

## **Introduction**

After its establishment in 1983 and until the present day, Holtek Semiconductor has released an unceasing stream of competitive semiconductor devices onto the global market. While continuing to concentrate its design efforts in the 8-bit and 32-bit microcontroller development area, the extensive and increasing range of peripheral semiconductor products should also not be ignored. At the foundation of these successful product developments exists many years of semiconductor design experience accumulated by the company's professional engineering design teams. The results of these extensive efforts have led to Holtek customers being provided with a huge range of high quality industrial grade semiconductor devices. Among Holtek's many customers are included a wide array of popular global brand consumer appliances and industrial products, which shows the global confidence in the company's devices. With this background, Holtek remains fully committed to a continuous expansion of its high quality and superior price-performance semiconductor devices well into the future.

## **Product Device Range**

Holtek's product development focus will remain firmly in the microcontroller area for both 8-bit and Arm® core based 32-bit microcontrollers. These highly functionally integrated microcontrollers includes digital and analog features such as A/D converters, comparators, LCD drivers, PWM generators, high current LED drivers, touch switches, SPI, I<sup>2</sup>C, UART and USB interfaces, voice functions, RF functions etc. All of the company's 32-bit and 8-bit microcontroller devices meet with full industry specifications in having a wide voltage and temperature operating range. In addition to its microcontrollers there exists a wide range of peripheral devices such as stand-alone touch switch ICs, LCD drivers, power management devices, video processors, sensors etc, further increasing the Holtek product diversity and opening up applications into a wider market area.

## **Product Development Strategy**

In following market trends and customer requirements, Holtek's commitment to new product development and innovation can be seen through its continuously expanding device functionality. As the world of IOT continues to extend its reach into demands for an increasingly connected lifestyle, Holtek's multi-function product range stands in a strong position to have a strong presence in this rapidly expanding market area. The integration of features such as RF functions, voice, touch key and power management functions into its microcontroller range demonstrates this commitment to IOT product trends. Holtek's range of standard microcontroller products will continue to expand but alongside it will be the design of application specific products such as those for motor control, personal health care, home appliances and many others. With its long history of working alongside its customers to assist in the design their custom microcontrollers, Holtek welcomes product manufacturers to contact them to discuss new custom microcontroller design possibilities. Additionally, and as no functionally rich microcontroller is useful without an appropriate development platform, all of Holtek's products are fully supported by a comprehensive range of hardware and software development tools to simplify the designer product development process. Holtek's obligation to ISO compliance and its string of innovation awards and intellectual properties provide further evidence of the company's commitment to product development excellence.

## **Marketing Service Network**

Holtek's range of semiconductor products is fully complemented by its extensive global marketing network with a sales presence in most parts of the world. Having established a large number of worldwide sales offices and agents, Holtek's global marketing structure is well placed to take advantage of any new market opportunities and trends as they arise.

## **Selecting Your Holtek Device**

As the range of 8-bit and 32-bit microcontroller devices covers such a vast range of types and functions, Holtek recommends that customers consult its on-line "Product Selector" to assist them in their selection of the most suitable microcontroller for their specific application. With Holtek continually releasing new products onto the market, it should be noted that the website version, rather than the printed version of the selection guide, will contain the most up to date product information.

To use our MCU Product Selector and more tool information, please visit: <https://www.holtek.com>.

| General Purpose 32-Bit MCU                    | General Purpose 8-Bit MCU        | Motor MCU & Peripheral                          |
|-----------------------------------------------|----------------------------------|-------------------------------------------------|
| 32-Bit Cortex®-M4 MCU ..... 3                 | 8-Bit MCU ..... 6                | 32-Bit BLDC Motor MCU ..... 9                   |
| 32-Bit Cortex®-M3 MCU ..... 3                 | 8-Bit OTP MCU ..... 8            | 8-Bit BLDC Motor MCU ..... 9                    |
| 32-Bit Cortex®-M0+ MCU ..... 3                | 8-Bit USB MCU ..... 8            | 32-Bit BLDC Motor MCU with Gate-Driver ..... 10 |
|                                               | 8-Bit CAN Bus MCU ..... 8        | 8-Bit BLDC Motor MCU with Gate-Driver ..... 11  |
|                                               |                                  | 32-Bit BLDC Motor MCU with Driver ..... 12      |
|                                               |                                  | 8-Bit BLDC Motor MCU with Driver ..... 12       |
|                                               |                                  | Driver Peripheral ..... 13                      |
| Health & Measurement                          | Security & Safety                | Battery & Power Management                      |
| 24-Bit ADC MCU ..... 14                       | Smoke Detector MCU ..... 17      | USB Charging Protocol MCU ..... 22              |
| 24-Bit ADC Peripheral ..... 14                | Smoke & CO Detector MCU ..... 19 | AC Charger MCU ..... 22                         |
| Health Care MCU ..... 15                      | Fire Protection MCU ..... 19     | DC Charger MCU ..... 22                         |
|                                               | CO/GAS Detector MCU ..... 20     | Power Inverter MCU ..... 23                     |
|                                               | Dust Detector MCU ..... 21       | BMS MCU ..... 24                                |
|                                               | PIR MCU ..... 21                 | Li-Battery BMS Peripheral ..... 24              |
|                                               | PIR Controller ..... 21          |                                                 |
| Touch / Proximity & Peripheral                | Music & Voice MCU                | Special Purpose MCU                             |
| 32-Bit Touch MCU ..... 25                     | Music/Voice MCU ..... 28         | 32-Bit ASSP MCU ..... 29                        |
| Touch OTP MCU ..... 25                        | Voice MCU ..... 28               | 8-Bit ASSP MCU ..... 29                         |
| Touch MCU ..... 25                            |                                  |                                                 |
| Touch Ultrasonic Atomiser MCU ..... 26        |                                  |                                                 |
| Proximity Sensing MCU ..... 26                |                                  |                                                 |
| Touch Wireless MCU ..... 27                   |                                  |                                                 |
| Touch Key IC ..... 27                         |                                  |                                                 |
| Wireless                                      | Power Management                 | Display                                         |
| Bluetooth Low Energy (Bluetooth® LE) ..... 30 | LDO & Detector ..... 32          | LCD Controller & Driver ..... 35                |
| 2.4GHz RF ..... 30                            | DC to DC ..... 33                | LED Controller & Driver ..... 35                |
| NFC ..... 30                                  | AC to DC ..... 34                |                                                 |
| Sub-1GHz RF ..... 31                          |                                  |                                                 |
| Module                                        | Amplifier & Comparator           | Interface Bridge                                |
| RF Module ..... 36                            | OP Amplifier ..... 38            | Interface Bridge ..... 39                       |
| Digital Sensor & Module ..... 36              | Audio Amplifier ..... 38         |                                                 |
| DALI Module ..... 37                          | Comparator ..... 38              |                                                 |
| Interface Process Module ..... 37             |                                  |                                                 |
| Atomization Module ..... 37                   |                                  |                                                 |
| Miscellaneous                                 | Part Number Index                |                                                 |
| CCD/CIS Analog Signal Processor ..... 40      | Part Number Index ..... 41       |                                                 |
| Real-Time Clock ..... 40                      |                                  |                                                 |
| Encoder / Decoder ..... 40                    |                                  |                                                 |
| Telecom IC ..... 40                           |                                  |                                                 |

| 32-Bit Cortex®-M4 MCU     |            |            |        |       |        |                      |           |     |                                                             |     |           |     |                                                                                     |                                                            |          |                               |
|---------------------------|------------|------------|--------|-------|--------|----------------------|-----------|-----|-------------------------------------------------------------|-----|-----------|-----|-------------------------------------------------------------------------------------|------------------------------------------------------------|----------|-------------------------------|
| 32-Bit Cortex®-M4 USB MCU |            |            |        |       |        |                      |           |     |                                                             |     |           |     |                                                                                     |                                                            |          |                               |
| Part No.                  | Max. Freq. | VDD        | Flash  | SRAM  | DMA    | ADC                  | DAC       | CMP | Timer                                                       | RTC | USB       | CAN | Interface                                                                           | Others                                                     | Max. I/O | Package                       |
| HT32F49041                | 96MHz      | 2.4V~3.6V  | 64KB   | 20KB  | 7CH x1 | 2Msps 12-bitx16ch    | —         | —   | ACTMRx1, 32-bit GPTMRx1<br>16-bit GPTMRx6, BTMRx2<br>WWDTx1 | √   | FS OTG    | 1   | USARTx4,<br>SPI/I <sup>2</sup> Sx3, I <sup>2</sup> Cx2<br>IRTMRx1                   | CRC                                                        | 55       | 20TSSOP<br>32QFN<br>48/64LQFP |
| HT32F49153                | 150MHz     | 2.4V~3.6V  | 128KB  | 48KB  | 7CH x2 | 5.33Msps 12-bitx24ch | 12-bit x2 | —   | ACTMRx1, 32-bit GPTMRx1<br>16-bit GPTMRx8, BTMRx2<br>WWDTx1 | √   | FS OTG    | 2   | USARTx8<br>SPI/I <sup>2</sup> Sx3, I <sup>2</sup> Cx3<br>IRTMRx1                    | CRC, XMC                                                   | 87       | 32QFN<br>48/64LQFP<br>100LQFP |
| HT32F49163                |            |            | 256KB  | 128KB | 6CH x2 | 4Msps 12-bitx24ch    | 12-bit x2 | 2   | MCTMRx2, GPTMRx2<br>SCTMRx4, BFTMRx2, WDTx1                 | √   | FS Device | 2   | USARTx2<br>UARTx4, SPIx2<br>QSPIx1, I <sup>2</sup> Cx3<br>I <sup>2</sup> Sx2, SCIx2 | CRC, AES,<br>SDIO, RNG,<br>CORDIC, PID,<br>EBI, CSIF, FPRA | 80       | 48/64LQFP<br>100LQFP          |
| HT32F42366*               | 168MHz     | 1.71V~3.6V | 256KB  | 128KB | 6CH x2 | 4Msps 12-bitx24ch    | 12-bit x2 | 2   | MCTMRx2, GPTMRx2<br>SCTMRx4, BFTMRx2, WDTx1                 | √   | FS Device | 2   | USARTx2<br>UARTx4, SPIx2<br>QSPIx1, I <sup>2</sup> Cx3<br>I <sup>2</sup> Sx2, SCIx2 | CRC, AES,<br>SDIO, RNG,<br>CORDIC, PID,<br>EBI, CSIF, FPRA | 80       | 48/64LQFP<br>100LQFP          |
| HT32F42386*               |            |            | 512KB  | 192KB | 6CH x2 | 4Msps 12-bitx24ch    | 12-bit x2 | 2   | MCTMRx2, GPTMRx2<br>SCTMRx4, BFTMRx2, WDTx1                 | √   | FS Device | 2   | USARTx2<br>UARTx4, SPIx2<br>QSPIx1, I <sup>2</sup> Cx3<br>I <sup>2</sup> Sx2, SCIx2 | CRC, AES,<br>SDIO, RNG,<br>CORDIC, PID,<br>EBI, CSIF, FPRA | 80       | 48/64LQFP<br>100LQFP          |
| HT32F49365                | 240MHz     | 2.6V~3.6V  | 256KB  | 224KB | 7CH x2 | 2Msps 12-bitx3 16ch  | 12-bit x2 | —   | ACTMRx2, 32-bit GPTMRx2<br>16-bit GPTMRx8, BTMRx2<br>WWDTx1 | √   | FS Device | 2   | USARTx4<br>SPI/I <sup>2</sup> Sx4, I <sup>2</sup> Cx3                               | CRC, SPIM,<br>XMC, SDIO                                    | 80       | 48QFN<br>48/64LQFP<br>100LQFP |
| HT32F49395                |            |            | 1024KB | 224KB | 7CH x2 | 2Msps 12-bitx3 16ch  | 12-bit x2 | —   | ACTMRx2, 32-bit GPTMRx2<br>16-bit GPTMRx8, BTMRx2<br>WWDTx1 | √   | FS Device | 2   | USARTx4<br>SPI/I <sup>2</sup> Sx4, I <sup>2</sup> Cx3                               | CRC, SPIM,<br>XMC, SDIO                                    | 80       | 48QFN<br>48/64LQFP<br>100LQFP |

\* Under development, available in 1Q, 2027.  
Operating Temperature: -40°C ~ 105°C  
Note:  
WWDT: Window Watchdog Timer  
ACTMR: Advanced Control Timer  
IRTMRx1: Infrared Transmitter  
FPRA: Fingerprint Recognition Accelerator  
PID: Proportional Integral Derivative  
BTMR: Basic Timer  
SPIM: External SPI Flash Memory Extension  
SDIO: Secure Digital Input Output  
CORDIC: Coordinate Rotation Digital Computer  
CSIF: CMOS Sensor Interface  
GPTMR: General Purpose Timer  
XMC: External Memory Controller.  
RNG: Random Number Generator  
EBI: External Bus Interface

| 32-Bit Cortex®-M3 MCU                                                                                                                                                                                                                                                                                                                |            |            |       |       |      |                    |     |                                 |     |     |                                        |                                  |          |                    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------|-------|-------|------|--------------------|-----|---------------------------------|-----|-----|----------------------------------------|----------------------------------|----------|--------------------|
| 32-Bit Cortex®-M3 USB MCU                                                                                                                                                                                                                                                                                                            |            |            |       |       |      |                    |     |                                 |     |     |                                        |                                  |          |                    |
| Part No.                                                                                                                                                                                                                                                                                                                             | Max. Freq. | VDD        | Flash | SRAM  | PDMA | ADC                | CMP | Timer                           | RTC | USB | Interface                              | Others                           | Max. I/O | Package            |
| HT32F12345                                                                                                                                                                                                                                                                                                                           | 96MHz      | 2.0V~3.6V  | 64KB  | 16KB  | 12CH | 1Msps<br>12-bit×12 | 2   | BFTM×2, GPTM×2<br>MCTM×2        | √   | √   | USART×2, UART×2<br>SPI×2, I²C×2, I²S×1 | CRC, EBI<br>SDIO                 | 51       | 48/64LQFP          |
| HT32F12365                                                                                                                                                                                                                                                                                                                           | 96MHz      | 2.0V~3.6V  | 256KB | 64KB  | 12CH | 1Msps<br>12-bit×16 | 2   | BFTM×2, GPTM×2<br>MCTM×2        | √   | √   | USART×2, UART×2<br>SPI×2, I²C×2, I²S×1 | CRC, SCI<br>EBI, AES, SDIO       | 80       | 48/64/100LQFP      |
| HT32F12366                                                                                                                                                                                                                                                                                                                           |            |            |       | 128KB |      |                    |     |                                 |     |     |                                        |                                  |          |                    |
| HT32F22366                                                                                                                                                                                                                                                                                                                           | 96MHz      | 2.0V~3.6V  | 256KB | 128KB | 12CH | 1Msps<br>12-bit×16 | 2   | BFTM×2, GPTM×2<br>MCTM×2        | √   | √   | USART×2, UART×2<br>SPI×2, I²C×2, I²S×1 | CRC, SCI, EBI<br>AES, SDIO, CSIF | 80       | 48/64/100LQFP      |
| HT32F12364                                                                                                                                                                                                                                                                                                                           | 72MHz      | 1.65V~3.6V | 256KB | 128KB | 6CH  | 1Msps<br>12-bit×8  | —   | BFTM×2, SCTM×2<br>PWM×1, GPTM×1 | √   | √   | USART×1, UART×2<br>SPI×2, I²C×2        | CRC, SCI<br>EBI, AES             | 52       | 40QFN<br>48/64LQFP |
| <div>Note:<br/>BFTM: Basic Function Timer<br/>GPTM: General Purpose Timer<br/>AES: Advanced Encryption Standard</div> <div>SCTM: Single Channel Timer<br/>MCTM: Motor Control Timer<br/>SDIO: Secure Digital Input Output</div> <div>PWM: Pulse Width Modulation<br/>SCI: Smart Card Interface<br/>CSIF: CMOS Sensor Interface</div> |            |            |       |       |      |                    |     |                                 |     |     |                                        |                                  |          |                    |

| 32-Bit Cortex®-M0+ MCU                                     |            |            |       |      |      |                    |                     |                                  |     |                                 |          |          |                            |
|------------------------------------------------------------|------------|------------|-------|------|------|--------------------|---------------------|----------------------------------|-----|---------------------------------|----------|----------|----------------------------|
| 32-Bit Cortex®-M0+ MCU                                     |            |            |       |      |      |                    |                     |                                  |     |                                 |          |          |                            |
| Part No.                                                   | Max. Freq. | VDD        | Flash | SRAM | PDMA | ADC                | DAC                 | Timer                            | RTC | Interface                       | Others   | Max. I/O | Package                    |
| HT32F52220                                                 | 40MHz      | 2.0V~3.6V  | 16KB  | 4KB  | —    | 1Msps<br>12-bit×8  | —                   | BFTM×1, SCTM×2<br>GPTM×1         | —   | USART×1, UART×1<br>SPI×1, I²C×1 | —        | 23       | 24/28SSOP<br>33QFN         |
| HT32F52230                                                 |            |            | 32KB  |      |      |                    |                     |                                  |     |                                 |          |          |                            |
| HT32F52231                                                 | 40MHz      | 2.0V~3.6V  | 32KB  | 4KB  | —    | 1Msps<br>12-bit×12 | —                   | BFTM×2, SCTM×4<br>GPTM×1, MCTM×1 | √   | USART×1, UART×2<br>SPI×2, I²C×2 | CRC      | 40       | 24/28SSOP<br>33QFN, 48LQFP |
| HT32F52241                                                 |            |            | 64KB  | 8KB  |      |                    |                     |                                  |     |                                 |          |          |                            |
| HT32F52234                                                 | 60MHz      | 1.65V~3.6V | 32KB  | 4KB  | 6CH  | 1Msps<br>12-bit×12 | 500ksps<br>12-bit×4 | BFTM×2, SCTM×2<br>PWM×1          | √   | USART×1, UART×1<br>SPI×1, I²C×3 | CRC, DIV | 40       | 24/32/46QFN<br>48LQFP      |
| HT32F52244                                                 |            |            | 64KB  | 8KB  |      |                    |                     |                                  |     |                                 |          |          |                            |
| HT32F52243                                                 | 40MHz      | 2.0V~3.6V  | 64KB  | 8KB  | 6CH  | 1Msps<br>12-bit×12 | —                   | BFTM×2, SCTM×4<br>GPTM×1, MCTM×1 | √   | USART×2, UART×4<br>SPI×2, I²C×3 | CRC, DIV | 52       | 33QFN<br>48/64LQFP         |
| HT32F52253                                                 |            |            | 128KB | 16KB |      |                    |                     |                                  |     |                                 |          |          |                            |
| HT32F52234/HT32F52244 Operating Temperature: -40°C ~ 105°C |            |            |       |      |      |                    |                     |                                  |     |                                 |          |          |                            |

### 32-Bit Cortex®-M0+ MCU

#### 32-Bit Cortex®-M0+ USB MCU

| Part No.    | Max. Freq. | VDD        | Flash | SRAM | PDMA | ADC                | CMP | DAC                  | Timer                                     | RTC | USB | Interface                                               | Others                         | Max. I/O | Package            |
|-------------|------------|------------|-------|------|------|--------------------|-----|----------------------|-------------------------------------------|-----|-----|---------------------------------------------------------|--------------------------------|----------|--------------------|
| HT32F52331  | 48MHz      | 2.0V~3.6V  | 32KB  | 4KB  | —    | 1Msps<br>12-bit×12 | —   | —                    | BFTM×2, SCTM×4<br>GPTM×1, MCTM×1          | √   | √   | USART×1, UART×2<br>SPI×2, I²C×2                         | CRC, SCI                       | 38       | 33QFN<br>48LQFP    |
| HT32F52341  |            |            | 64KB  | 8KB  |      |                    |     |                      |                                           |     |     |                                                         |                                |          |                    |
| HT32F52342  | 48MHz      | 2.0V~3.6V  | 64KB  | 8KB  | 6CH  | 1Msps<br>12-bit×12 | 2   | —                    | BFTM×2, SCTM×2<br>GPTM×2, MCTM×1          | √   | √   | USART×2, UART×2<br>SPI×2, I²C×2, I²S×1                  | CRC, SCI, EBI                  | 51       | 33QFN<br>48/64LQFP |
| HT32F52352  |            |            | 128KB | 16KB |      |                    |     |                      |                                           |     |     |                                                         |                                |          |                    |
| HT32F52344  | 60MHz      | 1.65V~3.6V | 64KB  | 8KB  | 6CH  | 1Msps<br>12-bit×12 | 2   | —                    | BFTM×2, SCTM×2<br>GPTM×1, MCTM×1          | √   | √   | UART×2, SPI×2<br>I²C×1                                  | CRC, DIV<br>EBI                | 54       | 33QFN<br>48/64LQFP |
| HT32F52354  |            |            | 128KB | 8KB  |      |                    |     |                      |                                           |     |     |                                                         |                                |          |                    |
| HT32F52357  | 60MHz      | 1.65V~3.6V | 128KB | 16KB | 6CH  | 1Msps<br>12-bit×12 | 2   | 500kpsps<br>12-bit×2 | BFTM×2, SCTM×2<br>PWM×2, GPTM×1<br>MCTM×1 | √   | √   | USART×2, UART×4, SPI×2<br>QSPI×1, I²C×2, I²S×1          | CRC, DIV<br>SCI, EBI, AES      | 67       | 48/64/80LQFP       |
| HT32F52367  |            |            | 256KB | 32KB |      |                    |     |                      |                                           |     |     |                                                         |                                |          |                    |
| HT32F72388* | 72MHz      | 1.62V~3.6V | 512KB | 80KB | 6CH  | 2Msps<br>12-bit×12 | 2   | 500kpsps<br>12-bit×2 | BFTM×2, SCTM×2<br>PWM×2, GPTM×1<br>MCTM×1 | √   | √   | USART×2, UART×4<br>SPI×2, QSPI×1, I²C×3<br>I²S×1, CAN×2 | CRC, DIV<br>SCI, EBI, AES, RNG | 67       | 48/64/80LQFP       |

\* Under development, available in 3Q, 2026.

HT32F72388 Operating Temperature: -40°C ~ 105°C

#### 32-Bit Cortex®-M0+ USB LCD MCU

| Part No.   | Max. Freq. | VDD        | Flash | SRAM | PDMA | ADC                | CMP | DAC                  | Timer                           | RTC | USB | LCD       | Interface                              | Others               | Max. I/O | Package      |
|------------|------------|------------|-------|------|------|--------------------|-----|----------------------|---------------------------------|-----|-----|-----------|----------------------------------------|----------------------|----------|--------------|
| HT32F57331 | 60MHz      | 1.65V~3.6V | 32KB  | 4KB  | —    | 1Msps<br>12-bit×10 | —   | —                    | BFTM×2, PWM×2<br>GPTM×1         | √   | √   | 29×4~25×8 | USART×1, UART×2<br>SPI×2, I²C×2        | CRC, DIV<br>SCI      | 53       | 48/64LQFP    |
| HT32F57341 |            |            | 64KB  | 8KB  |      |                    |     |                      |                                 |     |     |           |                                        |                      |          |              |
| HT32F57342 | 60MHz      | 1.65V~3.6V | 64KB  | 8KB  | 6CH  | 1Msps<br>12-bit×10 | 2   | 500kpsps<br>12-bit×2 | BFTM×2, SCTM×2<br>PWM×2, GPTM×1 | √   | √   | 37×4~33×8 | USART×1, UART×2<br>SPI×2, I²C×2, I²S×1 | CRC, DIV<br>SCI, AES | 67       | 48/64/80LQFP |
| HT32F57352 |            |            | 128KB | 16KB |      |                    |     |                      |                                 |     |     |           |                                        |                      |          |              |

#### 32-Bit Cortex®-M0+ Ultra Low Power MCU

| Part No.    | Max. Freq. | VDD        | Flash | SRAM | PDMA | ADC                | CMP | Timer                            | RTC | USB | LCD       | Interface                        | Others                    | Max. I/O | Package            |
|-------------|------------|------------|-------|------|------|--------------------|-----|----------------------------------|-----|-----|-----------|----------------------------------|---------------------------|----------|--------------------|
| HT32L52231  | 48MHz      | 1.65V~3.6V | 32KB  | 4KB  | 6CH  | 1Msps<br>12-bit×12 | —   | BFTM×2, SCTM×2<br>GPTM×1, MCTM×1 | √   | —   | —         | USART×1, UART×2<br>SPI×2, I²C×2  | CRC, DIV                  | 40       | 32QFN<br>48LQFP    |
| HT32L52241  |            |            | 64KB  | 8KB  |      |                    |     |                                  |     |     |           |                                  |                           |          |                    |
| HT32L57231* | 48MHz      | 1.65V~3.6V | 32KB  | 4KB  | 6CH  | 1Msps<br>12-bit×12 | —   | BFTM×2, PWM×1<br>GPTM×1, MCTM×1  | —   | —   | 45×4~41×8 | USART×1, UART×2,<br>SPI×2, I²C×2 | CRC, DIV                  | 57       | 64LQFP             |
| HT32L57241* |            |            | 64KB  | 8KB  |      |                    |     |                                  |     |     |           |                                  |                           |          |                    |
| HT32L52343  | 48MHz      | 1.65V~3.6V | 64KB  | 12KB | 6CH  | 1Msps<br>12-bit×12 | 2   | BFTM×2, SCTM×2<br>GPTM×2, MCTM×1 | —   | —   | —         | USART×2, UART×2,<br>SPI×2, I²C×2 | CRC, DIV<br>SCI, RNG, AES | 56       | 32QFN<br>48/64LQFP |
| HT32L52353  |            |            | 128KB | 24KB |      |                    |     |                                  |     |     |           |                                  |                           |          |                    |

\* Under development, available in 4Q, 2026.

Operating Temperature: -40°C ~ 105°C

#### 32-Bit Cortex®-M0+ 5V MCU

| Part No.   | Max. Freq. | VDD       | Flash | SRAM | PDMA | ADC                   | CMP | Timer                           | RTC | Interface                       | Others                | Max. I/O | Package                       |
|------------|------------|-----------|-------|------|------|-----------------------|-----|---------------------------------|-----|---------------------------------|-----------------------|----------|-------------------------------|
| HT32F50020 | 16MHz      | 2.5V~5.5V | 16KB  | 2KB  | —    | 500kpsps<br>12-bit×12 | —   | BFTM×1, SCTM×3                  | √   | UART×2, SPI×1<br>I²C×1          | LEDC                  | 42       | 24/28SSOP<br>24/32QFN, 48LQFP |
| HT32F50030 |            |           | 32KB  |      |      |                       |     |                                 |     |                                 |                       |          |                               |
| HT32F50220 | 20MHz      | 2.5V~5.5V | 16KB  | 4KB  | —    | 1Msps<br>12-bit×12    | —   | BFTM×1, PWM×2<br>GPTM×1         | √   | UART×2, SPI×2<br>I²C×1          | DIV                   | 40       | 24/28SSOP<br>24/32QFN, 48LQFP |
| HT32F50230 |            |           | 32KB  |      |      |                       |     |                                 |     |                                 |                       |          |                               |
| HT32F50231 | 20MHz      | 2.5V~5.5V | 32KB  | 4KB  | —    | 1Msps<br>12-bit×12    | —   | BFTM×2, PWM×2<br>GPTM×1, MCTM×1 | √   | USART×1, UART×2<br>SPI×2, I²C×2 | CRC, DIV              | 40       | 24/28SSOP<br>24/32QFN, 48LQFP |
| HT32F50241 |            |           | 64KB  | 8KB  |      |                       |     |                                 |     |                                 |                       |          |                               |
| HT32F50431 | 60MHz      | 2.5V~5.5V | 32KB  | 4KB  | 6CH  | 2Msps<br>12-bit×12    | —   | BFTM×2, PWM×1<br>GPTM×1, MCTM×1 | √   | USART×1, UART×2<br>SPI×2, I²C×2 | CRC, DIV<br>LEDC      | 40       | 32/46QFN<br>44/48LQFP         |
| HT32F50441 |            |           | 64KB  | 8KB  |      |                       |     |                                 |     |                                 |                       |          |                               |
| HT32F50442 | 60MHz      | 2.5V~5.5V | 64KB  | 8KB  | 6CH  | 2Msps<br>12-bit×12    | 2   | BFTM×2, PWM×2<br>GPTM×1, MCTM×1 | √   | USART×2, UART×2<br>SPI×2, I²C×2 | CRC, DIV<br>LEDC, EBI | 54       | 32/46QFN<br>44/48/64LQFP      |
| HT32F50452 |            |           | 128KB | 16KB |      |                       |     |                                 |     |                                 |                       |          |                               |

HT32F504xx Operating Temperature: -40°C ~ 105°C

#### 32-Bit Cortex®-M0+ 5V USB MCU

| Part No.   | Max. Freq. | VDD       | Flash | SRAM | PDMA | ADC                | Timer                             | RTC | USB | Interface                      | Others   | Max. I/O | Package            |
|------------|------------|-----------|-------|------|------|--------------------|-----------------------------------|-----|-----|--------------------------------|----------|----------|--------------------|
| HT32F50343 | 60MHz      | 2.5V~5.5V | 64KB  | 12KB | 6CH  | 1Msps<br>12-bit×12 | BFTM×2, SCTM×2<br>8-PWM×3, GPTM×1 | √   | √   | UART×2, SPI×2<br>I²C×2, SLED×2 | CRC, DIV | 51       | 32QFN<br>48/64LQFP |

| 32-Bit Cortex®-M0+ MCU                                                                                                                                                                                                                                                                                                                                                                                                                      |            |            |       |      |                         |                 |                          |                               |                              |                              |                              |                              |              |                                     |                   |          |                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------|-------|------|-------------------------|-----------------|--------------------------|-------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|--------------|-------------------------------------|-------------------|----------|-----------------------|
| 32-Bit Cortex®-M0+ 5V CAN MCU                                                                                                                                                                                                                                                                                                                                                                                                               |            |            |       |      |                         |                 |                          |                               |                              |                              |                              |                              |              |                                     |                   |          |                       |
| Part No.                                                                                                                                                                                                                                                                                                                                                                                                                                    | Max. Freq. | VDD        | Flash | SRAM | PDMA                    | ADC             | CMP                      | Timer                         | RTC                          | CAN                          | Interface                    | Others                       | Max. I/O     | Package                             |                   |          |                       |
| HT32F53231                                                                                                                                                                                                                                                                                                                                                                                                                                  | 60MHz      | 2.5V~5.5V  | 32KB  | 4KB  | 6CH                     | 2Msps 12-bitx12 | —                        | BFTM×2, PWMx1 GPTM×1, MCTM×1  | √                            | √                            | USART×1, UART×2 SPI×2, I²C×2 | CRC, DIV LEDC                | 40           | 32/46QFN 48LQFP                     |                   |          |                       |
| HT32F53241                                                                                                                                                                                                                                                                                                                                                                                                                                  |            |            | 64KB  | 8KB  |                         |                 |                          |                               |                              |                              |                              |                              |              |                                     |                   |          |                       |
| HT32F53242                                                                                                                                                                                                                                                                                                                                                                                                                                  | 60MHz      | 2.5V~5.5V  | 64KB  | 8KB  | 6CH                     | 2Msps 12-bitx12 | 2                        | BFTM×2, PWMx2 GPTM×1, MCTM×1  | √                            | √                            | USART×2, UART×2 SPI×2, I²C×2 | CRC, DIV LEDC, EBI           | 54           | 32/46QFN 48/64LQFP                  |                   |          |                       |
| HT32F53252                                                                                                                                                                                                                                                                                                                                                                                                                                  |            |            | 128KB | 16KB |                         |                 |                          |                               |                              |                              |                              |                              |              |                                     |                   |          |                       |
| Operating Temperature: -40°C ~ 105°C                                                                                                                                                                                                                                                                                                                                                                                                        |            |            |       |      |                         |                 |                          |                               |                              |                              |                              |                              |              |                                     |                   |          |                       |
| 32-Bit Cortex®-M0+ CAN LCD MCU                                                                                                                                                                                                                                                                                                                                                                                                              |            |            |       |      |                         |                 |                          |                               |                              |                              |                              |                              |              |                                     |                   |          |                       |
| Part No.                                                                                                                                                                                                                                                                                                                                                                                                                                    | Max. Freq. | VDD        | Flash | SRAM | PDMA                    | ADC             | CMP                      | DAC                           | Timer                        | RTC                          | USB                          | LCD                          | CAN          | Interface                           | Others            | Max. I/O | Package               |
| HT32F53742*                                                                                                                                                                                                                                                                                                                                                                                                                                 | 60MHz      | 1.8V~3.6V  | 64KB  | 8KB  | 6CH                     | 1Msps 12-bit×10 | 2                        | 500ksps 12-bit×2              | BFTM×2, SCTM×2 PWM×2, GPTM×1 | √                            | √                            | 37×4~33×8                    | √            | USART×1, UART×2 SPI×2, I²C×2, I²S×1 | CRC, DIV SCI, AES | 67       | 64LQFP 80LQFP 100LQFP |
| HT32F53752*                                                                                                                                                                                                                                                                                                                                                                                                                                 |            |            | 128KB | 16KB |                         |                 |                          |                               |                              |                              |                              |                              |              |                                     |                   |          |                       |
| * Under development, available in 4Q, 2026.                                                                                                                                                                                                                                                                                                                                                                                                 |            |            |       |      |                         |                 |                          |                               |                              |                              |                              |                              |              |                                     |                   |          |                       |
| 32-Bit Cortex®-M0+ 5V Touch MCU                                                                                                                                                                                                                                                                                                                                                                                                             |            |            |       |      |                         |                 |                          |                               |                              |                              |                              |                              |              |                                     |                   |          |                       |
| Part No.                                                                                                                                                                                                                                                                                                                                                                                                                                    | Max. Freq. | VDD        | Flash | SRAM | PDMA                    | ADC             | CMP                      | Timer                         | RTC                          | Touch Key                    | Interface                    | Others                       | Max. I/O     | Package                             |                   |          |                       |
| HT32F54231                                                                                                                                                                                                                                                                                                                                                                                                                                  | 60MHz      | 2.5V~5.5V  | 32KB  | 4KB  | —                       | 1Msps 12-bit×10 | —                        | BFTM×2, SCTM×2 GPTM×1, MCTM×1 | √                            | 24                           | USART×1, UART×2 SPI×2, I²C×2 | CRC, DIV LEDC                | 40           | 28SSOP, 32QFN 48LQFP                |                   |          |                       |
| HT32F54241                                                                                                                                                                                                                                                                                                                                                                                                                                  |            |            | 64KB  | 8KB  |                         |                 |                          |                               |                              |                              |                              |                              |              |                                     |                   |          |                       |
| HT32F54243                                                                                                                                                                                                                                                                                                                                                                                                                                  | 60MHz      | 2.5V~5.5V  | 64KB  | 8KB  | 6CH                     | 1Msps 12-bit×10 | 2                        | BFTM×2, SCTM×4 GPTM×1, MCTM×1 | √                            | 28                           | USART×2, UART×4 SPI×2, I²C×3 | CRC, DIV LEDC                | 54           | 32QFN 48/64LQFP                     |                   |          |                       |
| HT32F54253                                                                                                                                                                                                                                                                                                                                                                                                                                  |            |            | 128KB | 16KB |                         |                 |                          |                               |                              |                              |                              |                              |              |                                     |                   |          |                       |
| 32-Bit Cortex®-M0+ 24-Bit ADC MCU                                                                                                                                                                                                                                                                                                                                                                                                           |            |            |       |      |                         |                 |                          |                               |                              |                              |                              |                              |              |                                     |                   |          |                       |
| Part No.                                                                                                                                                                                                                                                                                                                                                                                                                                    | Max. Freq. | VDD        | Flash | SRAM | ADC                     |                 |                          | Timer                         | RTC                          | Interface                    | Others                       | Max. I/O                     | Package      |                                     |                   |          |                       |
| HT32F59041                                                                                                                                                                                                                                                                                                                                                                                                                                  | 20MHz      | 2.5V~5.5V  | 64KB  | 8KB  | SAR ADC 1Msps 12-bit×12 |                 | Delta Sigma ADC 24-bit×4 | BFTM×2, PWM×2 GPTM×1, MCTM×1  | √                            | USART×1, UART×2 SPI×1, I²C×1 | CRC, DIV                     | 30                           | 48LQFP       |                                     |                   |          |                       |
| 32-Bit Cortex®-M0+ 24-Bit ADC LCD MCU                                                                                                                                                                                                                                                                                                                                                                                                       |            |            |       |      |                         |                 |                          |                               |                              |                              |                              |                              |              |                                     |                   |          |                       |
| Part No.                                                                                                                                                                                                                                                                                                                                                                                                                                    | Max. Freq. | VDD        | Flash | SRAM | ADC                     |                 |                          | Timer                         | RTC                          | USB                          | LCD                          | Interface                    | Others       | Max. I/O                            | Package           |          |                       |
| HT32F59741                                                                                                                                                                                                                                                                                                                                                                                                                                  | 60MHz      | 1.65V~3.6V | 64KB  | 8KB  | SAR ADC 1Msps 12-bit×10 |                 | Delta Sigma ADC 24-bit×4 | BFTM×2, PWM×2 GPTM×1          | √                            | √                            | 29×4~25×8                    | USART×1, UART×2 SPI×2, I²C×2 | CRC, DIV SCI | 53                                  | 64/80LQFP         |          |                       |
| Note:<br>BFTM: Basic Function Timer<br>GPTM: General Purpose Timer<br>QSPI: Quad serial peripheral interface<br>SCI: Smart Card Interface<br>AES: Advanced Encryption Standard<br>SCTM: Single Channel Timer<br>MCTM: Motor Control Timer<br>SLED: Strip LED Controller<br>LEDC: LED controller<br>PWM: Pulse Width Modulation<br>USB: 2.0 Full Speed device<br>DIV: Hardware Divider<br>EBI: External Bus Interface for NOR Flash/SRAM/LCD |            |            |       |      |                         |                 |                          |                               |                              |                              |                              |                              |              |                                     |                   |          |                       |

## 8-Bit MCU

## Low Pin Count ADC MCU

| Part No.  | Max. Freq. | VDD       | Program Memory | Data Memory | Data EEPROM        | Stack | IAP | I/O | Timer                                        | ADC      | CMP | Interface                             | Package                                 |
|-----------|------------|-----------|----------------|-------------|--------------------|-------|-----|-----|----------------------------------------------|----------|-----|---------------------------------------|-----------------------------------------|
| HT66F302  | 8MHz       | 1.8V~5.5V | 1K×14          | 64×8        | 32×8               | 2     | —   | 8   | 10-bit STM×1<br>10-bit PTM×1                 | 12-bit×4 | —   | —                                     | 8SOP, 10SOP                             |
| HT66F303  |            |           |                |             |                    |       |     | 14  |                                              |          |     |                                       | 16NSOP                                  |
| HT66F0021 | 8MHz       | 1.8V~5.5V | 1K×14          | 64×8        | 32×14 <sup>#</sup> | 2     | —   | 6   | 8-bit×1                                      | 10-bit×4 | —   | —                                     | 8SOP                                    |
| HT66F002  |            | 2.2V~5.5V |                |             | 32×8               |       |     | 8   | 10-bit STM×1                                 | 12-bit×4 |     |                                       | 8SOP                                    |
| HT66F0025 | 8MHz       | 2.2V~5.5V | 2K×14          | 64×8        | 32×8               | 4     | —   | 8   | 10-bit STM×1                                 | 12-bit×4 | —   | —                                     | 8SOP, 10SOP                             |
| HT66F2030 | 8MHz       | 1.8V~5.5V | 2K×15          | 128×8       | 32×8               | 4     | —   | 14  | 10-bit CTM×1<br>10-bit PTM×1                 | 12-bit×4 | —   | UART×1<br>SPI/I <sup>2</sup> C×1      | 8SOP, 10MSOP<br>16NSOP, 16QFN           |
| HT66F2040 | 8MHz       | 1.8V~5.5V | 4K×16          | 512×8       | 512×8              | 8     | √   | 18  | 10-bit PTM×1<br>16-bit CTM×1<br>16-bit STM×1 | 12-bit×7 | 2   | UART×1<br>UART/SPI/I <sup>2</sup> C×1 | 8SOP, 10MSOP<br>16NSOP, 16QFN<br>20SSOP |
| HT66F2050 |            |           | 8K×16          |             |                    |       |     |     |                                              |          |     |                                       |                                         |

Note: <sup>#</sup> Emulated EEPROM.

## ADC MCU

| Part No.   | Max. Freq. | VDD       | Program Memory | Data Memory | Data EEPROM        | Stack | IAP | I/O | Timer                                        | ADC       | CMP | RTC | PWM             | Interface                                  | Package                                          |
|------------|------------|-----------|----------------|-------------|--------------------|-------|-----|-----|----------------------------------------------|-----------|-----|-----|-----------------|--------------------------------------------|--------------------------------------------------|
| HT66F3126  | 16MHz      | 1.8V~5.5V | 1K×14          | 128×8       | 64×8               | 4     | —   | 14  | 10-bit PTM×1<br>10-bit STM×1                 | 12-bit×7  | —   | —   | —               | —                                          | 8SOP<br>16NSOP                                   |
| HT66F0031  | 8MHz       | 1.8V~5.5V | 1K×14          | 64×8        | 32×14 <sup>#</sup> | 2     | —   | 14  | 8-bit×1                                      | 10-bit×4  | —   | —   | 8-bit<br>×1     | —                                          | 16NSOP                                           |
| HT66F003   |            | 2.2V~5.5V |                |             | 32×8               |       |     |     | 10-bit STM×1<br>10-bit PTM×1                 | 12-bit×4  |     |     | —               |                                            |                                                  |
| HT66F3132  | 16MHz      | 1.8V~5.5V | 2K×15          | 128×8       | 64×8               | 8     | —   | 18  | 10-bit CTM×1<br>10-bit PTM×2                 | 12-bit×9  | —   | —   | 10-bit<br>×3    | —                                          | 16NSOP<br>24SSOP                                 |
| HT66F0041  | 8MHz       | 1.8V~5.5V | 2K×14          | 64×8        | 32×14 <sup>#</sup> | 4     | —   | 18  | 8-bit×1                                      | 10-bit×4  | —   | —   | 8-bit<br>×1     | —                                          | 16NSOP<br>20NSOP/SSOP                            |
| HT66F004   |            | 2.2V~5.5V | 2K×15          | 96×8        | 32×8               |       |     |     | 10-bit PTM×2                                 | 12-bit×8  |     |     | —               |                                            | 16NSOP<br>20SSOP                                 |
| HT66F3142  | 16MHz      | 1.8V~5.5V | 4K×16          | 256×8       | 128×8              | 12    | —   | 22  | 10-bit CTM×1<br>10-bit PTM×2                 | 12-bit×12 | —   | √   | 10-bit<br>×3    | —                                          | 16NSOP<br>24SSOP                                 |
| HT66F0181  | 8MHz       | 1.8V~5.5V | 4K×15          | 128×8       | 32×15 <sup>#</sup> | 6     | —   | 18  | 10-bit PTM×1<br>10-bit STM×1                 | 10-bit×8  | —   | —   | —               | —                                          | 16NSOP<br>20NSOP/SSOP                            |
| HT66F018   | 20MHz      | 2.2V~5.5V | 4K×16          | 192×8       | 64×8               | 8     | —   | 18  | 10-bit PTM×1<br>16-bit CTM×1<br>16-bit STM×1 | 12-bit×8  | 1   | √   | —               | —                                          | 16NSOP<br>20NSOP/SSOP                            |
| HT66F0185  |            |           |                | 256×8       | 128×8              |       |     | 26  |                                              |           |     |     |                 | UART×1<br>SPI/I <sup>2</sup> C×1           | 24SSOP<br>28SSOP                                 |
| HT66F3185  | 16MHz      | 1.8V~5.5V | 4K×16          | 256×8       | 128×8              | 8     | √   | 26  | 10-bit PTM×1<br>16-bit CTM×1<br>16-bit STM×1 | 12-bit×12 | 1   | √   | —               | UART×1<br>SPI/I <sup>2</sup> C×1           | 16NSOP, 20NSOP<br>24SSOP, 28SSOP<br>24QFN, 28QFN |
| HT66F0195  | 16MHz      | 2.2V~5.5V | 8K×16          | 512×8       | 128×8              | 8     | —   | 26  | 10-bit PTM×1<br>16-bit CTM×1<br>16-bit STM×1 | 12-bit×12 | 1   | √   | —               | UART×1<br>SPI/I <sup>2</sup> C×1           | 24SSOP<br>28SSOP                                 |
| HT66F3152* | 16MHz      | 1.8V~5.5V | 8K×16          | 512×8       | 256×8              | 12    | √   | 26  | 10-bit CTM×1<br>16-bit PTM×1<br>16-bit STM×1 | 12-bit×19 | —   | √   | √ <sup>**</sup> | UART×1<br>SPI/I <sup>2</sup> C×1           | 16NSOP, 20TSSOP<br>24SSOP, 28SSOP                |
| HT66F3195  | 16MHz      | 1.8V~5.5V | 8K×16          | 512×8       | 128×8              | 8     | √   | 26  | 10-bit PTM×1<br>16-bit CTM×1<br>16-bit STM×1 | 12-bit×12 | 1   | √   | —               | UART×1<br>SPI/I <sup>2</sup> C×1           | 20NSOP<br>24SSOP, 28SSOP<br>24QFN, 28QFN         |
| HT66F31A5  | 16MHz      | 1.8V~5.5V | 16K×16         | 1024×8      | 1024×8             | 12    | √   | 30  | 10-bit PTM×2<br>16-bit CTM×1<br>16-bit STM×1 | 12-bit×12 | 1   | √   | —               | UART×2<br>SPI/I <sup>2</sup> C×1           | 24SSOP, 28SSOP<br>24QFN, 28QFN<br>32QFN          |
| HT66F2362  | 16MHz      | 1.8V~5.5V | 16K×16         | 2048×8      | 1024×8             | 16    | √   | 44  | 10-bit PTM×2<br>16-bit PTM×2<br>16-bit STM×3 | 12-bit×16 | 2   | √   | —               | UART×2<br>SPI/I <sup>2</sup> C×1<br>SPIA×1 | 32QFN<br>44LQFP, 48LQFP                          |
| HT66F2372  | 16MHz      | 1.8V~5.5V | 32K×16         | 3072×8      | 2048×8             | 16    | √   | 44  | 10-bit PTM×2<br>16-bit PTM×2<br>16-bit STM×3 | 12-bit×16 | 2   | √   | —               | UART×3<br>SPI/I <sup>2</sup> C×1<br>SPIA×1 | 28SSOP, 32QFN<br>44LQFP, 48LQFP                  |

\* Under development, available in 4Q, 2026.

Note: <sup>#</sup> Emulated EEPROM.

\*\* PWM complementary mode and dead time insert function.

| 8-Bit MCU   |            |           |                |             |             |       |     |     |                                              |           |                          |     |     |                                            |                            |
|-------------|------------|-----------|----------------|-------------|-------------|-------|-----|-----|----------------------------------------------|-----------|--------------------------|-----|-----|--------------------------------------------|----------------------------|
| ADC LCD MCU |            |           |                |             |             |       |     |     |                                              |           |                          |     |     |                                            |                            |
| Part No.    | Max. Freq. | VDD       | Program Memory | Data Memory | Data EEPROM | Stack | IAP | I/O | Timer                                        | ADC       | LCD                      | CMP | RTC | Interface                                  | Package                    |
| HT67F489    | 16MHz      | 2.2V~5.5V | 8K×16          | 256×8       | 64×8        | 8     | —   | 42  | 10-bit CTM×3<br>10-bit PTM×1                 | 12-bit×10 | 20×8<br>20×4             | —   | √   | UART×1                                     | 44LQFP                     |
| HT67F4892   |            |           |                | 384×8       |             |       |     | 50  |                                              |           | 32×4, 32×8<br>28×4, 28×8 |     |     | UART×1<br>SPI/I <sup>2</sup> C×1           | 48LQFP<br>52LQFP           |
| HT67F2355   | 12MHz      | 1.8V~5.5V | 8K×16          | 512×8       | 512×8       | 8     | √   | 46  | 10-bit CTM×3<br>10-bit PTM×1                 | 12-bit×10 | 32×4, 31×5<br>30×6, 28×8 | —   | √   | UART×1<br>SPI/I <sup>2</sup> C×1           | 44LQFP<br>48LQFP           |
| HT67F2362A  | 16MHz      | 1.8V~5.5V | 16K×16         | 2048×8      | 1024×8      | 16    | √   | 57  | 10-bit PTM×6<br>16-bit PTM×2<br>16-bit STM×3 | 12-bit×16 | 46×4<br>44×6<br>42×8     | 2   | √   | UART×2<br>SPI/I <sup>2</sup> C×1<br>SPIA×1 | 48LQFP<br>64LQFP           |
| HT67F2372A  | 16MHz      | 1.8V~5.5V | 32K×16         | 3072×8      | 2048×8      | 16    | √   | 71  | 10-bit PTM×6<br>16-bit PTM×2<br>16-bit STM×3 | 12-bit×20 | 27×8<br>42×8<br>52×8     | 2   | √   | UART×3<br>SPI/I <sup>2</sup> C×1<br>SPIA×1 | 48LQFP<br>64LQFP<br>80LQFP |

| I/O LCD MCU |            |           |                |             |             |       |     |     |                                              |              |     |                                  |                  |
|-------------|------------|-----------|----------------|-------------|-------------|-------|-----|-----|----------------------------------------------|--------------|-----|----------------------------------|------------------|
| Part No.    | Max. Freq. | VDD       | Program Memory | Data Memory | Data EEPROM | Stack | IAP | I/O | Timer                                        | LCD          | RTC | Interface                        | Package          |
| HT69F340    | 16MHz      | 1.8V~5.5V | 4K×16          | 256×8       | 64×8        | 8     | √   | 39  | 10-bit PTM×1<br>10-bit CTM×1                 | 24×4<br>25×3 | √   | SPI/I <sup>2</sup> C×1           | 48LQFP           |
| HT69F350    | 16MHz      | 1.8V~5.5V | 8K×16          | 512×8       | 64×8        | 8     | √   | 55  | 10-bit PTM×1<br>10-bit CTM×1<br>16-bit STM×1 | 36×4<br>37×3 | √   | SPI/I <sup>2</sup> C×1           | 48LQFP<br>64LQFP |
| HT69F360    | 16MHz      | 1.8V~5.5V | 16K×16         | 1024×8      | 128×8       | 8     | √   | 63  | 10-bit PTM×2<br>10-bit CTM×1<br>16-bit STM×1 | 48×4<br>49×3 | √   | UART×1<br>SPI/I <sup>2</sup> C×1 | 64LQFP           |

| Low Power ADC MCU |            |           |                |             |             |       |     |     |                              |             |              |     |                             |
|-------------------|------------|-----------|----------------|-------------|-------------|-------|-----|-----|------------------------------|-------------|--------------|-----|-----------------------------|
| Part No.          | Max. Freq. | VDD       | Program Memory | Data Memory | Data EEPROM | Stack | IAP | I/O | Timer                        | ADC         | Temp. Sensor | RTC | Interface                   |
| HT66L2530A        | 16MHz      | 1.8V~5.5V | 2K×16          | 128×8       | 128×8       | 8     | √   | 18  | 16-bit PTM×1<br>16-bit STM×1 | 10/12-bit×4 | √            | √   | UART/SPI/I <sup>2</sup> C×1 |
| HT66L2540A        | 16MHz      | 1.8V~5.5V | 4K×16          | 256×8       | 256×8       | 8     | √   | 26  | 16-bit PTM×1<br>16-bit STM×1 | 10/12-bit×8 | √            | √   | UART/SPI/I <sup>2</sup> C×1 |
| HT66L2550A        | 16MHz      | 1.8V~5.5V | 8K×16          | 512×8       | 256×8       | 8     | √   | 30  | 16-bit PTM×2<br>16-bit STM×1 | 10/12-bit×8 | √            | √   | UART/SPI/I <sup>2</sup> C×1 |

| Low Power ADC LCD MCU |            |           |                |             |             |       |     |     |                              |             |              |      |     |
|-----------------------|------------|-----------|----------------|-------------|-------------|-------|-----|-----|------------------------------|-------------|--------------|------|-----|
| Part No.              | Max. Freq. | VDD       | Program Memory | Data Memory | Data EEPROM | Stack | IAP | I/O | Timer                        | ADC         | Temp. Sensor | LCD  | RTC |
| HT67L2540A            | 16MHz      | 1.8V~5.5V | 4K×16          | 256×8       | 256×8       | 8     | √   | 22  | 16-bit PTM×1<br>16-bit STM×1 | 10/12-bit×8 | √            | 24×4 | √   |
| HT67L2550A            | 16MHz      | 1.8V~5.5V | 8K×16          | 512×8       | 512×8       | 8     | √   | 30  | 16-bit PTM×2<br>16-bit STM×1 | 10/12-bit×8 | √            | 32×4 | √   |

| Advanced OPA MCU |            |           |                |             |             |       |     |     |                              |          |              |         |     |     |          |
|------------------|------------|-----------|----------------|-------------|-------------|-------|-----|-----|------------------------------|----------|--------------|---------|-----|-----|----------|
| Part No.         | Max. Freq. | VDD       | Program Memory | Data Memory | Data EEPROM | Stack | IAP | I/O | Timer                        | ADC      | Temp. Sensor | DAC     | CMP | OPA | PWM      |
| HT66F4640        | 16MHz      | 1.8V~5.5V | 4K×16          | 512×8       | 512×8       | 8     | √   | 22  | 10-bit CTM×1<br>10-bit PTM×1 | 12-bit×8 | √            | 8-bit×3 | 2   | 2   | 16-bit×1 |

Note: 1. The MCU internal OPA gain bandwidth is software programmable.

2. PWM supports edge-aligned and center-aligned PWM mode and includes dead time, complementary, mask, protection functions.

| High Accuracy HIRC MCU |            |           |                |             |             |       |     |     |                                              |          |           |                      |     |           |           |
|------------------------|------------|-----------|----------------|-------------|-------------|-------|-----|-----|----------------------------------------------|----------|-----------|----------------------|-----|-----------|-----------|
| Part No.               | Max. Freq. | VDD       | Program Memory | Data Memory | Data EEPROM | Stack | IAP | I/O | Timer                                        | ADC      | Touch Key | LCD                  | RTC | IR Driver | Interface |
| BX68R2420              | 4MHz       | 2.0V~5.5V | 1K×14          | 32×8        | —           | 2     | —   | 16  | 9-bit×1                                      | —        | —         | —                    | —   | √         | —         |
| HT68F2420              | 4MHz       | 1.8V~5.5V | 1K×13          | 32×8        | —           | 2     | —   | 16  | 9-bit×1                                      | —        | —         | —                    | —   | √         | —         |
| HT67F2432              | 4MHz       | 1.8V~5.5V | 2K×16          | 128×8       | 32×16       | 6     | —   | 26  | 9-bit×1<br>10-bit CTM×1                      | 10-bit×4 | —         | 20×4                 | √   | —         | UART×1    |
| BS67F2432              | 4MHz       | 1.8V~5.5V | 2K×16          | 128×8       | 32×16       | 6     | —   | 21  | 9-bit×1<br>10-bit CTM×1                      | 10-bit×4 | 8         | 15×4                 | √   | —         | UART×1    |
| HT67F2452              | 4MHz       | 1.8V~5.5V | 8K×16          | 512×8       | 128×8       | 8     | √   | 44  | 10-bit CTM×1<br>10-bit PTM×1<br>16-bit STM×1 | 12-bit×8 | —         | 30×4<br>29×5<br>28×6 | √   | √         | UART×1    |

Note: BX68R2420 Program Memory is OTP type.

## 8-Bit MCU

## RGB LED MCU

| Part No.  | Max. Freq. | VDD       | Program Memory | Data Memory | Stack | I/O | Timer        | Multiple RGB LED | Constant Current | Interface                     | Package            |
|-----------|------------|-----------|----------------|-------------|-------|-----|--------------|------------------|------------------|-------------------------------|--------------------|
| HT45F0062 | 8MHz       | 2.2V~5.5V | 2K×16          | 128×8       | 4     | 14  | 10-bit CTM×1 | √                | 12               | I <sup>2</sup> C×1<br>Cascade | 16NSOP-EP<br>16QFN |

## 8-Bit OTP MCU

## I/O OTP MCU

| Part No. | Max. Freq. | VDD       | Program Memory | Data Memory | Stack | I/O | Timer             | ADC | PWM     | Package                         |
|----------|------------|-----------|----------------|-------------|-------|-----|-------------------|-----|---------|---------------------------------|
| BX68R002 | 8MHz       | 2.0V~5.5V | 1K×14          | 64×8        | 2     | 8   | 8-bit×1, 16-bit×1 | —   | 8-bit×1 | 8SOP, 10SOP                     |
| BX68R003 | 8MHz       | 2.0V~5.5V | 1K×14          | 64×8        | 2     | 14  | 8-bit×1, 16-bit×1 | —   | 8-bit×3 | 8SOP, 16NSOP                    |
| BX68R004 | 8MHz       | 2.0V~5.5V | 2K×15          | 96×8        | 4     | 18  | 8-bit×1, 16-bit×1 | —   | 8-bit×3 | 16NSOP, 20NSOP<br>20SOP, 20SSOP |

## ADC OTP MCU

| Part No.  | Max. Freq. | VDD       | Program Memory | Data Memory | Stack | I/O | Timer                        | ADC      | PWM      | Package                                |
|-----------|------------|-----------|----------------|-------------|-------|-----|------------------------------|----------|----------|----------------------------------------|
| BX66R002  | 8MHz       | 2.0V~5.5V | 1K×14          | 64×8        | 2     | 8   | 8-bit×1, 16-bit×1            | 8-bit×4  | 8-bit×1  | 8SOP<br>10SOP                          |
| BX66R0025 |            |           | 2K×16          | 128×8       | 4     |     |                              |          |          |                                        |
| BX66R003  | 8MHz       | 2.0V~5.5V | 1K×14          | 64×8        | 2     | 14  | 8-bit×1, 16-bit×1            | 8-bit×5  | 8-bit×3  | 8SOP, 16NSOP                           |
| BX66R004  | 8MHz       | 2.0V~5.5V | 2K×15          | 96×8        | 4     | 18  | 8-bit×1, 16-bit×1            | 8-bit×10 | 8-bit×3  | 16NSOP, 20NSOP<br>20SOP, 20SSOP        |
| BX66R006  | 16MHz      | 1.8V~5.5V | 4K×16          | 256×8       | 8     | 18  | 10-bit STM×1<br>16-bit PTM×1 | 12-bit×8 | 16-bit×5 | 16NSOP, 20NSOP<br>20SOP, 20SSOP, 20QFN |

## 8-Bit USB MCU

## I/O USB OTP MCU

| Part No. | Max. Freq. | VDD       | Program Memory | Data Memory | Stack | I/O | Timer               | Endpoints | LDO 3.3V | Package |
|----------|------------|-----------|----------------|-------------|-------|-----|---------------------|-----------|----------|---------|
| HT82B45R | 12MHz      | 2.2V~5.5V | 4K×16          | 256×8       | 8     | 35  | 8-bit×1<br>16-bit×1 | 3         | √        | 48LQFP  |

## I/O USB MCU

| Part No.  | Max. Freq. | VDD       | Program Memory | Data Memory | Stack | IAP/ISP | I/O | Timer                                        | Endpoints | LDO 3.3V | Interface                       | Package          |
|-----------|------------|-----------|----------------|-------------|-------|---------|-----|----------------------------------------------|-----------|----------|---------------------------------|------------------|
| HT68FB550 | 16MHz      | 2.2V~5.5V | 8K×16          | 512×8       | 8     | √       | 25  | 10-bit CTM×2<br>10-bit STM×1<br>16-bit STM×1 | 6         | √        | SPI/I <sup>2</sup> C×1<br>SPI×1 | 24SSOP<br>28SSOP |
| HT68FB560 | 16MHz      | 2.2V~5.5V | 16K×16         | 768×8       | 12    | √       | 37  | 10-bit CTM×2<br>10-bit STM×1<br>16-bit STM×1 | 8         | √        | SPI/I <sup>2</sup> C×1<br>SPI×1 | 28SSOP<br>48LQFP |

## RGB LED USB MCU

| Part No.  | Max. Freq. | VDD       | Program Memory | Data Memory | Data EEPROM | Stack | IAP/ISP | I/O | Timer    | ADC | Endpoints | LDO 3.3V | LED PWM | Const. Current | Interface | Package          |
|-----------|------------|-----------|----------------|-------------|-------------|-------|---------|-----|----------|-----|-----------|----------|---------|----------------|-----------|------------------|
| HT68FB541 | 16MHz      | 3.0V~5.5V | 4K×16          | 256×8       | 64×8        | 8     | √       | 18  | 16-bit×2 | —   | 4         | √        | 3×8     | —              | SPI×1     | 24SSOP           |
| HT68FB571 | 16MHz      | 3.0V~5.5V | 8K×16          | 512×8       | 64×8        | 8     | √       | 41  | 16-bit×2 | —   | 4         | √        | 16×8    | —              | SPI×1     | 28SSOP<br>48LQFP |

## 8-Bit CAN Bus MCU

## CAN Bus MCU

| Part No.  | Max. Freq. | VDD       | Program Memory | Data Memory | Data EEPROM | Stack | IAP | I/O | Timer                                        | ADC       | CAN Protocol             | Message Objects | Interface                                 | Package                   |
|-----------|------------|-----------|----------------|-------------|-------------|-------|-----|-----|----------------------------------------------|-----------|--------------------------|-----------------|-------------------------------------------|---------------------------|
| HT66F3352 | 16MHz      | 1.8V~5.5V | 8K×16          | 512×8       | 128×8       | 8     | √   | 26  | 16 bit CTM×1<br>16 bit STM×1<br>10 bit PTM×1 | 12-bit×12 | CAN 2.0A/B<br>ISO11898-1 | 32              | CAN×1<br>UART×1<br>SPI/I <sup>2</sup> C×1 | 28SSOP<br>46QFN<br>48LQFP |
| HT66F3362 |            |           | 16K×16         | 1K×8        | 1K×8        | 12    |     | 28  | 16 bit CTM×1<br>16 bit STM×1<br>10 bit PTM×2 |           |                          |                 | CAN×1<br>UART×2<br>SPI/I <sup>2</sup> C×1 |                           |

Note: Based on BOSCH CAN IP module C\_CAN.

**32-Bit BLDC Motor MCU**
**32-Bit Cortex®-M4 BLDC Motor MCU**

| Part No.                                                                                                                                                                                                                                                                                                                                                               | Max. Freq. | VDD        | Flash | SRAM  | DMA   | ADC                       | DAC          | Timer                                      | RTC | USB          | CAN | Interface                                               | Others                                                | Max. I/O | Package              |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------|-------|-------|-------|---------------------------|--------------|--------------------------------------------|-----|--------------|-----|---------------------------------------------------------|-------------------------------------------------------|----------|----------------------|
| HT32F42386*                                                                                                                                                                                                                                                                                                                                                            | 168MHz     | 1.71V~3.6V | 512KB | 192KB | 6CH×2 | 4Msps<br>12-bit×2<br>24ch | 12-bit<br>×2 | MCTM×2, GPTM×2<br>SCTM×4, BFTM×2,<br>WDT×1 | √   | FS<br>Device | 2   | USART×2, UART×4<br>SPI×2, QSPI×1<br>I²C×3, I²S×2, SCI×2 | CRC, AES, SDIO<br>RNG, CORDIC, PID<br>EBI, CSIF, FPRA | 80       | 48/64LQFP<br>100LQFP |
| * Under development, available in 1Q, 2027.<br>Operating Temperature: -40°C ~ 105°C<br>Note:<br>WWDT: Window Watchdog Timer<br>ACTMR: Advanced Control Timer<br>IRTMR: Infrared Transmitter<br>BTMR: Basic Timer<br>SPIM: External SPI Flash Memory Extension<br>SDIO: Secure Digital Input Output<br>GPTMR: General Purpose Timer<br>XMC: External Memory Controller. |            |            |       |       |       |                           |              |                                            |     |              |     |                                                         |                                                       |          |                      |

**32-Bit Cortex®-M0+ BLDC Motor MCU**

| Part No.   | Max. Freq. | VDD       | Flash | SRAM | PDMA | ADC                  | CMP | OPA / PGA | Timer <sup>1</sup>                             | Cap. <sup>2</sup> or PWM | Cpm. PWM <sup>3</sup> | RTC | Interface                         | Others     | I/O      | Package         |
|------------|------------|-----------|-------|------|------|----------------------|-----|-----------|------------------------------------------------|--------------------------|-----------------------|-----|-----------------------------------|------------|----------|-----------------|
| HT32F65233 | 60MHz      | 2.5V~5.5V | 32KB  | 8KB  | 6CH  | 2Msps×1<br>12-bit×12 | 2   | 1 / 2     | BFTM×2<br>SCTM×2<br>GPTM×1<br>MCTM×1<br>LSTM×1 | 12                       | 3                     | —   | UART×1<br>SPI×1, I²C×1            | CRC<br>DIV | 20<br>28 | 24SSOP<br>32QFN |
| HT32F65240 |            |           | 64KB  |      |      | 1Msps×2<br>12-bit×8  | 3   | 2 / 0     | BFTM×2<br>SCTM×4<br>GPTM×1<br>MCTM×1           |                          |                       | √   | USART×1<br>UART×1<br>SPI×1, I²C×1 |            | 40       | 48LQFP          |

**32-Bit Cortex®-M0+ BLDC Motor MCU (CORDIC + PID Engine)**

|             |       |           |       |      |     |                        |   |       |                                                |    |   |   |                                            |            |                |                           |
|-------------|-------|-----------|-------|------|-----|------------------------|---|-------|------------------------------------------------|----|---|---|--------------------------------------------|------------|----------------|---------------------------|
| HT32F66246  | 80MHz | 2.5V~5.5V | 64KB  | 8KB  | 6CH | 2.5Msps×1<br>12-bit×12 | 2 | 0 / 4 | BFTM×2<br>SCTM×4<br>GPTM×1<br>MCTM×1<br>LSTM×1 | 12 | 3 | — | CAN×1<br>USART×1<br>UART×1<br>SPI×1, I²C×1 | CRC<br>DIV | 20<br>28<br>44 | 24SSOP<br>32QFN<br>48LQFP |
| HT32F66256* | 80MHz | 2.5V~5.5V | 128KB | 32KB | 6CH | 2.5Msps×2<br>12-bit×11 | 4 | 0 / 6 | BFTM×3<br>SCTM×4<br>GPTM×2<br>MCTM×2<br>LSTM×1 | 24 | 6 | — | CAN×1<br>USART×1<br>UART×2<br>SPI×2, I²C×2 | CRC<br>DIV | 42<br>42<br>56 | 48QFN<br>48LQFP<br>64LQFP |

\* Under development, available in 4Q, 2026.  
 Note: 1. BFTM: Basic Function Timer, SCTM: Single-Channel Timer, GPTM: General-Purpose Timer, MCTM: Motor Control Timer, LSTM: Low Speed Timer.  
 2. Cap.: Input Capture.  
 3. Cpm. PWM: Complementary PWM for 3-phase motor control or inverter application.

**8-Bit BLDC Motor MCU**
**8-Bit BLDC Motor MCU**

| Part No.   | Max. Freq. | VDD       | Program Memory | Data Memory | Data EEPROM | Stack | IAP | I/O | Timer                                          | ADC           | MDU | OCP | PWM          | CMP | Inter-face      | Package            |
|------------|------------|-----------|----------------|-------------|-------------|-------|-----|-----|------------------------------------------------|---------------|-----|-----|--------------|-----|-----------------|--------------------|
| BD66FM5245 | 20MHz      | 4.5V~5.5V | 4K×16          | 512×8       | —           | 8     | √   | 22  | 10-bit PTM×2<br>16-bit PTM×2<br>16-bit CAPTM×1 | 12-bit<br>×14 | √   | √   | 10-bit<br>×3 | 3   | UART×1          | 16NSOP<br>24SSOP   |
| BD66FM5252 |            |           | 8K×16          | 2048×8      | 512×8       |       |     | 30  | 10-bit PTM×2<br>16-bit PTM×2<br>16-bit CAPTM×1 | 12-bit<br>×11 |     |     |              |     | UART×1<br>I²C×1 | 24/28SSOP<br>32QFN |

**32-Bit BLDC Motor MCU with Gate-Driver**
**32-Bit Cortex®-M0+ BLDC Motor MCU with 26V P/N Gate-Driver**

| Part No.    | Max. Freq. | VCC    | LDO             | Flash | SRAM | PDMA | ADC                  | CMP | OPA / PGA | Timer <sup>2</sup>                             | Cap. <sup>3</sup> or PWM | Cpm. PWM <sup>4</sup> | RTC | Interface                           | Others  | I/O            | Package                      |
|-------------|------------|--------|-----------------|-------|------|------|----------------------|-----|-----------|------------------------------------------------|--------------------------|-----------------------|-----|-------------------------------------|---------|----------------|------------------------------|
| HT32F65333A | 60MHz      | 6V~20V | 5V <sup>1</sup> | 32KB  | 8KB  | 6CH  | 2Msps×1<br>12-bit×12 | 2   | 1 / 2     | BFTM×2<br>SCTM×2<br>GPTM×1<br>MCTM×1<br>LSTM×1 | 12                       | 3                     | —   | UART×1<br>SPI×1, I <sup>2</sup> C×1 | CRC DIV | 14<br>16<br>24 | 28SSOP<br>32QFN<br>48LQFP-EP |

**32-Bit Cortex®-M0+ BLDC Motor MCU with 26V N/N Gate-Driver**

|              |       |        |                 |      |     |     |                      |   |       |                                                |    |   |   |                                     |         |          |                    |
|--------------|-------|--------|-----------------|------|-----|-----|----------------------|---|-------|------------------------------------------------|----|---|---|-------------------------------------|---------|----------|--------------------|
| HT32F65333G* | 60MHz | 6V~20V | 5V <sup>1</sup> | 32KB | 8KB | 6CH | 2Msps×1<br>12-bit×12 | 2 | 1 / 2 | BFTM×2<br>SCTM×2<br>GPTM×1<br>MCTM×1<br>LSTM×1 | 12 | 3 | — | UART×1<br>SPI×1, I <sup>2</sup> C×1 | CRC DIV | 12<br>26 | 32QFN<br>48LQFP-EP |
|--------------|-------|--------|-----------------|------|-----|-----|----------------------|---|-------|------------------------------------------------|----|---|---|-------------------------------------|---------|----------|--------------------|

**32-Bit Cortex®-M0+ BLDC Motor MCU with 36V P/N Gate-Driver**

|             |       |        |                 |      |     |     |                      |   |       |                                                |    |   |   |                                     |         |                |                              |
|-------------|-------|--------|-----------------|------|-----|-----|----------------------|---|-------|------------------------------------------------|----|---|---|-------------------------------------|---------|----------------|------------------------------|
| HT32F65433A | 60MHz | 6V~32V | 5V <sup>1</sup> | 32KB | 8KB | 6CH | 2Msps×1<br>12-bit×12 | 2 | 1 / 2 | BFTM×2<br>SCTM×2<br>GPTM×1<br>MCTM×1<br>LSTM×1 | 12 | 3 | — | UART×1<br>SPI×1, I <sup>2</sup> C×1 | CRC DIV | 14<br>16<br>24 | 28SSOP<br>32QFN<br>48LQFP-EP |
|-------------|-------|--------|-----------------|------|-----|-----|----------------------|---|-------|------------------------------------------------|----|---|---|-------------------------------------|---------|----------------|------------------------------|

**32-Bit Cortex®-M0+ BLDC Motor MCU with 36V P/N Gate-Driver (CORDIC + PID Engine)**

|             |       |        |                 |      |     |     |                        |   |       |                                                |    |   |   |                                                         |         |                |                    |
|-------------|-------|--------|-----------------|------|-----|-----|------------------------|---|-------|------------------------------------------------|----|---|---|---------------------------------------------------------|---------|----------------|--------------------|
| HT32F66446A | 80MHz | 6V~32V | 5V <sup>1</sup> | 64KB | 8KB | 6CH | 2.5Msps×1<br>12-bit×11 | 2 | 0 / 4 | BFTM×2<br>SCTM×4<br>GPTM×1<br>MCTM×1<br>LSTM×1 | 12 | 3 | — | CAN×1<br>USART×1<br>UART×1<br>SPI×1, I <sup>2</sup> C×1 | CRC DIV | 16<br>26<br>29 | 46QFN<br>48LQFP-EP |
|-------------|-------|--------|-----------------|------|-----|-----|------------------------|---|-------|------------------------------------------------|----|---|---|---------------------------------------------------------|---------|----------------|--------------------|

**32-Bit Cortex®-M0+ BLDC Motor MCU with 48V N/N Gate-Driver**

|             |       |        |    |      |     |     |                      |   |       |                                                |    |   |   |                                                |         |          |                    |
|-------------|-------|--------|----|------|-----|-----|----------------------|---|-------|------------------------------------------------|----|---|---|------------------------------------------------|---------|----------|--------------------|
| HT32F65532G | 60MHz | 6V~40V | 5V | 32KB | 4KB | 6CH | 2Msps×1<br>12-bit×12 | 2 | 1 / 0 | BFTM×2<br>SCTM×4<br>GPTM×1<br>MCTM×1<br>LSTM×1 | 12 | 3 | — | USART×1<br>UART×1<br>SPI×1, I <sup>2</sup> C×1 | CRC DIV | 12<br>28 | 32QFN<br>48LQFP-EP |
| HT32F65533G |       |        |    | 32KB | 8KB |     | 2Msps×1<br>12-bit×12 | 2 | 1 / 2 | BFTM×2<br>SCTM×2<br>GPTM×1<br>MCTM×1<br>LSTM×1 |    |   |   | UART×1<br>SPI×1, I <sup>2</sup> C×1            |         | 12<br>26 | 32QFN<br>48LQFP-EP |

**32-Bit Cortex®-M0+ BLDC Motor MCU with 48V N/N Gate-Driver (CORDIC + PID Engine)**

|             |       |        |    |      |     |     |                        |   |       |                                                |    |   |   |                                                         |         |          |                    |
|-------------|-------|--------|----|------|-----|-----|------------------------|---|-------|------------------------------------------------|----|---|---|---------------------------------------------------------|---------|----------|--------------------|
| HT32F66546G | 80MHz | 6V~40V | 5V | 64KB | 8KB | 6CH | 2.5Msps×1<br>12-bit×11 | 2 | 0 / 4 | BFTM×2<br>SCTM×4<br>GPTM×1<br>MCTM×1<br>LSTM×1 | 12 | 3 | — | CAN×1<br>USART×1<br>UART×1<br>SPI×1, I <sup>2</sup> C×1 | CRC DIV | 25<br>28 | 46QFN<br>48LQFP-EP |
|-------------|-------|--------|----|------|-----|-----|------------------------|---|-------|------------------------------------------------|----|---|---|---------------------------------------------------------|---------|----------|--------------------|

**32-Bit Cortex®-M0+ BLDC Motor MCU with 110V N/N Gate-Driver**

|             |       |        |    |      |     |     |                      |   |       |                                                |    |   |   |                                     |         |          |                    |
|-------------|-------|--------|----|------|-----|-----|----------------------|---|-------|------------------------------------------------|----|---|---|-------------------------------------|---------|----------|--------------------|
| HT32F65733G | 60MHz | 6V~20V | 5V | 32KB | 8KB | 6CH | 2Msps×1<br>12-bit×12 | 2 | 1 / 2 | BFTM×2<br>SCTM×2<br>GPTM×1<br>MCTM×1<br>LSTM×1 | 12 | 3 | — | UART×1<br>SPI×1, I <sup>2</sup> C×1 | CRC DIV | 23<br>24 | 46QFN<br>48LQFP-EP |
|-------------|-------|--------|----|------|-----|-----|----------------------|---|-------|------------------------------------------------|----|---|---|-------------------------------------|---------|----------|--------------------|

**32-Bit Cortex®-M0+ BLDC Motor MCU with 110V N/N Gate-Driver (CORDIC + PID Engine)**

|             |       |        |    |      |     |     |                      |   |       |                                                |    |   |   |                                                         |         |          |                    |
|-------------|-------|--------|----|------|-----|-----|----------------------|---|-------|------------------------------------------------|----|---|---|---------------------------------------------------------|---------|----------|--------------------|
| HT32F66746G | 80MHz | 6V~20V | 5V | 64KB | 8KB | 6CH | 1Msps×2<br>12-bit×10 | 3 | 0 / 4 | BFTM×2<br>SCTM×4<br>GPTM×1<br>MCTM×1<br>LSTM×1 | 12 | 3 | — | CAN×1<br>USART×1<br>UART×1<br>SPI×1, I <sup>2</sup> C×1 | CRC DIV | 22<br>26 | 46QFN<br>48LQFP-EP |
|-------------|-------|--------|----|------|-----|-----|----------------------|---|-------|------------------------------------------------|----|---|---|---------------------------------------------------------|---------|----------|--------------------|

\* Under development, available in 4Q, 2026.

Note: 1. LDO: Support external signal wakeup to realize zero standby power function.

2. BFTM: Basic Function Timer, SCTM: Single-Channel Timer, GPTM: General-Purpose Timer, MCTM: Motor Control Timer, LSTM: Low Speed Timer.

3. Cap.: Input Capture.

4. Cpm. PWM: Complementary PWM for 3-phase motor control or inverter application.

**8-Bit BLDC Motor MCU with Gate-Driver**
**8-Bit BLDC Motor MCU with 26V P/N Gate-Driver**

| Part No.    | Max. Freq. | VCC    | LDO | Program Memory | Data Memory | Data EEPROM | I/O | Timer                                          | ADC       | MDU | OCP | PWM       | CMP | Inter-face                   | Package |
|-------------|------------|--------|-----|----------------|-------------|-------------|-----|------------------------------------------------|-----------|-----|-----|-----------|-----|------------------------------|---------|
| BD66FM6352A | 20MHz      | 6V~32V | 5V* | 8K×16          | 2048×8      | 512×8       | 18  | 10-bit PTM×2<br>16-bit PTM×2<br>16-bit CAPTM×1 | 12-bit ×9 | √   | √   | 10-bit ×3 | 3   | UART×1<br>I <sup>2</sup> C×1 | 32QFN   |

**8-Bit BLDC Motor MCU with 26V N/N Gate-Driver**

|              |       |        |     |       |        |       |    |                                                |           |   |   |           |   |                              |                    |
|--------------|-------|--------|-----|-------|--------|-------|----|------------------------------------------------|-----------|---|---|-----------|---|------------------------------|--------------------|
| BD66FM6352G* | 20MHz | 6V~32V | 5V* | 8K×16 | 2048×8 | 512×8 | 21 | 10-bit PTM×2<br>16-bit PTM×2<br>16-bit CAPTM×1 | 12-bit ×9 | √ | √ | 10-bit ×3 | 3 | UART×1<br>I <sup>2</sup> C×1 | 32QFN<br>48LQFP-EP |
|--------------|-------|--------|-----|-------|--------|-------|----|------------------------------------------------|-----------|---|---|-----------|---|------------------------------|--------------------|

**8-Bit BLDC Motor MCU with 36V P/N Gate-Driver**

|                            |       |        |     |       |        |       |    |                                                                |            |   |   |           |   |                              |       |
|----------------------------|-------|--------|-----|-------|--------|-------|----|----------------------------------------------------------------|------------|---|---|-----------|---|------------------------------|-------|
| BD66FM6445A                | 20MHz | 6V~32V | 5V* | 4K×16 | 512×8  | —     | 15 | 10-bit PTM×2<br>16-bit PTM×2<br>16-bit CAPTM×1                 | 12-bit ×12 | √ | √ | 10-bit ×3 | 3 | UART×1                       | 32QFN |
| BD66FM6452A                |       |        |     | 8K×16 | 2048×8 | 512×8 | 18 |                                                                | 12-bit ×9  |   |   |           |   | UART×1<br>I <sup>2</sup> C×1 |       |
| BD66FM6446B<br>BD66FM6446C |       |        | 5V  | 4K×16 | 512×8  | 512×8 | 16 | 10-bit PTM×2<br>16-bit PTM×2<br>16-bit CTM×1<br>16-bit CAPTM×1 | 12-bit ×10 |   |   |           |   | UART×1<br>I <sup>2</sup> C×1 | 24QFN |

**8-Bit BLDC Motor MCU with 48V N/N Gate-Driver**

|             |       |        |    |       |        |       |    |                                                                |            |   |   |           |   |                              |                    |
|-------------|-------|--------|----|-------|--------|-------|----|----------------------------------------------------------------|------------|---|---|-----------|---|------------------------------|--------------------|
| BD66FM6546G | 20MHz | 6V~40V | 5V | 4K×16 | 512×8  | 512×8 | 13 | 10-bit PTM×2<br>16-bit PTM×2<br>16-bit CTM×1<br>16-bit CAPTM×1 | 12-bit ×8  | √ | √ | 10-bit ×3 | 3 | UART×1<br>I <sup>2</sup> C×1 | 28QFN              |
| BD66FM6545G |       |        |    |       |        | —     | 15 |                                                                | 12-bit ×12 |   |   |           |   | UART×1                       | 32QFN              |
| BD66FM6550G |       |        |    | 8K×16 | 2048×8 | 512×8 | 24 | 10-bit PTM×2<br>16-bit PTM×2<br>16-bit CAPTM×1                 | 12-bit ×10 |   |   |           |   | UART×1<br>I <sup>2</sup> C×1 | 32QFN<br>48LQFP-EP |

**8-Bit BLDC Motor MCU with 110V N/N Gate-Driver**

|             |       |        |    |       |        |       |    |                                                                |            |   |   |           |   |                              |                             |
|-------------|-------|--------|----|-------|--------|-------|----|----------------------------------------------------------------|------------|---|---|-----------|---|------------------------------|-----------------------------|
| BD66FM6746G | 20MHz | 6V~20V | 5V | 4K×16 | 512×8  | 512×8 | 16 | 10-bit PTM×2<br>16-bit PTM×2<br>16-bit CTM×1<br>16-bit CAPTM×1 | 12-bit ×13 | √ | √ | 10-bit ×3 | 3 | UART×1<br>I <sup>2</sup> C×1 | 28QFN<br>32QFN              |
| BD66FM6752G |       |        |    | 8K×16 | 2048×8 |       | 24 |                                                                | 12-bit ×10 |   |   |           |   |                              | 28QFN<br>32QFN<br>48LQFP-EP |

\* Under development, available in 4Q, 2026.

Note: LDO: Support external signal wakeup to realize zero standby power function.

**8-Bit 1-phase BLDC Motor OTP MCU with 36V P/N Gate-Driver**

| Part No.    | Max. Freq. | VCC    | LDO | Program Memory | Data Memory | ORPP | I/O | Timer                        | ADC       | MDU | OCP | PWM       | CMP | Inter-face | Package             |
|-------------|------------|--------|-----|----------------|-------------|------|-----|------------------------------|-----------|-----|-----|-----------|-----|------------|---------------------|
| BD66RM2441B | 20MHz      | 6V~32V | 5V  | 4K×16          | 384×8       | √    | 7   | 16-bit PTM×1<br>16-bit CTM×3 | 12-bit ×5 | √   | √   | 10-bit ×3 | 1   | UART       | 16TSSOP-EP<br>16QFN |

**8-Bit 1-phase BLDC Motor OTP MCU with 48V N/N Gate-Driver**

| Part No.    | Max. Freq. | VCC    | LDO | Program Memory | Data Memory | ORPP | I/O | Timer                        | ADC       | MDU | OCP | PWM       | CMP | Inter-face | Package |
|-------------|------------|--------|-----|----------------|-------------|------|-----|------------------------------|-----------|-----|-----|-----------|-----|------------|---------|
| BD66RM2541G | 20MHz      | 6V~40V | 5V  | 4K×16          | 384×8       | √    | 7   | 16-bit PTM×1<br>16-bit CTM×3 | 12-bit ×5 | √   | √   | 10-bit ×3 | 1   | UART       | 24QFN   |

**32-Bit BLDC Motor MCU with Driver**
**32-Bit Cortex®-M0+ BLDC Motor MCU with Driver**

| Part No.     | Max. Freq. | VM     | LDO | Peak Current | Flash | SRAM | PDMA | ADC                  | CMP | OPA / PGA | Timer <sup>1</sup>                             | Cap. <sup>2</sup> or PWM | Cpm. PWM <sup>3</sup> | Interface                           | Others  | I/O      | Package            |
|--------------|------------|--------|-----|--------------|-------|------|------|----------------------|-----|-----------|------------------------------------------------|--------------------------|-----------------------|-------------------------------------|---------|----------|--------------------|
| HT32F65B33F* | 60MHz      | 6V~20V | 5V  | 3.5A         | 32KB  | 4KB  | 6CH  | 2Msps×1<br>12-bit×12 | 2   | 1 / 2     | BFTM×2<br>SCTM×4<br>GPTM×1<br>MCTM×1<br>LSTM×1 | 12                       | 3                     | USART×1<br>UART×1<br>SPI×1<br>I²C×1 | CRC DIV | 23       | 46QFN              |
| HT32F65C33F  |            | 6V~32V |     |              |       | 8KB  |      | 2Msps×1<br>12-bit×12 | 2   | 1 / 2     | BFTM×2<br>SCTM×2<br>GPTM×1<br>MCTM×1<br>LSTM×1 |                          |                       | UART×1<br>SPI×1<br>I²C×1            |         | 22<br>23 | 46QFN<br>48LQFP-EP |
| HT32F65C32F  |            |        |     |              |       | 4KB  |      |                      |     | 1 / 0     | BFTM×2<br>SCTM×4<br>GPTM×1<br>MCTM×1<br>LSTM×1 |                          |                       | USART×1<br>UART×1<br>SPI×1<br>I²C×1 |         | 28       | 48LQFP-EP          |

\* Under development, available in 4Q, 2026.

Note: 1. BFTM: Basic Function Timer, SCTM: Single-Channel Timer, GPTM: General-Purpose Timer, MCTM: Motor Control Timer, LSTM: Low Speed Timer.

2. Cap.: Input Capture.

3. Cpm. PWM: Complementary PWM for 3-phase motor control or inverter application.

**8-Bit BLDC Motor MCU with Driver**
**8-Bit BLDC Motor MCU with Driver**

| Part No.     | Max. Freq. | VM     | LDO | Peak Current | Program Memory | Data Memory | Data EEPROM | IAP | I/O | Timer                                                          | ADC        | MDU | OCF | PWM       | CMP | Interface                    | Package            |
|--------------|------------|--------|-----|--------------|----------------|-------------|-------------|-----|-----|----------------------------------------------------------------|------------|-----|-----|-----------|-----|------------------------------|--------------------|
| BD66FM8345C  | 20MHz      | 6V~15V | 5V  | 1.5A         | 4K×16          | 512×8       | —           | √   | 11  | 10-bit PTM×2<br>16-bit PTM×2<br>16-bit CAPTM×1                 | 12-bit ×9  | √   | √   | 10-bit ×3 | 3   | UART×1                       | 24SSOP-EP<br>32QFN |
| BD66FM8346F* |            | 6V~20V |     | 3.5A         |                |             | 512×8       |     | 14  | 10-bit PTM×2<br>16-bit PTM×2<br>16-bit CTM×1<br>16-bit CAPTM×1 | 12-bit ×11 |     |     |           |     | UART×1<br>I <sup>2</sup> C×1 | 32QFN              |
| BD66FM8446F  |            | 6V~32V |     |              | 8K×16          | 2048×8      |             |     | 13  | 10-bit PTM×2<br>16-bit PTM×2<br>16-bit CAPTM×1                 | 12-bit ×9  |     |     |           |     |                              |                    |
| BD66FM8452F  |            |        |     |              |                |             |             |     |     |                                                                |            |     |     |           |     |                              |                    |

\* Under development, available in 4Q, 2026.

**8-Bit 1-phase BLDC Motor OTP MCU with Driver**

| Part No.    | Max. Freq. | VM     | LDO | Peak Current | Program Memory | Data Memory | ORPP | I/O | Timer                        | ADC       | MDU | OCF | PWM       | CMP | Interface | Package |
|-------------|------------|--------|-----|--------------|----------------|-------------|------|-----|------------------------------|-----------|-----|-----|-----------|-----|-----------|---------|
| BD66RM3341C | 20MHz      | 6V~15V | 5V  | 1.5A         | 4K×16          | 384×8       | √    | 6   | 16-bit PTM×1<br>16-bit CTM×3 | 12-bit ×4 | √   | √   | 10-bit ×3 | 1   | UART      | 16QFN   |

| Driver Peripheral                                                                           |                |                    |                                     |                                    |                         |                         |                       |                         |         |
|---------------------------------------------------------------------------------------------|----------------|--------------------|-------------------------------------|------------------------------------|-------------------------|-------------------------|-----------------------|-------------------------|---------|
| H-Bridge Driver                                                                             |                |                    |                                     |                                    |                         |                         |                       |                         |         |
| Part No.                                                                                    | Supply Voltage | Max. Motor Voltage | Motor Peak Current (A)              | Motor RMS Current (A)              | Max. Sleep Current (μA) | Max. PWM Frequency (Hz) | Number of H-Bridge    | Protection              | Package |
| HT7K1201                                                                                    | 1.8V~6.0V      | 6V                 | 1.3                                 | 0.8                                | 0.1                     | 200K                    | 1                     | UVLO, OCP<br>OTP, OSP   | SOT23-6 |
| HT7K1211                                                                                    |                | 7.5V               | 2.1                                 | 1.5                                |                         |                         |                       |                         | 8SOP-EP |
| HT7K1311                                                                                    | 2.5V~5.5V      | 15V                | 3.0                                 | 2.4                                | 1.0                     | 200K                    | 1                     | UVLO, OCP<br>OTP, OSP   | 8SOP-EP |
| HT7K1312                                                                                    |                |                    |                                     |                                    |                         |                         |                       |                         | 8DFN    |
| HT7K1411                                                                                    | 2.5V~5.5V      | 24V                | 3.2                                 | 2.5                                | 1.0                     | 200K                    | 1                     | UVLO, OCP<br>OTP, OSP   | 8SOP-EP |
| 3-Channel Half-Bridge Driver                                                                |                |                    |                                     |                                    |                         |                         |                       |                         |         |
| Part No.                                                                                    | Supply Voltage | Max. Motor Voltage | Motor Peak Current (A)              | Motor RMS Current (A)              | Max. Sleep Current (μA) | Max. PWM Frequency (Hz) | LDO                   | Function                | Package |
| HT7K9316-50**                                                                               | 4V~20V         | 26V                | 3.5                                 | 2A                                 | 5                       | 50K                     | 5V/50mA               | UVLO, OSP<br>OTP, FAULT | 24QFN   |
| HT7K9416-50*                                                                                | 4.5V~32V       | 40V                | 4.0                                 | 2A                                 | 5                       | 50K                     | 5V/50mA               | UVLO, OSP<br>OTP, FAULT | 24QFN   |
| * Under development, available in 3Q, 2026.<br>** Under development, available in 1Q, 2027. |                |                    |                                     |                                    |                         |                         |                       |                         |         |
| Gate-Driver                                                                                 |                |                    |                                     |                                    |                         |                         |                       |                         |         |
| Part No.                                                                                    | Supply Voltage | Max. Motor Voltage | High Side Source / Sink Current (A) | Low Side Source / Sink Current (A) | Chip Shutdown Control   | Max. PWM Frequency (Hz) | Number of Half-Bridge | Protection              | Package |
| HT7K6875*                                                                                   | 10V~20V        | 250V               | 4.0 / 4.0                           | 4.0 / 4.0                          | —                       | 200K                    | 1                     | UVLO                    | 8SOP    |
| HT7K6970                                                                                    | 10V~20V        | 600V               | 0.35 / 0.30                         | 0.35 / 0.30                        | —                       | 200K                    | 1                     | UVLO                    | 8SOP    |
|                                                                                             |                |                    |                                     |                                    | √                       |                         |                       |                         | 16NSOP  |
| HT7K6975*                                                                                   | 9V~18V         | 700V               | 4.3 / 4.3                           | 4.3 / 4.3                          | —                       | 200K                    | 1                     | UVLO                    | 8SOP    |
| * Under development, available in 3Q, 2026.                                                 |                |                    |                                     |                                    |                         |                         |                       |                         |         |

## 24-Bit ADC MCU

### 32-Bit Cortex®-M0+ 24-Bit ADC MCU

| Part No.   | Max. Freq. | VDD       | Flash | SRAM | ADC                        |                             | Timer                           |  | RTC | Interface                       |  | Others   | Max. I/O | Package |
|------------|------------|-----------|-------|------|----------------------------|-----------------------------|---------------------------------|--|-----|---------------------------------|--|----------|----------|---------|
| HT32F59041 | 20MHz      | 2.5V~5.5V | 64KB  | 8KB  | SAR ADC 1MSPS<br>12-bit×12 | Delta Sigma ADC<br>24-bit×4 | BFTM×2, PWM×2<br>GPTM×1, MCTM×1 |  | √   | USART×1, UART×2<br>SPI×1, I²C×1 |  | CRC, DIV | 30       | 48LQFP  |

### 32-Bit Cortex®-M0+ 24-Bit ADC LCD MCU

| Part No.   | Max. Freq. | VDD        | Flash | SRAM | ADC                        |                             | Timer                   |  | RTC | USB | LCD       | Interface                       |  | Others          | Max. I/O | Package   |
|------------|------------|------------|-------|------|----------------------------|-----------------------------|-------------------------|--|-----|-----|-----------|---------------------------------|--|-----------------|----------|-----------|
| HT32F59741 | 60MHz      | 1.65V~3.6V | 64KB  | 8KB  | SAR ADC 1MSPS<br>12-bit×10 | Delta Sigma ADC<br>24-bit×4 | BFTM×2, PWM×2<br>GPTM×1 |  | √   | √   | 29×4~25×8 | USART×1, UART×2<br>SPI×2, I²C×2 |  | CRC, DIV<br>SCI | 53       | 64/80LQFP |

Note:  
 BFTM: Basic Function Timer  
 GPTM: General Purpose Timer  
 QSPI: Quad serial peripheral interface  
 SCI: Smart Card Interface  
 AES: Advanced Encryption Standard  
 SCTM: Single Channel Timer  
 MCTM: Motor Control Timer  
 SLED: Strip LED Controller  
 LEDC: LED controller  
 PWM: Pulse Width Modulation  
 USB: 2.0 Full Speed device  
 DIV: Hardware Divider  
 EBI: External Bus Interface for NOR Flash/SRAM/LCD

### 24-Bit ADC MCU

| Part No.   | Max. Freq. | VDD       | Program Memory | Data Memory | Data EEPROM | Stack | IAP | I/O | Timer                        | ADC      | ENOB | Temp. Sensor | OPA | Interface           |  | Package         |
|------------|------------|-----------|----------------|-------------|-------------|-------|-----|-----|------------------------------|----------|------|--------------|-----|---------------------|--|-----------------|
| BH66F5345* | 16MHz      | 1.8V~5.5V | 4K×16          | 256×8       | 128×8       | 8     | √   | 8   | 10-bit CTM×1<br>16-bit PTM×1 | 24-bit×8 | 19.5 | ±0.2°C       | 2   | UART×1<br>SPI/I²C×1 |  | 16QFN           |
| BH66F5355  | 12MHz      | 2.2V~5.5V | 8K×16          | 512×8       | 512×8       | 8     | √   | 10  | 10-bit CTM×1<br>16-bit PTM×1 | 24-bit×4 | 19.5 | ±0.2°C       | 2   | UART×1<br>SPI/I²C×1 |  | 24QFN<br>24SSOP |

\* Under development, available in 3Q, 2026.

### 24-Bit ADC LCD MCU

| Part No.   | Max. Freq. | VDD       | Program Memory | Data Memory | Data EEPROM | MDU | Stack | IAP | I/O | Timer                                        | ADC                   | ENOB      | LCD                  | OPA | RTC | Interface                    |  | Package                      |
|------------|------------|-----------|----------------|-------------|-------------|-----|-------|-----|-----|----------------------------------------------|-----------------------|-----------|----------------------|-----|-----|------------------------------|--|------------------------------|
| BH67F5372A | 16MHz      | 1.8V~5.5V | 32K×16         | 3072×8      | 2048×8      | √   | 16    | √   | 45  | 10-bit PTM×6<br>16-bit PTM×2<br>16-bit STM×3 | 12-bit×14<br>24-bit×4 | —<br>19.5 | 36×4<br>34×6<br>32×8 | —   | √   | UART×3<br>SPI/I²C×1          |  | 64LQFP                       |
| BH67F5255  | 8MHz       | 2.2V~5.5V | 8K×16          | 512×8       | 512×8       | —   | 16    | √   | 30  | 10-bit PTM×2<br>16-bit STM×1                 | 24-bit×4              | 19.1      | 24×4<br>22×6         | 2   | —   | UART×1<br>SPI/I²C×1          |  | 32QFN<br>48LQFP              |
| BH67F5265  | 16MHz      | 2.2V~5.5V | 16K×16         | 1024×8      | 1024×8      | √   | 16    | √   | 43  | 10-bit PTM×3<br>16-bit STM×1                 | 24-bit×6              | 19.1      | 30×4<br>28×6<br>26×8 | 2   | √   | UART×1<br>SPI×1<br>SPI/I²C×1 |  | 32QFN<br>48/64LQFP           |
| BH67F5275  | 16MHz      | 2.2V~5.5V | 32K×16         | 2048×8      | 2048×8      | √   | 16    | √   | 57  | 10-bit ATM×1<br>10-bit PTM×3<br>16-bit STM×1 | 24-bit×6              | 19.1      | 44×4<br>42×6<br>40×8 | 2   | √   | UART×1<br>SPI×1<br>SPI/I²C×1 |  | 32QFN<br>48/64LQFP<br>80LQFP |

Note: Test Conditions of ENOB are PGA Gain = 64, Data Rate = 10Hz and V<sub>REF</sub>=1.65V.

## 24-Bit ADC Peripheral

### 24-Bit ADC Peripheral

| Part No.  | Max. Freq. | VDD       | ADC      | ENOB | Data Rate    | PGA   | Interface    |  | Package      |
|-----------|------------|-----------|----------|------|--------------|-------|--------------|--|--------------|
| BH45B1225 | 4.91MHz    | 2.4V~5.5V | 24-bit×4 | 19.5 | 5Hz~1.6kHz   | 1~128 | I²C×1        |  | 8SOP, 16NSOP |
| BH45B1525 | 4.91MHz    | 2.7V~5.5V | 24-bit×4 | 21.3 | 10Hz~1.28kHz | 1~128 | SPI×1, I²C×1 |  | 20SSOP       |

Note: Test Conditions of ENOB are PGA Gain = 64, Data Rate = 10Hz, and V<sub>REF</sub>=1.65V.

| Health Care MCU                                                                                  |            |           |                |                |             |       |                              |              |                              |                                              |              |                      |                                  |                                  |                                  |                                      |                           |                                  |                  |
|--------------------------------------------------------------------------------------------------|------------|-----------|----------------|----------------|-------------|-------|------------------------------|--------------|------------------------------|----------------------------------------------|--------------|----------------------|----------------------------------|----------------------------------|----------------------------------|--------------------------------------|---------------------------|----------------------------------|------------------|
| Health Measurement OTP MCU                                                                       |            |           |                |                |             |       |                              |              |                              |                                              |              |                      |                                  |                                  |                                  |                                      |                           |                                  |                  |
| Part No.                                                                                         | Max. Freq. |           | VDD            | Program Memory | Data Memory | Stack | I/O                          | Timer        |                              | ADC                                          | OPA          | DAC                  | Interface                        | Package                          |                                  |                                      |                           |                                  |                  |
| BH66R2040                                                                                        | 8MHz       |           | 1.8V~5.5V      | 4K×16          | 512×8       | 12    | 11                           | 10-bit CTM×1 |                              | 24-bit ×6                                    | 3            | 12-bit ×3            | UART×1<br>SPI/I <sup>2</sup> C×1 | 32QFN                            |                                  |                                      |                           |                                  |                  |
| Impedance & Electrochemical LCD MCU                                                              |            |           |                |                |             |       |                              |              |                              |                                              |              |                      |                                  |                                  |                                  |                                      |                           |                                  |                  |
| Part No.                                                                                         | Max. Freq. | VDD       | Program Memory | Data Memory    | Data EEPROM | MDU   | Stack                        | IAP          | I/O                          | Timer                                        | ADC          | ENOB                 | LCD                              | RTC                              | OPA                              | Phase Detect                         | USB                       | Interface                        | Package          |
| BH67F2476                                                                                        | 16MHz      | 2.2V~5.5V | 32K×16         | 2048×8         | 2048×8      | —     | 16                           | √            | 49                           | 10-bit PTM×2<br>16-bit STM×1<br>10-bit ATM×1 | 24-bit ×10   | 19.1                 | 36×4<br>34×6<br>32×8             | √                                | 2                                | √                                    | —                         | UART×2<br>SPI/I <sup>2</sup> C×1 | 64LQFP<br>80LQFP |
| BH67F2493                                                                                        | 12MHz      | 1.8V~5.5V | 64K×16         | 3072×8         | 8192×8      | √     | 16                           | √            | 53                           | 10-bit PTM×2<br>16-bit STM×1<br>10-bit ATM×1 | 24-bit ×10   | 19.1                 | 40×4<br>38×6<br>36×8             | √                                | 2                                | √                                    | —                         | UART×2<br>SPI/I <sup>2</sup> C×1 | 64LQFP<br>80LQFP |
| BH67F2495                                                                                        | 16MHz      | 2.2V~5.5V | 64K×16         | 4096×8         | 4096×8      | √     | 16                           | √            | 49                           | 10-bit PTM×2<br>16-bit STM×1<br>10-bit ATM×1 | 24-bit ×10   | 19.1                 | 36×4<br>34×6<br>32×8             | √                                | 2                                | √                                    | √                         | UART×2<br>SPI/I <sup>2</sup> C×1 | 64LQFP<br>80LQFP |
| Note: Test Conditions of ENOB are PGA Gain = 64, Data Rate = 10Hz, and V <sub>REF</sub> = 1.65V. |            |           |                |                |             |       |                              |              |                              |                                              |              |                      |                                  |                                  |                                  |                                      |                           |                                  |                  |
| Glucose Meter LCD MCU                                                                            |            |           |                |                |             |       |                              |              |                              |                                              |              |                      |                                  |                                  |                                  |                                      |                           |                                  |                  |
| Part No.                                                                                         | Max. Freq. | VDD       | Program Memory | Data Memory    | Data EEPROM | MDU   | Stack                        | IAP          | I/O                          | Timer                                        | ADC          | LCD                  | RTC                              | OPA                              | USB                              | Interface                            | Package                   |                                  |                  |
| BH67F2472                                                                                        | 16MHz      | 2.2V~5.5V | 32K×16         | 2048×8         | 2048×8      | —     | 16                           | √            | 58                           | 10-bit PTM×2<br>16-bit STM×1<br>10-bit ATM×1 | 12-bit ×6    | 36×4<br>34×6<br>32×8 | √                                | 2                                | —                                | UART/SPI/I <sup>2</sup> C×2<br>SPI×1 | 64LQFP<br>80LQFP          |                                  |                  |
| BH67F2475                                                                                        | 16MHz      | 2.2V~5.5V | 32K×16         | 2048×8         | 2048×8      | √     | 16                           | √            | 56                           | 10-bit PTM×2<br>16-bit STM×1<br>10-bit ATM×1 | 12-bit ×6    | 36×4<br>34×6<br>32×8 | √                                | 2                                | √                                | UART/SPI/I <sup>2</sup> C×2<br>SPI×1 | 32QFN<br>64LQFP<br>80LQFP |                                  |                  |
| Continuous Glucose Monitoring MCU                                                                |            |           |                |                |             |       |                              |              |                              |                                              |              |                      |                                  |                                  |                                  |                                      |                           |                                  |                  |
| Part No.                                                                                         | Max. Freq. | VDD       | Program Memory | Data Memory    | Data EEPROM | MDU   | Stack                        | IAP          | I/O                          | Timer                                        | ADC          | OPA                  | CMP                              | Interface                        | Package                          |                                      |                           |                                  |                  |
| BH66F2455                                                                                        | 4MHz       | 2.2V~5.5V | 8K×16          | 512×8          | 512×8       | —     | 16                           | √            | 9                            | 10-bit CTM×1<br>16-bit PTM×1                 | 24-bit ×2    | 3                    | —                                | UART×1<br>SPI×1                  | 24QFN                            |                                      |                           |                                  |                  |
| BH66F2475                                                                                        | 16MHz      | 2.2V~5.5V | 32K×16         | 2048×8         | 2048×8      | √     | 16                           | √            | 9                            | 10-bit CTM×2<br>16-bit PTM×1                 | 24-bit ×2    | 3                    | √                                | UART×1<br>SPI×1                  | 16/24QFN                         |                                      |                           |                                  |                  |
| Continuous Glucose Monitoring OTP MCU                                                            |            |           |                |                |             |       |                              |              |                              |                                              |              |                      |                                  |                                  |                                  |                                      |                           |                                  |                  |
| Part No.                                                                                         | Max. Freq. | VDD       | Program Memory | Data Memory    | Stack       | I/O   | Timer                        | ADC          | OPA                          | Interface                                    | Package      |                      |                                  |                                  |                                  |                                      |                           |                                  |                  |
| BH66R2445*                                                                                       | 4MHz       | 2.2V~5.5V | 4K×16          | 512×8          | 16          | 7     | 10-bit CTM×1<br>16-bit PTM×1 | 24-bit ×2    | 4                            | UART×1<br>SPI×1                              | 20WLCSP      |                      |                                  |                                  |                                  |                                      |                           |                                  |                  |
| * Under development, available in 2Q, 2027                                                       |            |           |                |                |             |       |                              |              |                              |                                              |              |                      |                                  |                                  |                                  |                                      |                           |                                  |                  |
| Blood Pressure Meter LCD MCU                                                                     |            |           |                |                |             |       |                              |              |                              |                                              |              |                      |                                  |                                  |                                  |                                      |                           |                                  |                  |
| Part No.                                                                                         | Max. Freq. | VDD       | Program Memory | Data Memory    | Data EEPROM | Stack | IAP                          | I/O          | Timer                        | ADC                                          | LCD          | RTC                  | OPA                              | Const. Current                   | Interface                        | Package                              |                           |                                  |                  |
| BH67F2265                                                                                        | 8MHz       | 2.2V~5.5V | 16K×16         | 512×8          | 1024×8      | 12    | √                            | 30           | 10-bit CTM×2<br>16-bit STM×1 | 12-bit ×4                                    | 32×4<br>30×6 | √                    | 3                                | √                                | UART×1<br>SPI/I <sup>2</sup> C×1 | 32QFN<br>64LQFP                      |                           |                                  |                  |
| Pulse Oximeter MCU                                                                               |            |           |                |                |             |       |                              |              |                              |                                              |              |                      |                                  |                                  |                                  |                                      |                           |                                  |                  |
| Part No.                                                                                         | Max. Freq. | VDD       | Program Memory | Data Memory    | Data EEPROM | MDU   | Stack                        | IAP          | I/O                          | Timer                                        | ADC          | SCOM                 | Oximeter AFE                     | Interface                        | Package                          |                                      |                           |                                  |                  |
| BH66F2560                                                                                        | 16MHz      | 2.2V~5.5V | 16K×16         | 1024×8         | 1024×8      | —     | 16                           | √            | 24                           | 10-bit PTM×1<br>10-bit STM×2                 | 12-bit ×8    | 4                    | √                                | UART×1<br>SPI/I <sup>2</sup> C×1 | 32QFN                            |                                      |                           |                                  |                  |
| BH66F2570*                                                                                       |            |           | 32K×16         | 2048×8         |             | √     |                              |              |                              | 10-bit PTM×1<br>16-bit STM×2                 |              |                      |                                  |                                  |                                  |                                      |                           |                                  |                  |
| * Under development, available in 2Q, 2027                                                       |            |           |                |                |             |       |                              |              |                              |                                              |              |                      |                                  |                                  |                                  |                                      |                           |                                  |                  |

| Health Care MCU                             |            |            |                |             |                 |       |                                  |              |                              |              |              |                                 |              |                     |                    |  |
|---------------------------------------------|------------|------------|----------------|-------------|-----------------|-------|----------------------------------|--------------|------------------------------|--------------|--------------|---------------------------------|--------------|---------------------|--------------------|--|
| 32-Bit Cortex®-M0+ Body Fat Measurement MCU |            |            |                |             |                 |       |                                  |              |                              |              |              |                                 |              |                     |                    |  |
| Part No.                                    | Max. Freq. | VDD        | Flash          | SRAM        | I/O             | RTC   | Timer                            |              | ADC                          | Electrode    | Phase Detect | Interface                       |              | Package             |                    |  |
| HT32L59046*                                 | 48MHz      | 1.65V~3.6V | 64KB           | 8KB         | 23              | √     | BFTM×2, SCTM×2<br>GPTM×1, MCTM×1 |              | 12-bit×10<br>24-bit×4        | 8            | √            | USART×1, UART×2<br>SPI×2, I²C×2 |              | 64LQFP              |                    |  |
|                                             |            |            |                |             |                 |       |                                  |              |                              |              |              |                                 |              |                     |                    |  |
| * Under development, available in 3Q, 2026  |            |            |                |             |                 |       |                                  |              |                              |              |              |                                 |              |                     |                    |  |
| Body Fat Measurement MCU                    |            |            |                |             |                 |       |                                  |              |                              |              |              |                                 |              |                     |                    |  |
| Part No.                                    | Max. Freq. | VDD        | Program Memory | Data Memory | Data EEPROM     | Stack | I/O                              | IAP          | Timer                        | ADC          | RTC          | Electrode                       | Phase Detect | Interface           | Package            |  |
| BH66F2665                                   | 8MHz       | 2.2V~5.5V  | 16K×16         | 1024×8      | 1024×8          | 16    | 26                               | √            | 10-bit CTM×1<br>10-bit STM×1 | 24-bit×6     | √            | 8                               | √            | UART×1<br>SPI/I²C×1 | 24/32QFN<br>48LQFP |  |
| Ultra-Low Voltage R to F LCD MCU            |            |            |                |             |                 |       |                                  |              |                              |              |              |                                 |              |                     |                    |  |
| Part No.                                    | Max. Freq. | VDD        | Program Memory | Data Memory | Data EEPROM     | Stack | I/O                              | Timer        |                              | LCD          | R to F       | EL                              | LVD          | Package             |                    |  |
| BH67F2132                                   | 128kHz     | 1.1V~2.2V  | 2K×16          | 128×8       | 128×8           | 4     | 24                               | 10-bit CTM×1 |                              | 21×3<br>22×2 | 2CH          | √                               | 1.15V        | 32QFN<br>48LQFP     |                    |  |
| BH67F2142                                   |            |            | 4K×16          | 256×8       |                 |       |                                  |              |                              |              |              |                                 |              |                     |                    |  |
| R to F LCD OTP MCU                          |            |            |                |             |                 |       |                                  |              |                              |              |              |                                 |              |                     |                    |  |
| Part No.                                    | Max. Freq. | VDD        | Program Memory | Data Memory | Stack           |       | I/O                              | Timer        |                              | LCD          | R to F       | LVD                             | Package      |                     |                    |  |
| BH67R2136*                                  | 512kHz     | 1.8V~5.5V  | 2K×16          | 128×8       | 8               |       | 7                                | 10-bit CTM×1 |                              | 12×3<br>11×4 | 1CH          | √                               | 32QFN        |                     |                    |  |
| * Under development, available in 4Q, 2026  |            |            |                |             |                 |       |                                  |              |                              |              |              |                                 |              |                     |                    |  |
| NFC Tag R to F OTP MCU                      |            |            |                |             |                 |       |                                  |              |                              |              |              |                                 |              |                     |                    |  |
| Part No.                                    | Max. Freq. | VDD        | Program Memory | Data Memory | NFC Data EEPROM | I/O   | Timer                            | R to F       | NFC Standards                | RF Data Rate | SRAM Buffer  | Security Mechanisms             | Package      |                     |                    |  |
| BH66R2232*                                  | 512kHz     | 2.0V~3.6V  | 2K×16          | 128×8       | 1K×8            | 7     | 10-bit CTM×1                     | 1CH          | ISO14443A<br>NFC Fourn Type2 | 106kbps      | 64×8         | 32-bit Password                 | 32QFN        |                     |                    |  |
| * Under development, available in 3Q, 2026  |            |            |                |             |                 |       |                                  |              |                              |              |              |                                 |              |                     |                    |  |

### Smoke Detector MCU

#### 32-Bit Cortex®-M0+ Smoke Detector MCU with Buzzer Driver

| Part No.   | Max. Freq. | VDD       | Flash | SRAM | PDMA | ADC                   | Timer                                | RTC | AFE | IR Driver | Boost | Interface                           | Others     | Max. I/O | Package |
|------------|------------|-----------|-------|------|------|-----------------------|--------------------------------------|-----|-----|-----------|-------|-------------------------------------|------------|----------|---------|
| HT32L62141 | 48MHz      | 2.2V~3.6V | 64KB  | 8KB  | 6CH  | 1Msps<br>12-bit<br>x7 | BFTM×2<br>SCTM×2<br>GPTM×1<br>MCTM×1 | √   | 1CH | 2         | √     | USART×1<br>UART×2<br>SPI×2<br>I²C×2 | CRC<br>DIV | 30       | 64LQFP  |

Note: BFTM: Basic Function Timer, SCTM: Single-Channel Timer, GPTM: General-Purpose Timer, MCTM: Motor Control Timer.

#### Smoke Detector MCU

| Part No.    | Max. Freq. | VDD       | Program Memory | Data Memory | Data EEPROM | IAP | I/O | Timer                        | ADC        | Voice DAC | AFE | IR Driver | Temp. Sensor | Interface           | Package                |
|-------------|------------|-----------|----------------|-------------|-------------|-----|-----|------------------------------|------------|-----------|-----|-----------|--------------|---------------------|------------------------|
| BA45F5220   | 8MHz       | 2.2V~5.5V | 1K×14          | 64×8        | 32×14       | —   | 4   | 10-bit PTM×1                 | 10-bit x3  | —         | 1CH | 2         | —            | —                   | 8SOP<br>10SOP          |
| BA45F5240   | 8MHz       | 2.2V~5.5V | 4K×16          | 256×8       | 64×8        | —   | 13  | 10-bit PTM×1<br>10-bit STM×1 | 12-bit x4  | —         | 1CH | 2         | —            | UART/SPI/I²C×1      | 16NSOP<br>20SSOP       |
| BA45F5240-2 |            |           |                |             |             |     | 11  |                              |            |           |     |           |              |                     | 16NSOP                 |
| BA45F5250   | 8MHz       | 2.2V~5.5V | 8K×16          | 1024×8      | 128×8       | √   | 22  | 10-bit PTM×1<br>10-bit STM×2 | 12-bit x8  | 16-bit x1 | 1CH | 2         | —            | UART×1<br>SPI/I²C×1 | 16NSOP<br>20/24/28SSOP |
| BA45F5260   | 16MHz      | 2.2V~5.5V | 16K×16         | 2048×8      | 256×8       | √   | 26  | 10-bit PTM×3<br>10-bit STM×2 | 12-bit x12 | 16-bit x1 | 1CH | 2         | √            | UART×2<br>SPI/I²C×1 | 24/28SSOP<br>48LQFP    |

#### Enhanced Smoke Detector MCU

| Part No.     | Max. Freq. | VDD       | Program Memory | Data Memory | Data EEPROM | IAP | CRC | I/O | Timer                        | ADC        | Voice DAC | AFE | IR Driver | Temp. Sensor | Interface           | Package                 |
|--------------|------------|-----------|----------------|-------------|-------------|-----|-----|-----|------------------------------|------------|-----------|-----|-----------|--------------|---------------------|-------------------------|
| BA45F25240   | 8MHz       | 2.2V~5.5V | 4K×16          | 256×8       | 64×8        | —   | √   | 15  | 10-bit PTM×1<br>10-bit STM×1 | 12-bit x4  | —         | 2CH | 2         | √            | UART/SPI/I²C×1      | 16NSOP<br>20/24SSOP     |
| BA45F25240-2 |            |           |                |             |             |     |     | 11  |                              |            |           |     |           |              |                     | 16NSOP                  |
| BA45F5240A*  | 8MHz       | 2.2V~5.5V | 4K×16          | 512×8       | 128×8       | √   | √   | 14  | 10-bit PTM×1<br>10-bit STM×1 | 12-bit x4  | —         | 2CH | 2         | —            | UART/SPI/I²C×1      | 16NSOP<br>24SSOP        |
| BA45F25250   | 8MHz       | 2.2V~5.5V | 8K×16          | 1024×8      | 128×8       | √   | √   | 22  | 10-bit PTM×1<br>10-bit STM×2 | 12-bit x8  | 16-bit x1 | 2CH | 2         | √            | UART×1<br>SPI/I²C×1 | 16NSOP<br>20/24/28SSOP  |
| BA45F25260   | 16MHz      | 2.2V~5.5V | 16K×16         | 2048×8      | 256×8       | √   | √   | 31  | 10-bit PTM×3<br>10-bit STM×2 | 12-bit x16 | 16-bit x1 | 2CH | 2         | √            | UART×2<br>SPI/I²C×1 | 28SSOP<br>48LQFP        |
| BA45F25260B* | 16MHz      | 2.2V~5.5V | 16K×16         | 2048×8      | 1024×8      | √   | √   | 31  | 10-bit PTM×3<br>10-bit STM×2 | 12-bit x16 | —         | 2CH | 2         | √            | UART×2<br>SPI/I²C×1 | 28SSOP<br>32QFN, 48LQFP |

\* Under development, available in 4Q, 2026.

#### Smoke Detector MCU with Buzzer Driver

| Part No.  | Max. Freq. | VDD       | Program Memory | Data Memory | Data EEPROM | IAP | I/O | Timer                        | ADC        | Voice DAC | AFE | IR Driver | Temp. Sensor | Boost | Interface           | Package          |
|-----------|------------|-----------|----------------|-------------|-------------|-----|-----|------------------------------|------------|-----------|-----|-----------|--------------|-------|---------------------|------------------|
| BA45F5320 | 8MHz       | 2.2V~5.5V | 1K×14          | 64×8        | 32×14       | —   | 4   | 10-bit PTM×1                 | 10-bit x3  | —         | 1CH | 2         | —            | √     | —                   | 20SSOP           |
| BA45F5340 | 8MHz       | 2.2V~5.5V | 4K×16          | 256×8       | 64×8        | —   | 13  | 10-bit PTM×1<br>10-bit STM×1 | 12-bit x4  | —         | 1CH | 2         | —            | √     | UART/SPI/I²C×1      | 24SSOP<br>28SSOP |
| BA45F5350 | 8MHz       | 2.2V~5.5V | 8K×16          | 1024×8      | 128×8       | √   | 22  | 10-bit PTM×1<br>10-bit STM×2 | 12-bit x8  | 16-bit x1 | 1CH | 2         | —            | √     | UART×1<br>SPI/I²C×1 | 28SSOP<br>48LQFP |
| BA45F5360 | 16MHz      | 2.2V~5.5V | 16K×16         | 2048×8      | 256×8       | √   | 26  | 10-bit PTM×3<br>10-bit STM×2 | 12-bit x12 | 16-bit x1 | 1CH | 2         | √            | √     | UART×2<br>SPI/I²C×1 | 28SOP<br>48LQFP  |

#### Enhanced Smoke Detector MCU with Buzzer Driver

| Part No.     | Max. Freq. | VDD       | Program Memory | Data Memory | Data EEPROM | IAP | CRC | I/O | Timer                        | ADC        | Voice DAC | AFE | IR Driver | Temp. Sensor | Boost | Interface           | Package          |
|--------------|------------|-----------|----------------|-------------|-------------|-----|-----|-----|------------------------------|------------|-----------|-----|-----------|--------------|-------|---------------------|------------------|
| BA45F25343   | 8MHz       | 2.2V~5.5V | 4K×16          | 256×8       | 64×8        | —   | √   | 12  | 10-bit PTM×1<br>10-bit STM×1 | 12-bit x4  | —         | 2CH | 2         | √            | √     | UART/SPI/I²C×1      | 24SSOP<br>28SSOP |
| BA45F5343A*  | 8MHz       | 2.2V~5.5V | 4K×16          | 512×8       | 128×8       | √   | √   | 12  | 10-bit PTM×1<br>10-bit STM×1 | 12-bit x4  | —         | 2CH | 2         | —            | √     | UART/SPI/I²C×1      | 24SSOP<br>28SSOP |
| BA45F25353   | 8MHz       | 2.2V~5.5V | 8K×16          | 1024×8      | 128×8       | √   | √   | 22  | 10-bit PTM×1<br>10-bit STM×2 | 12-bit x8  | 16-bit x1 | 2CH | 2         | √            | √     | UART×1<br>SPI/I²C×1 | 28SSOP<br>48LQFP |
| BA45F25363   | 16MHz      | 2.2V~5.5V | 16K×16         | 2048×8      | 256×8       | √   | √   | 31  | 10-bit PTM×3<br>10-bit STM×2 | 12-bit x16 | 16-bit x1 | 2CH | 2         | √            | √     | UART×2<br>SPI/I²C×1 | 48LQFP           |
| BA45F25363B* | 16MHz      | 2.2V~5.5V | 16K×16         | 2048×8      | 1024×8      | √   | √   | 31  | 10-bit PTM×3<br>10-bit STM×2 | 12-bit x16 | —         | 2CH | 2         | √            | √     | UART×2<br>SPI/I²C×1 | 28SSOP<br>48LQFP |

\* Under development, available in 4Q, 2026.

### Smoke Detector MCU

#### 9V Battery Smoke Detector MCU with Buzzer Driver

| Part No.    | Max. Freq. | VCC (HV) | Program Memory | Data Memory | Data EEPROM | IAP | I/O | Timer                        | ADC        | Voice DAC | AFE | IR Driver | Temp. Sensor | LDO | Buzzer Driver | Interface                        | Package         |
|-------------|------------|----------|----------------|-------------|-------------|-----|-----|------------------------------|------------|-----------|-----|-----------|--------------|-----|---------------|----------------------------------|-----------------|
| BA45F5420   | 8MHz       | 4.3V~12V | 1K×14          | 64×8        | 32×14       | —   | 4   | 10-bit PTM×1                 | 10-bit ×3  | —         | 1CH | 2         | —            | √   | √             | —                                | 16NSOP          |
| BA45F5440   | 8MHz       | 4.3V~12V | 4K×16          | 256×8       | 64×8        | —   | 9   | 10-bit PTM×1<br>10-bit STM×1 | 12-bit ×4  | —         | 1CH | 2         | —            | √   | √             | UART/SPI/I <sup>2</sup> C×1      | 20SOP<br>20SSOP |
| BA45F5440A* | 8MHz       | 4.3V~12V | 4K×16          | 512×8       | 128×8       | —   | 9   | 10-bit PTM×1<br>10-bit STM×1 | 12-bit ×4  | —         | 2CH | 2         | —            | √   | √             | UART/SPI/I <sup>2</sup> C×1      | 20SOP<br>24SSOP |
| BA45F5450   | 8MHz       | 4.3V~12V | 8K×16          | 1024×8      | 128×8       | √   | 17  | 10-bit PTM×1<br>10-bit STM×2 | 12-bit ×8  | 16-bit ×1 | 1CH | 2         | —            | √   | √             | UART×1<br>SPI/I <sup>2</sup> C×1 | 24SOP           |
| BA45F5460   | 16MHz      | 4.3V~12V | 16K×16         | 2048×8      | 256×8       | √   | 24  | 10-bit PTM×3<br>10-bit STM×2 | 12-bit ×12 | 16-bit ×1 | 1CH | 2         | √            | √   | √             | UART×2<br>SPI/I <sup>2</sup> C×1 | 48LQFP          |

\* Under development, available in 4Q, 2026.

#### Smoke Detector MCU with Addressable Power Line Transceiver

| Part No.    | Max. Freq. | VCC (HV) | Program Memory | Data Memory | Data EEPROM | IAP | I/O | Timer                        | ADC        | AFE | IR Driver | Power Line Transceiver | LDO | Temp. Sensor | Interface                        | Package                        |
|-------------|------------|----------|----------------|-------------|-------------|-----|-----|------------------------------|------------|-----|-----------|------------------------|-----|--------------|----------------------------------|--------------------------------|
| BA45F5542   | 8MHz       | 42V      | 4K×16          | 256×8       | 64×8        | —   | 9   | 10-bit PTM×1<br>10-bit STM×1 | 12-bit ×4  | 1CH | 2         | √                      | √   | —            | UART/SPI/I <sup>2</sup> C×1      | 16NSOP<br>20SOP                |
| BA45F5542-2 |            |          |                |             |             |     | 7   |                              | 12-bit ×3  |     |           |                        |     |              |                                  | 16NSOP                         |
| BA45F5552   | 8MHz       | 42V      | 8K×16          | 1024×8      | 128×8       | √   | 13  | 10-bit PTM×1<br>10-bit STM×2 | 12-bit ×8  | 1CH | 2         | √                      | √   | —            | UART×1<br>SPI/I <sup>2</sup> C×1 | 16NSOP<br>20SOP, 24SOP         |
| BA45F5562   | 16MHz      | 42V      | 16K×16         | 2048×8      | 256×8       | √   | 23  | 10-bit PTM×3<br>10-bit STM×2 | 12-bit ×12 | 1CH | 2         | √                      | √   | √            | UART×2<br>SPI/I <sup>2</sup> C×1 | 24SOP, 28SOP<br>28SSOP, 48LQFP |

#### Enhanced Smoke Detector MCU with Addressable Power Line Transceiver

| Part No.     | Max. Freq. | VCC (HV) | Program Memory | Data Memory | Data EEPROM | IAP | CRC | I/O | Timer                        | ADC        | AFE | IR Driver | Power Line Transceiver | LDO          | Temp. Sensor | Interface                        | Package          |
|--------------|------------|----------|----------------|-------------|-------------|-----|-----|-----|------------------------------|------------|-----|-----------|------------------------|--------------|--------------|----------------------------------|------------------|
| BA45F25543   | 8MHz       | ±42V#    | 4K×16          | 256×8       | 64×8        | —   | √   | 10  | 10-bit PTM×1<br>10-bit STM×1 | 12-bit ×4  | 2CH | 2         | √                      | 3.3V<br>5.0V | √            | UART/SPI/I <sup>2</sup> C×1      | 16NSOP<br>24SSOP |
| BA45F5542A*  | 8MHz       | 42V      | 4K×16          | 512×8       | 128×8       | √   | √   | 9   | 10-bit PTM×1<br>10-bit STM×1 | 12-bit ×4  | 2CH | 2         | √                      | 3.3V         | —            | UART/SPI/I <sup>2</sup> C×1      | 16NSOP<br>24SSOP |
| BA45F25553   | 8MHz       | ±42V#    | 8K×16          | 1024×8      | 128×8       | √   | √   | 13  | 10-bit PTM×1<br>10-bit STM×2 | 12-bit ×8  | 2CH | 2         | √                      | 3.3V<br>5.0V | √            | UART×1<br>SPI/I <sup>2</sup> C×1 | 16NSOP<br>28SOP  |
| BA45F25563   | 16MHz      | ±42V#    | 16K×16         | 2048×8      | 256×8       | √   | √   | 28  | 10-bit PTM×3<br>10-bit STM×2 | 12-bit ×16 | 2CH | 2         | √                      | 3.3V<br>5.0V | √            | UART×2<br>SPI/I <sup>2</sup> C×1 | 28SOP<br>48LQFP  |
| BA45F25563B* | 16MHz      | ±42V#    | 16K×16         | 2048×8      | 1024×8      | √   | √   | 28  | 10-bit PTM×3<br>10-bit STM×2 | 12-bit ×16 | 2CH | 2         | √                      | 3.3V<br>5.0V | √            | UART×2<br>SPI/I <sup>2</sup> C×1 | 28SSOP<br>48LQFP |

\* Under development, available in 4Q, 2026.

Note: # Built-in MOSFET bridge rectifier can achieve non-polar voltage input.

#### Smoke Detector MCU with Sub-1GHz Transceiver

| Part No.  | Max. Freq. | VDD       | Program Memory | Data Memory | Data EEPROM | IAP | I/O | Timer                        | ADC       | AFE | IR Driver | Band                                           | Data Rate  | Output Power | Temp. Sensor | Interface                        | Package   |
|-----------|------------|-----------|----------------|-------------|-------------|-----|-----|------------------------------|-----------|-----|-----------|------------------------------------------------|------------|--------------|--------------|----------------------------------|-----------|
| BA45F5640 | 8MHz       | 2.2V~3.6V | 4K×16          | 256×8       | 64×8        | —   | 13  | 10-bit PTM×1<br>10-bit STM×1 | 12-bit ×4 | 1CH | 2         | 315MHz<br>433MHz<br>470MHz<br>868MHz<br>915MHz | 2~250 kbps | 13dBm        | —            | UART/SPI/I <sup>2</sup> C×1      | 46QFN     |
| BA45F5650 |            |           | 8K×16          | 1024×8      | 128×8       | √   | 17  | 10-bit PTM×1<br>10-bit STM×2 | 12-bit ×5 |     |           |                                                |            |              |              | UART×1<br>SPI/I <sup>2</sup> C×1 |           |
| BA45F5660 |            |           | 16K×16         | 2048×8      | 256×8       |     | 22  | 10-bit PTM×3<br>10-bit STM×2 | 12-bit ×8 |     |           |                                                |            |              |              | UART×2<br>SPI/I <sup>2</sup> C×1 | 48LQFP-EP |

#### Enhanced Smoke Detector MCU with Calendar and Buzzer Driver

| Part No.   | Max. Freq. | VDD       | Program Memory | Data Memory | Data EEPROM | IAP | CRC | I/O | Timer                        | ADC        | Voice DAC | AFE | IR Driver | Temp. Sensor | Boost | Interface                        | Package |
|------------|------------|-----------|----------------|-------------|-------------|-----|-----|-----|------------------------------|------------|-----------|-----|-----------|--------------|-------|----------------------------------|---------|
| BA45F25752 | 8MHz       | 2.2V~5.5V | 8K×16          | 1024×8      | 128×8       | √   | √   | 22  | 10-bit PTM×1<br>10-bit STM×2 | 12-bit ×8  | 16-bit ×1 | 2CH | 2         | √            | √     | UART×1<br>SPI/I <sup>2</sup> C×1 | 48LQFP  |
| BA45F25762 | 8MHz       | 2.2V~5.5V | 16K×16         | 2048×8      | 256×8       | √   | √   | 24  | 10-bit PTM×3<br>10-bit STM×2 | 12-bit ×10 | 16-bit ×1 | 2CH | 2         | √            | √     | UART×2<br>SPI/I <sup>2</sup> C×1 | 48LQFP  |

### Smoke & CO Detector MCU

#### 32-Bit Cortex®-M0+ Smoke & CO Detector MCU

| Part No.    | Max. Freq. | VDD       | Flash | SRAM | PDMA | ADC                    | Timer                                | RTC | AFE         | IR Driver | Interface                           | Others     | Max. I/O | Package |
|-------------|------------|-----------|-------|------|------|------------------------|--------------------------------------|-----|-------------|-----------|-------------------------------------|------------|----------|---------|
| HT32L64041* | 48MHz      | 2.2V~3.6V | 64KB  | 8KB  | 6CH  | 1MSPS<br>12-bit<br>×10 | BFTM×2<br>SCTM×2<br>GPTM×1<br>MCTM×1 | √   | Smoke<br>CO | 2         | USART×1<br>UART×2<br>SPI×2<br>I²C×2 | CRC<br>DIV | 34       | 64LQFP  |

\* Under development, available in 3Q, 2026.

Note: BFTM: Basic Function Timer, SCTM: Single-Channel Timer, GPTM: General-Purpose Timer, MCTM: Motor Control Timer.

#### 32-Bit Cortex®-M0+ Smoke & CO Detector MCU with Buzzer Driver

| Part No.    | Max. Freq. | VDD       | Flash | SRAM | PDMA | ADC                   | Timer                                | RTC | AFE         | IR Driver | Boost | Interface                           | Others     | Max. I/O | Package |
|-------------|------------|-----------|-------|------|------|-----------------------|--------------------------------------|-----|-------------|-----------|-------|-------------------------------------|------------|----------|---------|
| HT32L64141* | 48MHz      | 2.2V~3.6V | 64KB  | 8KB  | 6CH  | 1MSPS<br>12-bit<br>×7 | BFTM×2<br>SCTM×2<br>GPTM×1<br>MCTM×1 | √   | Smoke<br>CO | 2         | √     | USART×1<br>UART×2<br>SPI×2<br>I²C×2 | CRC<br>DIV | 28       | 64LQFP  |

\* Under development, available in 3Q, 2026.

Note: BFTM: Basic Function Timer, SCTM: Single-Channel Timer, GPTM: General-Purpose Timer, MCTM: Motor Control Timer.

### Fire Protection MCU

#### Fire Protection MCU with Power Line Transceiver

| Part No.  | Max. Freq. | VCC (HV) | VDD  | Program Memory | Data Memory | Data EEPROM | I/O | Timer                        | ADC          | Power Line Transceiver | LDO  | Interface | Package          |
|-----------|------------|----------|------|----------------|-------------|-------------|-----|------------------------------|--------------|------------------------|------|-----------|------------------|
| BA45F5541 | 8MHz       | 42V      | 3.3V | 4K×16          | 256×8       | 64×8        | 13  | 10-bit PTM×2<br>10-bit CTM×2 | 10-bit<br>×4 | √                      | 3.3V | UART×1    | 16NSOP<br>20SSOP |

Note: Built-in MOSFET bridge rectifier can achieve non-polar voltage input.

#### Fire Emergency Indicating MCU with Power Line Transceiver

| Part No.  | Max. Freq. | VCC (HV) | LDO  | Program Memory | Data Memory | Data EEPROM | ADC          | I/O | Power Line Transceiver | LED Constant Current       | Open/Short Detection | Short Protection | Thermal Shutdown | Package |
|-----------|------------|----------|------|----------------|-------------|-------------|--------------|-----|------------------------|----------------------------|----------------------|------------------|------------------|---------|
| BA45F3631 | 8MHz       | 60V      | 3.3V | 2K×14          | 64×8        | 32×14       | 12-bit<br>×3 | 7   | √                      | Max. 63mA×1<br>Max. 31mA×2 | √                    | √                | √                | 16NSOP  |
| BA45F3641 | 8MHz       | 60V      | 3.3V | 4K×15          | 128×8       | 32×15       | 12-bit<br>×4 | 7   | √                      | Max. 63mA×1<br>Max. 31mA×2 | √                    | √                | √                | 16NSOP  |

| CO/GAS Detector MCU                                         |            |           |                |             |             |       |     |     |                                              |           |                                  |                  |              |                                       |                                       |                         |
|-------------------------------------------------------------|------------|-----------|----------------|-------------|-------------|-------|-----|-----|----------------------------------------------|-----------|----------------------------------|------------------|--------------|---------------------------------------|---------------------------------------|-------------------------|
| CO/GAS(Catalytic Gas Sensor) Detector MCU                   |            |           |                |             |             |       |     |     |                                              |           |                                  |                  |              |                                       |                                       |                         |
| Part No.                                                    | Max. Freq. | VDD       | Program Memory | Data Memory | Data EEPROM | Stack | IAP | I/O | Timer                                        | ADC       | AFE                              | Temp. Sensor     | Voice DAC    | Interface                             | Package                               |                         |
| BA45F6730                                                   | 8MHz       | 2.2V~5.5V | 2K×16          | 128×8       | 32×8        | 6     | —   | 14  | 10-bit PTM×1                                 | 12-bit×5  | √                                | —                | —            | UART/SPI/I <sup>2</sup> C×1           | 16NSOP, 20SSOP                        |                         |
| BA45F6740                                                   | 8MHz       | 2.2V~5.5V | 4K×16          | 256×8       | 128×8       | 8     | √   | 22  | 10-bit PTM×1<br>10-bit STM×1                 | 12-bit×8  | √                                | √                | —            | UART/SPI/I <sup>2</sup> C×1           | 16NSOP, 20SSOP<br>24SSOP, 28SSOP      |                         |
| BA45F6750                                                   | 8MHz       | 2.2V~5.5V | 8K×16          | 1024×8      | 256×8       | 8     | √   | 36  | 10-bit PTM×1<br>10-bit STM×1                 | 12-bit×8  | √                                | √                | 16-bit×1     | UART×1<br>UART/SPI/I <sup>2</sup> C×1 | 28SSOP<br>32QFN, 48LQFP               |                         |
| BA45F6760                                                   | 8MHz       | 2.2V~5.5V | 16K×16         | 2024×8      | 256×8       | 8     | √   | 42  | 10-bit PTM×1<br>10-bit STM×2                 | 12-bit×8  | √                                | √                | 16-bit×1     | UART×1<br>UART/SPI/I <sup>2</sup> C×1 | 28SSOP<br>48LQFP                      |                         |
| CO/GAS(Catalytic Gas Sensor) Detector LCD MCU               |            |           |                |             |             |       |     |     |                                              |           |                                  |                  |              |                                       |                                       |                         |
| Part No.                                                    | Max. Freq. | VDD       | Program Memory | Data Memory | Data EEPROM | Stack | IAP | I/O | Timer                                        | ADC       | AFE                              | LCD Driver       | Temp. Sensor | Voice DAC                             | Interface                             | Package                 |
| BA45F6746                                                   | 8MHz       | 2.2V~5.5V | 4K×16          | 256×8       | 128×8       | 8     | √   | 31  | 10-bit PTM×1<br>10-bit STM×1                 | 12-bit×8  | √                                | 12SEG×4COM       | √            | —                                     | UART/SPI/I <sup>2</sup> C×1           | 28SSOP<br>32QFN, 48LQFP |
| BA45F6756                                                   | 8MHz       | 2.2V~5.5V | 8K×16          | 1024×8      | 256×8       | 8     | √   | 36  | 10-bit PTM×1<br>10-bit STM×1                 | 12-bit×8  | √                                | 16SEG×4COM       | √            | 16-bit×1                              | UART×1<br>UART/SPI/I <sup>2</sup> C×1 | 28SSOP<br>48LQFP        |
| BA45F6766                                                   | 8MHz       | 2.2V~5.5V | 16K×16         | 2048×8      | 256×8       | 8     | √   | 38  | 10-bit PTM×1<br>10-bit STM×2                 | 12-bit×8  | √                                | 20SEG×4COM       | √            | 16-bit×1                              | UART×1<br>UART/SPI/I <sup>2</sup> C×1 | 28SSOP<br>48LQFP        |
| CO/GAS(Catalytic Gas Sensor) Detector MCU with Calendar     |            |           |                |             |             |       |     |     |                                              |           |                                  |                  |              |                                       |                                       |                         |
| Part No.                                                    | Max. Freq. | VDD       | Program Memory | Data Memory | Data EEPROM | Stack | IAP | I/O | Timer                                        | ADC       | AFE                              | Temp. Sensor     | Voice DAC    | Interface                             | Package                               |                         |
| BA45F6752                                                   | 8MHz       | 2.2V~5.5V | 8K×16          | 1024×8      | 256×8       | 8     | √   | 31  | 10-bit PTM×1<br>10-bit STM×1                 | 12-bit×8  | √                                | √                | 16-bit×1     | UART×1<br>UART/SPI/I <sup>2</sup> C×1 | 48LQFP                                |                         |
| CO/GAS(Catalytic Gas Sensor) Detector LCD MCU with Calendar |            |           |                |             |             |       |     |     |                                              |           |                                  |                  |              |                                       |                                       |                         |
| Part No.                                                    | Max. Freq. | VDD       | Program Memory | Data Memory | Data EEPROM | Stack | IAP | I/O | Timer                                        | ADC       | AFE                              | LCD Driver       | Temp. Sensor | Voice DAC                             | Interface                             | Package                 |
| BA45F6758                                                   | 8MHz       | 2.2V~5.5V | 8K×16          | 1024×8      | 256×8       | 8     | √   | 32  | 10-bit PTM×1<br>10-bit STM×1                 | 12-bit×8  | √                                | 13SEG×4COM       | √            | 16-bit×1                              | UART×1<br>UART/SPI/I <sup>2</sup> C×1 | 48LQFP                  |
| GAS(Semiconductor Gas Sensor) Detector MCU with Calendar    |            |           |                |             |             |       |     |     |                                              |           |                                  |                  |              |                                       |                                       |                         |
| Part No.                                                    | Max. Freq. | VDD       | Program Memory | Data Memory | Data EEPROM | Stack | IAP | I/O | Timer                                        | ADC       | Interface                        | Package          |              |                                       |                                       |                         |
| BA45F6753                                                   | 16MHz      | 2.2V~5.5V | 8K×16          | 512×8       | 128×8       | 8     | √   | 26  | 10-bit PTM×1<br>16-bit CTM×1<br>16-bit STM×1 | 12-bit×12 | UART×1<br>SPI/I <sup>2</sup> C×1 | 28SSOP           |              |                                       |                                       |                         |
| BA45F6763                                                   | 16MHz      | 2.2V~5.5V | 16K×16         | 1024×8      | 1024×8      | 8     | √   | 28  | 10-bit PTM×2<br>16-bit CTM×1<br>16-bit STM×1 | 12-bit×12 | UART×2<br>SPI/I <sup>2</sup> C×1 | 28SSOP<br>48LQFP |              |                                       |                                       |                         |

### Dust Detector MCU

#### Dust Detector MCU

| Part No.  | Max. Freq. | VDD       | Program Memory | Data Memory | Data EEPROM | IAP | I/O | Timer                        | ADC       | MDU | AFE | IR Driver | LDO | Temp. Sensor | OVP | Interface                   | Package          |
|-----------|------------|-----------|----------------|-------------|-------------|-----|-----|------------------------------|-----------|-----|-----|-----------|-----|--------------|-----|-----------------------------|------------------|
| BA45F4140 | 12MHz      | 2.2V~5.5V | 4K×16          | 512×8       | 512×8       | √   | 15  | 10-bit PTM×4<br>10-bit CTM×2 | 12-bit ×4 | √   | √   | 1         | √   | √            | 3   | UART/SPI/I <sup>2</sup> C×1 | 16NSOP<br>24SSOP |

### PIR MCU

#### PIR MCU

| Part No.  | Max. Freq. | VDD       | Program Memory | Data Memory | Data EEPROM | Stack | I/O | Timer        | ADC      | OPA | Interface                   | Package         |
|-----------|------------|-----------|----------------|-------------|-------------|-------|-----|--------------|----------|-----|-----------------------------|-----------------|
| BA45F6622 | 8MHz       | 2.2V~5.5V | 1K×14          | 64×8        | 32×14       | 4     | 6   | 10-bit STM×1 | 10-bit×2 | 2   | —                           | 16NSOP<br>16QFN |
| BA45F6630 | 8MHz       | 2.2V~5.5V | 2K×16          | 256×8       | 32×8        | 6     | 15  | 10-bit STM×2 | 12-bit×4 | 2   | UART/SPI/I <sup>2</sup> C×1 | 24SSOP<br>24QFN |

### PIR Controller

#### PIR Controller

| Part No. | VDD       | Standby Current | Vreg | Comparator Window | Effective Trigger Width | LVD | Output      | CDS Debounce Time | Sensitivity             | Package |
|----------|-----------|-----------------|------|-------------------|-------------------------|-----|-------------|-------------------|-------------------------|---------|
| BA76220  | 2.2V~5.5V | 12μA            | √    | Vreg×(1/2±1/6)    | >24ms                   | √   | High Active | <3s               | Adjustable <sup>#</sup> | 16NSOP  |

Note: # Adjusted by resistors or development platform.

## USB Charging Protocol MCU

### USB Charging Protocol MCU

| Part No.  | Max. Freq. | VDD       | Program Memory | Data Memory | Data EEPROM | IAP | ADC        | Timer                                        | Type-C Ports | Termination Resistor | Max. CC Voltage | Interface                        | I/O | Package |
|-----------|------------|-----------|----------------|-------------|-------------|-----|------------|----------------------------------------------|--------------|----------------------|-----------------|----------------------------------|-----|---------|
| HT45F9160 | 20MHz      | 2.2V~5.5V | 16K×16         | 2K×8        | 1K×8        | √   | 12-bit ×11 | 10-bit PTM×2<br>16-bit PTM×2<br>16-bit STM×1 | 1            | Rp, Rd-db            | 24V             | UART×1<br>SPI/I <sup>2</sup> C×1 | 19  | 32QFN   |

## AC Charger MCU

### AC Charger MCU

| Part No.    | Max. Freq. | VDD       | Program Memory | Data Memory | Data EEPROM | IAP | ADC        | Timer                                                    | OPA | DAC                  | HVO      | LDO     | Interface                        | I/O | Package            |
|-------------|------------|-----------|----------------|-------------|-------------|-----|------------|----------------------------------------------------------|-----|----------------------|----------|---------|----------------------------------|-----|--------------------|
| HT45F5Q-2A  | 8MHz       | 2.2V~5.5V | 2K×15          | 128×8       | 32×15       | —   | 12-bit ×7  | 10-bit CTM×1                                             | 3   | 12-bit×1<br>14-bit×1 | —        | —       | UART×1                           | 15  | 16NSOP<br>20NSOP   |
| HT45F5Q-3   | 8MHz       | 2.2V~5.5V | 4K×15          | 256×8       | 32×15       | —   | 12-bit ×11 | 10-bit CTM×1<br>10-bit STM×1                             | 3   | 12-bit×1<br>14-bit×1 | —        | —       | UART×1<br>SPI/I <sup>2</sup> C×1 | 23  | 24SSOP<br>28SSOP   |
| HT45F5Q-5   | 8MHz       | 2.2V~5.5V | 8K×16          | 512×8       | 512×8       | √   | 12-bit ×12 | 10-bit CTM×1<br>10-bit STM×1, 16-bit STM×1               | 3   | 14-bit×2             | —        | —       | UART×1<br>SPI/I <sup>2</sup> C×1 | 27  | 24/28SSOP<br>32QFN |
| HT45F5Q-6   | 20MHz      | 2.7V~5.5V | 16K×16         | 1024×8      | 1024×8      | √   | 12-bit ×12 | 10-bit PTM×2, 10-bit CTM×1<br>10-bit STM×1, 16-bit STM×1 | 3   | 14-bit×2             | —        | —       | UART×1<br>SPI/I <sup>2</sup> C×1 | 27  | 24/28SSOP<br>32QFN |
| HT45F5QC-5  | 8MHz       | 2.2V~5.5V | 8K×16          | 512×8       | 512×8       | √   | 12-bit ×9  | 10-bit CTM×1, 10-bit STM×1                               | 3   | 14-bit×2             | —        | —       | —                                | 16  | 28SSOP<br>32QFN    |
| HT45F5QC-6  | 20MHz      | 2.7V~5.5V | 16K×16         | 1024×8      | 1024×8      | √   | 12-bit ×9  | 10-bit PTM×2, 10-bit CTM×1<br>10-bit STM×1, 16-bit STM×1 | 3   | 14-bit×2             | —        | —       | UART×1                           | 16  | 28SSOP<br>32QFN    |
| HT45F6Q-3A* | 8MHz       | 2.2V~5.5V | 4K×15          | 256×8       | 32×15       | —   | 12-bit ×5  | 10-bit CTM×1<br>10-bit STM×1                             | 3   | 12-bit×1<br>14-bit×1 | 1xLS 20V | 5V/50mA | UART×1                           | 14  | 24SSOP             |
| HT45F6Q-5A* | 8MHz       | 2.2V~5.5V | 8K×16          | 512×8       | 512×8       | √   | 12-bit ×7  | 10-bit CTM×1<br>10-bit STM×1, 16-bit STM×1               | 3   | 14-bit×2             | 1xLS 20V | 5V/50mA | UART×1<br>SPI/I <sup>2</sup> C×1 | 14  | 24SSOP             |

\* Under development, available in 1Q, 2027.

### AC Charger OTP MCU

| Part No.  | Max. Freq. | VDD       | Program Memory | Data Memory | ORPP | ADC        | Timer                        | OPA | DAC       | HVO      | LDO     | Interface                        | I/O | Package          |
|-----------|------------|-----------|----------------|-------------|------|------------|------------------------------|-----|-----------|----------|---------|----------------------------------|-----|------------------|
| HT45R5Q-2 | 8MHz       | 2.2V~5.5V | 2K×16          | 128×8       | √    | 12-bit ×5  | 8-bit×1                      | 3   | 12-bit ×2 | —        | —       | —                                | 11  | 16NSOP           |
| HT45R5Q-3 | 8MHz       | 2.2V~5.5V | 4K×16          | 256×8       | √    | 12-bit ×10 | 10-bit CTM×1<br>10-bit STM×1 | 3   | 14-bit ×2 | —        | —       | UART×1<br>SPI/I <sup>2</sup> C×1 | 23  | 24SSOP<br>28SSOP |
| HT45R6Q-2 | 8MHz       | 2.2V~5.5V | 2K×16          | 128×8       | √    | 12-bit ×4  | 8-bit×1                      | 3   | 12-bit ×2 | 1xLS 30V | 5V/30mA | —                                | 10  | 16NSOP<br>20NSOP |
| HT45R6Q-3 | 8MHz       | 2.2V~5.5V | 4K×16          | 256×8       | √    | 12-bit ×7  | 10-bit CTM×1<br>10-bit STM×1 | 3   | 14-bit ×2 | 1xLS 30V | 5V/30mA | UART×1<br>SPI/I <sup>2</sup> C×1 | 15  | 24SSOP           |

## DC Charger MCU

### Power Bank MCU

| Part No. | Max. Freq. | VDD        | Program Memory | Data Memory | Data EEPROM | ADC        | Timer                        | Hardware Protect | HVO      | $\Delta t_{pwm}$ | I/O | Package          |
|----------|------------|------------|----------------|-------------|-------------|------------|------------------------------|------------------|----------|------------------|-----|------------------|
| HT45F4MA | 15MHz      | 2.55V~5.5V | 2K×16          | 128×8       | 64×8        | 12-bit ×8  | 10-bit PTM×1<br>16-bit STM×1 | OVP×1<br>OCP×1   | —        | 33ns             | 16  | 16NSOP<br>20SSOP |
| HT45F5N  | 8MHz       | 2.55V~5.5V | 4K×16          | 256×8       | 64×8        | 12-bit ×14 | 10-bit PTM×1<br>16-bit STM×1 | OVP×1<br>OCP×2   | —        | 8ns              | 26  | 28SSOP           |
| HT45FH5N |            |            |                |             |             |            |                              |                  | 2xLS 30V |                  | 28  | 46QFN            |

| DC Charger MCU                                        |            |           |                |             |                    |               |                               |                                              |                         |                  |                                   |           |                 |                 |     |         |
|-------------------------------------------------------|------------|-----------|----------------|-------------|--------------------|---------------|-------------------------------|----------------------------------------------|-------------------------|------------------|-----------------------------------|-----------|-----------------|-----------------|-----|---------|
| 32-Bit Cortex®-M0+ MPPT Charger MCU                   |            |           |                |             |                    |               |                               |                                              |                         |                  |                                   |           |                 |                 |     |         |
| Part No.                                              | Max. Freq. | VDD       | Flash          | SRAM        | PDMA               | ADC           | Timer                         | Battery Type                                 | Power Topology          | MPPT Eff.        | Interface                         | Others    | Max. I/O        | Package         |     |         |
| HT32F61049                                            | 60MHz      | 2.5V~5.5V | 64KB           | 8KB         | 6CH                | 1Msps 12bit×8 | BFTM×2, SCTM×4 GPTM×1, MCTM×1 | Lithium Lead-acid                            | Buck, Boost, Buck-Boost | 99%              | USART×1<br>UART×1<br>SPI×1, I²C×1 | CRC DIV   | 40              | 48LQFP          |     |         |
| 32-Bit Cortex®-M0+ Dual-Port PD Charging Protocol MCU |            |           |                |             |                    |               |                               |                                              |                         |                  |                                   |           |                 |                 |     |         |
| Part No.                                              | Max. Freq. | VDD       | Flash          | SRAM        | ADC                |               | Timer                         | Cell #                                       | Power Topology          | I <sub>CRG</sub> | Interface                         | Others    | I/O             | Package         |     |         |
| HT32F61031*                                           | 16MHz      | 2.5V~5.5V | 32KB           | 2KB         | 500Ksps 12bit×12ch |               | BFTM×1, SCTM×3                | 1                                            | Linear                  | 1A               | UART×2<br>SPI×1, I²C×1            | LEDC      | 32              | 48LQFP          |     |         |
| * Under development, available in 3Q, 2027.           |            |           |                |             |                    |               |                               |                                              |                         |                  |                                   |           |                 |                 |     |         |
| Li-Battery Charger MCU                                |            |           |                |             |                    |               |                               |                                              |                         |                  |                                   |           |                 |                 |     |         |
| Part No.                                              | Max. Freq. | VDD       | Program Memory | Data Memory | Data EEPROM        | IAP           | ADC                           | Timer                                        | Cell #                  | Power Topology   | I <sub>CRG</sub>                  | Touch Key | Other Function  | Interface       | I/O | Package |
| HT45F2440                                             | 16MHz      | 1.8V~5.5V | 4K×16          | 256×8       | 128×8              | √             | 12-bit ×6                     | 10-bit PTM×1<br>16-bit CTM×1<br>16-bit STM×1 | 1                       | Linear           | 1A                                | —         | Boost (5V/0.3A) | UART×1<br>I²C×1 | 17  | 32QFN   |
| HT45F2140                                             | 16MHz      | 2.5V~4.2V | 4K×16          | 256×8       | 128×8              | —             | 12-bit ×5                     | 10-bit STM×1<br>10-bit PTM×1                 | 1                       | Linear           | 1A                                | —         | —               | —               | 11  | 16NSOP  |
| Li-Battery Charger OTP MCU                            |            |           |                |             |                    |               |                               |                                              |                         |                  |                                   |           |                 |                 |     |         |
| Part No.                                              | Max. Freq. | VDD       | Program Memory | Data Memory | ORPP               | ADC           | Timer                         | Cell #                                       | Power Topology          | I <sub>CRG</sub> | Touch Key                         | Interface | I/O             | Package         |     |         |
| HT45R2140                                             | 16MHz      | 2.5V~4.2V | 4K×16          | 256×8       | √                  | 12-bit ×5     | 10-bit STM×1<br>16-bit PTM×1  | 1                                            | Linear                  | 1A               | —                                 | —         | 11              | 16NSOP          |     |         |
| BS45R2141                                             | 16MHz      | 2.0V~5.5V | 4K×16          | 384×8       | √                  | 12-bit ×3     | 10-bit CTM×3<br>10-bit PTM×1  | 1                                            | Linear                  | 1A               | 3                                 | I²C×1     | 10              | 16NSOP          |     |         |

| Power Inverter MCU     |            |           |                |             |             |           |                              |                              |             |                         |                          |                          |                 |     |                  |
|------------------------|------------|-----------|----------------|-------------|-------------|-----------|------------------------------|------------------------------|-------------|-------------------------|--------------------------|--------------------------|-----------------|-----|------------------|
| Power Inverter MCU     |            |           |                |             |             |           |                              |                              |             |                         |                          |                          |                 |     |                  |
| Part No.               | Max. Freq. | VDD       | Program Memory | Data Memory | Data EEPROM | IAP       | ADC                          | Timer                        | Position    | Directional             | Max. AC P <sub>IN</sub>  | Max. AC P <sub>OUT</sub> | Interface       | I/O | Package          |
| HT45F7550              | 20MHz      | 4.5V~5.5V | 8K×16          | 512×8       | 512×8       | √         | 12-bit ×7                    | 10-bit CTM×2<br>16-bit STM×1 | AC Side     | Uni-                    | —                        | 1000W                    | UART×1          | 22  | 24SSOP<br>28SSOP |
| Power Inverter OTP MCU |            |           |                |             |             |           |                              |                              |             |                         |                          |                          |                 |     |                  |
| Part No.               | Max. Freq. | VDD       | Program Memory | Data Memory | ORPP        | ADC       | Timer                        | Position                     | Directional | Max. AC P <sub>IN</sub> | Max. AC P <sub>OUT</sub> | HVO                      | Interface       | I/O | Package          |
| HT45R7130              | 16MHz      | 2.2V~5.5V | 2K×16          | 128×8       | √           | 12-bit ×6 | 10-bit CTM×1<br>10-bit PTM×1 | DC Side                      | Uni-        | —                       | 1000W                    | 2×LS 12V                 | UART×1<br>SPI×1 | 9   | 16NSOP           |

## BMS MCU

### 32-Bit Cortex®-M0+ BMS MCU

| Part No.   | Max. Freq. | VDD       | Flash | SRAM | ADC                 | Timer                           | Cell # | V <sub>CELL</sub> Accuracy | HVO                  | Interface                       | Max. I/O | Package |
|------------|------------|-----------|-------|------|---------------------|---------------------------------|--------|----------------------------|----------------------|---------------------------------|----------|---------|
| HT32F61730 | 16MHz      | 2.5V~5.5V | 32KB  | 2KB  | 500ksps<br>12-bit×7 | BFTM×1<br>SCTM×3                | 3~8    | 4.2V±5mV                   | 2×LS 12V<br>1×HS 12V | UART×2<br>SPI×2, I²C×1          | 23       | 64LQFP  |
| HT32F61741 | 20MHz      |           | 64KB  | 8KB  | 1Msps<br>12-bit×7   | BFTM×2, PWM×2<br>GPTM×1, MCTM×1 |        |                            |                      | USART×1, UART×1<br>SPI×2, I²C×2 |          |         |

### BMS MCU

| Part No.  | Max. Freq. | VDD       | Program Memory | Data Memory | Data EEPROM | IAP | ADC          | Timer                                        | Cell # | V <sub>CELL</sub> Accuracy | HVO                  | Interface           | I/O | Package   |
|-----------|------------|-----------|----------------|-------------|-------------|-----|--------------|----------------------------------------------|--------|----------------------------|----------------------|---------------------|-----|-----------|
| HT45F8662 | 16MHz      | 1.8V~5.5V | 16K×16         | 1024×8      | 1024×8      | √   | 12-bit<br>×8 | 10-bit PTM×2<br>16-bit CTM×1<br>16-bit STM×1 | √      | ±0.5%                      | 2×LS<br>1×HS         | UART×2<br>SPI/I²C×1 | 25  | 48LQFP-EP |
| HT45F8750 | 16MHz      | 1.8V~5.5V | 8K×16          | 512×8       | 128×8       | √   | 12-bit<br>×8 | 10-bit PTM×1<br>16-bit CTM×1<br>16-bit STM×1 | 3~8    | 4.2V±5mV                   | 2×LS 12V<br>1×HS 12V | UART×1<br>SPI/I²C×1 | 21  | 48LQFP-EP |
| HT45F8762 |            |           | 16K×16         | 1024×8      | 1024×8      |     |              | 10-bit PTM×2<br>16-bit CTM×1<br>16-bit STM×1 |        |                            |                      |                     |     |           |

## Li-Battery BMS Peripheral

### Battery Protection AFE

| Part No. | Cell # | Input Voltage | Control Interface | V <sub>MON</sub> Voltage Monitor Type | V <sub>MON</sub> Accuracy | I <sub>MON</sub> Gain Accuracy | V <sub>REF</sub> | Cell Balance | Gate Driver        | LDO     | HV Wake Up | Package          |
|----------|--------|---------------|-------------------|---------------------------------------|---------------------------|--------------------------------|------------------|--------------|--------------------|---------|------------|------------------|
| HT7Q1521 | 3~8    | 7.5V~36V      | I/O               | Accumulative                          | 1/n±0.5%<br>(Ratio)       | —                              | —                | —            | —                  | 5V±1%   | 1CH        | 16NSOP<br>24SSOP |
| HT7Q2552 | 3~8    | 7.5V~36V      | I²C               | Cell Voltage                          | 4.2V±15mV                 | ±5%                            | 2.5V±8mV         | 120Ω/CH      | L/S×2CH<br>H/S×1CH | 5V/3.3V | 2CH        | 32QFN            |

### Battery Protection DFE

| Part No.  | Cell # | Input Voltage | Standby Current | V <sub>MON</sub> Accuracy | I <sub>MON</sub> Gain Accuracy | Control Interface | Cell Balance | Gate Driver           | V <sub>BAT</sub> Protection | I <sub>BAT</sub> Protection | Others          | Package |
|-----------|--------|---------------|-----------------|---------------------------|--------------------------------|-------------------|--------------|-----------------------|-----------------------------|-----------------------------|-----------------|---------|
| HT7Q5751* | 8~16   | 32.5V~72V     | 120μA           | 4.2V±3mV                  | ±1%                            | I²C               | 120Ω/CH      | H/S×2CH or<br>L/S×2CH | OVP, UVP                    | 3-level OCP<br>SCP          | NTC×4CH<br>Fuse | 64LQFP  |
| HT7Q5951* | 16~24  | 40V~108V      | 120μA           | 4.2V±3mV                  | ±1%                            | I²C               | 120Ω/CH      | H/S×2CH or<br>L/S×2CH | OVP, UVP                    | 3-level OCP<br>SCP          | NTC×4CH<br>Fuse | 64LQFP  |

\* Under development, available in 3Q, 2026.

## 32-Bit Touch MCU

### 32-Bit Cortex®-M0+ 5V Touch MCU

| Part No.   | Max. Freq. | VDD       | Flash | SRAM | PDMA | ADC                | CMP | Timer                            | RTC | Touch Key | Interface                       | Others           | Max. I/O | Package                 |
|------------|------------|-----------|-------|------|------|--------------------|-----|----------------------------------|-----|-----------|---------------------------------|------------------|----------|-------------------------|
| HT32F54231 | 60MHz      | 2.5V~5.5V | 32KB  | 4KB  | —    | 1Msps<br>12-bit×10 | —   | BFTM×2, SCTM×2<br>GPTM×1, MCTM×1 | √   | 24        | USART×1, UART×2<br>SPI×2, I²C×2 | CRC, DIV<br>LEDC | 40       | 28SSOP, 32QFN<br>48LQFP |
| HT32F54241 |            |           | 64KB  | 8KB  |      |                    |     |                                  |     |           |                                 |                  |          |                         |
| HT32F54243 | 60MHz      | 2.5V~5.5V | 64KB  | 8KB  | 6CH  | 1Msps<br>12-bit×10 | 2   | BFTM×2, SCTM×4<br>GPTM×1, MCTM×1 | √   | 28        | USART×2, UART×4<br>SPI×2, I²C×3 | CRC, DIV<br>LEDC | 54       | 32QFN<br>48/64LQFP      |
| HT32F54253 |            |           | 128KB | 16KB |      |                    |     |                                  |     |           |                                 |                  |          |                         |

Note:

BFTM: Basic Function Timer  
GPTM: General Purpose Timer

SCTM: Single Channel Timer  
MCTM: Motor Control Timer

LEDC: LED controller  
DIV: Hardware Divider

## Touch OTP MCU

### Touch I/O OTP MCU

| Part No.  | Max. Freq. | VDD       | Program Memory | Data Memory | Stack | I/O | Timer   | Touch Key | Interface | Package       |
|-----------|------------|-----------|----------------|-------------|-------|-----|---------|-----------|-----------|---------------|
| BS23A02CA | 8MHz       | 2.0V~5.5V | 1K×14          | 64×8        | 2     | 6   | —       | 2         | —         | 8SOP, SOT23-6 |
| BS23B04CA | 8MHz       | 2.0V~5.5V | 2K×15          | 128×8       | 4     | 8   | 8-bit×2 | 4         | I²C×1     | 8SOP, 10MSOP  |
| BS23B08CA | 8MHz       | 2.0V~5.5V | 2K×15          | 256×8       | 6     | 14  | 8-bit×4 | 8         | I²C×1     | 16NSOP        |

### Touch ADC OTP MCU

| Part No.  | Max. Freq. | VDD       | Program Memory | Data Memory | Stack | I/O | Timer                        | ADC       | Touch Key | Interface | Package              |
|-----------|------------|-----------|----------------|-------------|-------|-----|------------------------------|-----------|-----------|-----------|----------------------|
| BS24B04CA | 16MHz      | 2.0V~5.5V | 2K×16          | 256×8       | 6     | 14  | 10-bit CTM×4                 | 12-bit ×8 | 4         | I²C×1     | 8SOP<br>16NSOP       |
| BS24C08CA | 16MHz      | 2.0V~5.5V | 4K×16          | 384×8       | 6     | 22  | 10-bit CTM×3<br>10-bit PTM×1 | 12-bit ×8 | 8         | SPI/I²C×1 | 16NSOP<br>24SOP/SSOP |

## Touch MCU

### Touch I/O MCU

| Part No. | Max. Freq. | VDD       | Program Memory | Data Memory | Data EEPROM | Stack | I/O | Timer        | Touch Key | High Current LED Driver | RTC | Interface      | Package              |
|----------|------------|-----------|----------------|-------------|-------------|-------|-----|--------------|-----------|-------------------------|-----|----------------|----------------------|
| BS83A01C | 8MHz       | 1.8V~5.5V | 512×14         | 32×8        | —           | 2     | 4   | —            | 1         | —                       | —   | —              | 8SOP<br>SOT23-6      |
| BS83A02C | 8MHz       | 2.2V~5.5V | 1K×16          | 96×8        | —           | 4     | 4   | 8-bit×1      | 2         | 4                       | —   | —              | 8SOP<br>SOT23-6      |
| BS83A04C | 8MHz       | 1.8V~5.5V | 1K×16          | 128×8       | 32×16       | 4     | 8   | 10-bit CTM×1 | 4         | 8                       | —   | I²C×1          | 8SOP<br>10MSOP       |
| BS83B04C | 8MHz       | 1.8V~5.5V | 2K×16          | 128×8       | 32×8        | 4     | 8   | 10-bit CTM×1 | 4         | 8                       | —   | I²C×1          | 8SOP<br>10MSOP/DFN   |
| BS83B08C | 16MHz      | 2.2V~5.5V | 2K×16          | 288×8       | 64×8        | 6     | 14  | 10-bit PTM×1 | 8         | 14                      | —   | SPI/I²C×1      | 16NSOP/SSOP<br>16QFN |
| BS83B12C | 16MHz      | 2.2V~5.5V | 2K×16          | 512×8       | 64×8        | 6     | 18  | 10-bit PTM×1 | 12        | 18                      | —   | SPI/I²C×1      | 20SOP/SSOP<br>20QFN  |
| BS83B16C | 16MHz      | 2.2V~5.5V | 2K×16          | 512×8       | 64×8        | 6     | 22  | 10-bit PTM×1 | 16        | 22                      | —   | SPI/I²C×1      | 24SOP/SSOP<br>24QFN  |
| BS83B24C | 16MHz      | 2.2V~5.5V | 3K×16          | 512×8       | 128×8       | 6     | 26  | 10-bit PTM×1 | 24        | 26                      | √   | UART/SPI/I²C×1 | 28SSOP               |

### Touch ADC MCU

| Part No.  | Max. Freq. | VDD       | Program Memory | Data Memory | Data EEPROM | Stack | IAP | I/O | Timer                                        | ADC        | Touch Key | High Current LED Driver | Interface           | Package                 |
|-----------|------------|-----------|----------------|-------------|-------------|-------|-----|-----|----------------------------------------------|------------|-----------|-------------------------|---------------------|-------------------------|
| BS84B04C  | 16MHz      | 1.8V~5.5V | 2K×16          | 256×8       | 32×8        | 4     | —   | 14  | 10-bit CTM×4                                 | 12-bit ×8  | 4         | 14                      | I²C×1               | 8SOP, 10MSOP<br>16NSOP  |
| BS84C12CA | 16MHz      | 1.8V~5.5V | 4K×16          | 512×8       | 512×8       | 6     | √   | 26  | 10-bit CTM×1<br>10-bit PTM×1                 | 12-bit ×8  | 12        | 26                      | UART×1<br>SPI/I²C×1 | 16NSOP<br>24/28SOP/SSOP |
| BS84D20CA | 16MHz      | 1.8V~5.5V | 8K×16          | 768×8       | 512×8       | 8     | √   | 46  | 10-bit CTM×1<br>10-bit PTM×1<br>16-bit STM×1 | 12-bit ×12 | 20        | 46                      | UART×1<br>SPI/I²C×1 | 48LQFP                  |

## Touch MCU

### Touch I/O MCU with LED/LCD Driver

| Part No.  | Max. Freq. | VDD       | Program Memory | Data Memory | Data EEPROM | Stack | I/O | Timer                        | LCD              | Touch Key | RTC | High Current LED Driver | LVD | Interface                    | Package       |
|-----------|------------|-----------|----------------|-------------|-------------|-------|-----|------------------------------|------------------|-----------|-----|-------------------------|-----|------------------------------|---------------|
| BS82C16CA | 16MHz      | 1.8V~5.5V | 4K×16          | 512×8       | 512×8       | 6     | 26  | 10-bit CTM×2<br>10-bit PTM×1 | (SCOM/ SSEG) ×26 | 16        | √   | 26                      | √   | UART×1<br>I <sup>2</sup> C×1 | 24/28SOP/SSOP |

### Touch ADC MCU with LED Driver

| Part No.  | Max. Freq. | VDD       | Program Memory | Data Memory | Data EEPROM | Stack | IAP | I/O | Timer                        | ADC       | Touch Key | High Current LED Driver | RTC | LVD | Interface                             | Package                 |
|-----------|------------|-----------|----------------|-------------|-------------|-------|-----|-----|------------------------------|-----------|-----------|-------------------------|-----|-----|---------------------------------------|-------------------------|
| BS86C12CA | 16MHz      | 1.8V~5.5V | 4K×16          | 512×8       | 512×8       | 6     | √   | 26  | 10-bit CTM×4<br>10-bit PTM×1 | 12-bit ×8 | 12        | 26                      | √   | √   | UART×1<br>I <sup>2</sup> C×1          | 24/28 SOP/SSOP          |
| BS86D20CA | 16MHz      | 1.8V~5.5V | 8K×16          | 768×8       | 512×8       | 8     | √   | 26  | 10-bit CTM×1<br>10-bit PTM×2 | 12-bit ×8 | 20        | 26                      | √   | √   | UART×1<br>SPI/I <sup>2</sup> C×1      | 24/28 SOP/SSOP          |
| BS86E20CA | 16MHz      | 1.8V~5.5V | 16K×16         | 1024×8      | 1024×8      | 12    | √   | 46  | 10-bit CTM×2<br>10-bit PTM×2 | 12-bit ×8 | 20        | 46                      | √   | √   | UART×1<br>UART/SPI/I <sup>2</sup> C×1 | 28SOP/SSOP<br>44/48LQFP |

### Touch ADC MCU with LCD Driver

| Part No.   | Max. Freq. | VDD       | Program Memory | Data Memory | Data EEPROM | Stack | IAP | I/O | Timer                                        | ADC       | Touch Key | LCD  | RTC | LVD | Interface                                              | Package          |
|------------|------------|-----------|----------------|-------------|-------------|-------|-----|-----|----------------------------------------------|-----------|-----------|------|-----|-----|--------------------------------------------------------|------------------|
| BS67F2432  | 4MHz       | 1.8V~5.5V | 2K×16          | 128×8       | 32×16       | 6     | —   | 21  | 9-bit×1<br>10-bit CTM×1                      | 10-bit ×4 | 8         | 15×4 | √   | —   | UART×1                                                 | 28SSOP<br>32QFN  |
| BS67F360CA | 16MHz      | 1.8V~5.5V | 16K×16         | 1024×8      | 1024×8      | 16    | √   | 59  | 10-bit CTM×3<br>16-bit STM×1<br>10-bit PTM×3 | 12-bit ×8 | 24        | 43×4 | √   | √   | UART×3<br>SPI/I <sup>2</sup> C×1<br>I <sup>2</sup> C×1 | 48LQFP<br>64LQFP |

## Touch Ultrasonic Atomiser MCU

### Touch Ultrasonic Atomiser MCU

| Part No.  | Max. Freq. | VDD       | Program Memory | Data Memory | Data EEPROM | Stack | I/O | Timer                                        | ADC       | Touch Key | Atomiser Processor | LVD | Interface | Package             |
|-----------|------------|-----------|----------------|-------------|-------------|-------|-----|----------------------------------------------|-----------|-----------|--------------------|-----|-----------|---------------------|
| BS45F3833 | 12MHz      | 2.2V~5.5V | 2K×16          | 128×8       | 32×8        | 4     | 18  | 10-bit CTM×3<br>10-bit STM×1<br>10-bit PTM×1 | 12-bit ×4 | 4         | √                  | √   | —         | 16/20NSOP           |
| BS45F3843 | 8MHz       | 2.2V~5.5V | 4K×16          | 256×8       | 32×8        | 8     | 26  | 10-bit CTM×3<br>10-bit STM×1<br>10-bit PTM×1 | 12-bit ×8 | 8         | √                  | √   | UART×1    | 16NSOP<br>24/28SSOP |

## Proximity Sensing MCU

### Proximity Sensing MCU

| Part No.  | Max. Freq. | VDD       | Program Memory | Data Memory | Data EEPROM | Stack | I/O | Timer        | ADC       | IR Driver & Receiver | DC Motor Driver      | Interface                   | Package            |
|-----------|------------|-----------|----------------|-------------|-------------|-------|-----|--------------|-----------|----------------------|----------------------|-----------------------------|--------------------|
| BS45F3232 | 8MHz       | 2.2V~5.5V | 2K×14          | 64×8        | 32×8        | 4     | 11  | 10-bit STM×1 | 12-bit ×8 | IR×1<br>OPA×2        | —                    | UART/SPI/I <sup>2</sup> C×1 | 8SOP<br>16NSOP/QFN |
| BS45F3235 |            |           |                |             |             |       |     |              |           |                      | V <sub>M</sub> =7.5V |                             |                    |

### Touch Proximity Sensing MCU

| Part No.  | Max. Freq. | VDD       | Program Memory | Data Memory | Data EEPROM | Stack | I/O | Timer                        | ADC       | Touch Key | IR Driver & Receiver | DC Motor Driver      | Interface | Package              |
|-----------|------------|-----------|----------------|-------------|-------------|-------|-----|------------------------------|-----------|-----------|----------------------|----------------------|-----------|----------------------|
| BS45F3332 | 8MHz       | 1.8V~5.5V | 2K×15          | 128×8       | 32×8        | 4     | 13  | 10-bit CTM×1                 | 10-bit ×4 | 2         | IR×2<br>OPA×1        | —                    | —         | 8SOP<br>16NSOP       |
| BS45F3335 |            |           |                |             |             |       | 11  |                              |           |           |                      | V <sub>M</sub> =7.5V |           |                      |
| BS45F3340 | 8MHz       | 1.8V~5.5V | 4K×16          | 192×8       | 32×8        | 6     | 20  | 10-bit CTM×1<br>10-bit STM×1 | 12-bit ×8 | 4         | IR×2<br>OPA×2        | —                    | UART×1    | 16NSOP/QFN<br>24SSOP |
| BS45F3345 |            |           |                |             |             |       | 17  |                              |           |           |                      | V <sub>M</sub> =7.5V |           |                      |

**Touch Wireless MCU**
**NFC Reader Touch MCU**

| Part No.  | VDD       | Max. Freq. | Program Memory | Data Memory | Data EEPROM | NFC System Clock | NFC Standards          | RF Data Rate                     | RF Output Current | NFC FIFO-buffer | I/O | Touch Key | Interface                 | Package |
|-----------|-----------|------------|----------------|-------------|-------------|------------------|------------------------|----------------------------------|-------------------|-----------------|-----|-----------|---------------------------|---------|
| BS65F2042 | 2.3V~5.5V | 16MHz      | 4K×16          | 512×8       | 512×8       | 27.12MHz         | ISO14443A/B (13.56MHz) | 106/212/424/848Kbps @ISO14443A/B | 230mA             | 64×8            | 26  | 16        | UART×1 I <sup>2</sup> C×1 | 46QFN   |

**Touch Key IC**
**Touch Key**

| Part No.  | Touch Key | VDD       | Standby Current at 3V | Output Type                                                | Package        |
|-----------|-----------|-----------|-----------------------|------------------------------------------------------------|----------------|
| BS211C-1  | 1-Key     | 2.2V~5.5V | 2.5μA                 | Active Low                                                 | SOT23-6        |
| BS212C-1  | 2-Key     | 2.2V~5.5V | 3.5μA                 | Active Low                                                 | SOT23-6        |
| BS213C-1  | 3-Key     | 2.2V~5.5V | 4.0μA                 | Active Low                                                 | 8SOP           |
| BS214C-1  | 4-Key     | 2.2V~5.5V | 5.0μA                 | Active Low                                                 | 10MSOP         |
| BS214C-2  | 4-Key     | 2.2V~5.5V | 5.0μA                 | 2-Wire Series Interface Mode                               | 8SOP           |
| BS216C-1  | 6-Key     | 2.2V~5.5V | 7.5μA/3.5μA           | Active Low / Active High                                   | 16NSOP         |
| BS218C-2  | 8-Key     | 2.2V~5.5V | 8.5μA/3.5μA           | 2-Wire Series Interface Mode / 4-Wire Binary Parallel Mode | 16NSOP         |
| BS218C-3  | 8-Key     | 2.2V~5.5V | 3.5μA/2.5μA           | I <sup>2</sup> C                                           | 16NSOP         |
| BS8112C-3 | 12-Key    | 2.2V~5.5V | 4.0μA/2.5μA           | I <sup>2</sup> C                                           | 16NSOP, 20SSOP |
| BS8116C-3 | 16-Key    | 2.2V~5.5V | 4.0μA/2.5μA           | I <sup>2</sup> C                                           | 20/24SSOP      |

**LED Lighting Touch**

| Part No.  | Touch Key | VDD       | Standby Current at 3V | Optional Modes | PWM Output | Package |
|-----------|-----------|-----------|-----------------------|----------------|------------|---------|
| BS45B2210 | 1-Key     | 2.2V~5.5V | 2.5μA                 | 7              | 2ch        | 8SOP    |

| Music/Voice MCU                                                                                                   |            |           |       |            |      |     |                                      |                    |      |     |      |                 |             |           |                                                           |                  |
|-------------------------------------------------------------------------------------------------------------------|------------|-----------|-------|------------|------|-----|--------------------------------------|--------------------|------|-----|------|-----------------|-------------|-----------|-----------------------------------------------------------|------------------|
| 32-Bit Cortex®-M0+ Music/Voice MCU                                                                                |            |           |       |            |      |     |                                      |                    |      |     |      |                 |             |           |                                                           |                  |
| Part No.                                                                                                          | Max. Freq. | VDD       | Flash | Data Flash | SRAM | I/O | Timer                                | ADC                | PDMA | RTC | Echo | Sub-Band Coding | MIDI Engine | Audio DAC | Interface                                                 | Package          |
| HT32F61244                                                                                                        | 48MHz      | 2.3V~3.6V | 64KB  | 16Mbit     | 8KB  | 49  | BFTM×2<br>SCTM×2<br>GPTM×1<br>LSTM×1 | 1Msps<br>12-bit×16 | 6CH  | —   | √    | √               | 16CH        | 16-bit×2  | UART×1, SPI×1<br>QSPI×1, I²C×1                            | 48LQFP<br>64LQFP |
| HT32F61245                                                                                                        |            |           |       | 32Mbit     |      |     |                                      |                    |      |     |      |                 |             |           |                                                           |                  |
| HT32F61355                                                                                                        | 48MHz      | 2.3V~3.6V | 128KB | 32Mbit     | 16KB | 43  | BFTM×2<br>SCTM×4<br>GPTM×1           | 1Msps<br>12-bit×16 | 6CH  | √   | √    | √               | 32CH        | 16-bit×2  | USART×1, UART×1<br>SPI×1, QSPI×1<br>I²S×1, USB×1<br>I²C×1 | 48LQFP<br>64LQFP |
| HT32F61356                                                                                                        |            |           |       | 64Mbit     |      |     |                                      |                    |      |     |      |                 |             |           |                                                           |                  |
| HT32F61357                                                                                                        |            |           |       | 128Mbit    |      |     |                                      |                    |      |     |      |                 |             |           |                                                           |                  |
| Note: BFTM: Basic Function Timer, SCTM: Single-Channel Timer, GPTM: General-Purpose Timer, LSTM: Low Speed Timer. |            |           |       |            |      |     |                                      |                    |      |     |      |                 |             |           |                                                           |                  |

| Voice MCU         |            |                    |                                        |                     |                 |                  |                  |                    |                              |           |     |           |            |                    |                          |
|-------------------|------------|--------------------|----------------------------------------|---------------------|-----------------|------------------|------------------|--------------------|------------------------------|-----------|-----|-----------|------------|--------------------|--------------------------|
| ADC Voice MCU     |            |                    |                                        |                     |                 |                  |                  |                    |                              |           |     |           |            |                    |                          |
| Part No.          | Max. Freq. | VDD                | Program Memory                         | Data Memory         | Data EEPROM     | Stack            | IAP              | I/O                | Timer                        | ADC       | RTC | Audio DAC | Power Amp. | Inter-<br>face     | Package                  |
| HT66FV140         | 16MHz      | 2.2V~5.5V          | 4K×16                                  | 256×8               | 64×8            | 8                | √                | 19                 | 10-bit CTM×1<br>10-bit PTM×2 | 12-bit ×8 | √   | 16-bit ×1 | 1.5W       | SPI/I²C×1<br>SPI×1 | 24SOP<br>24SSOP<br>28SOP |
| I/O Voice MCU     |            |                    |                                        |                     |                 |                  |                  |                    |                              |           |     |           |            |                    |                          |
| Part No.          | VDD        | Voice Flash Memory | Control Mode                           | Speech              | Voice Output    | PWM Output Power | Support Sentence | Max Voice Capacity | Package                      |           |     |           |            |                    |                          |
| HT68FV022         | 2.3V~5.5V  | 16Mbit             | One Wire<br>Two Wire, Direct           | ADPCM<br>μ-Law, PCM | PWM             | 0.5W             | √                | 400 sec            | 8SOP                         |           |     |           |            |                    |                          |
| HT68FV024         |            | 32Mbit             |                                        |                     |                 |                  |                  | 800 sec            |                              |           |     |           |            |                    |                          |
| I/O Voice OTP MCU |            |                    |                                        |                     |                 |                  |                  |                    |                              |           |     |           |            |                    |                          |
| Part No.          | VDD        | Voice Flash Memory | Control Mode                           | Speech              | Voice Output    | PWM Output Power | Support Sentence | Max Voice Capacity | Package                      |           |     |           |            |                    |                          |
| HT68RV034L        | 2.0V~5.5V  | 8Mbit              | SPI, I²C, One Wire<br>Two Wire, Direct | ADPCM<br>μ-Law, PCM | Delta Sigma PWM | 0.5W             | √                | 340 sec            | 8SOP                         |           |     |           |            |                    |                          |
| HT68RV032         | 2.3V~5.5V  | 2Mbit              |                                        |                     |                 |                  |                  | 85 sec             |                              |           |     |           |            |                    |                          |
| HT68RV033         |            | 4Mbit              |                                        |                     |                 |                  |                  | 170 sec            |                              |           |     |           |            |                    |                          |
| HT68RV034         |            | 8Mbit              |                                        |                     |                 |                  |                  | 340 sec            |                              |           |     |           |            |                    |                          |
| HT68RV035         |            | 16Mbit             |                                        |                     |                 |                  |                  | 680 sec            |                              |           |     |           |            |                    |                          |
| HT68RV036         |            | 32Mbit             |                                        |                     |                 |                  |                  | 1360 sec           |                              |           |     |           |            |                    |                          |

## 32-Bit ASSP MCU

## 32-Bit Cortex®-M0+ USB Data Logger LCD MCU

| Part No.  | Max. Freq. | VDD         | Flash | SRAM | PDF Create LIB | PDMA | I/O | Timer <sup>*1</sup>                 | ADC                | DAC                 | Cap. <sup>*2</sup> or PWM | RTC | SCI <sup>*3</sup> | LCD       | Interface                                         | Others            | Package                    |
|-----------|------------|-------------|-------|------|----------------|------|-----|-------------------------------------|--------------------|---------------------|---------------------------|-----|-------------------|-----------|---------------------------------------------------|-------------------|----------------------------|
| HT32F5828 | 60MHz      | 1.65V~3.60V | 128KB | 16KB | √              | 6CH  | 67  | BFTM×2<br>SCTM×2<br>PWM×2<br>GPTM×1 | 1Msps<br>12-bit×10 | 500ksps<br>12-bit×2 | 14                        | √   | 2                 | 37×4~33×8 | USART×1<br>UART×2<br>SPI×2, I²C×2<br>I²S×1, USB×1 | AES<br>CRC<br>DIV | 48LQFP<br>64LQFP<br>80LQFP |

## 32-Bit Cortex®-M0+ 5V USB Smart Card Reader MCU

| Part No.    | Max. Freq. | VDD       | Flash | SRAM | I/O | Timer <sup>*1</sup>        | RTC | SCI <sup>*3</sup> | Card LDO             | USB <sup>*4</sup> | Interface                | Others | Package         |
|-------------|------------|-----------|-------|------|-----|----------------------------|-----|-------------------|----------------------|-------------------|--------------------------|--------|-----------------|
| HT32F61141  | 48MHz      | 2.5V~5.5V | 64KB  | 16KB | 36  | BFTM×2<br>SCTM×2<br>GPTM×1 | √   | 2                 | 1.8V<br>3.0V<br>5.0V | √                 | UART×2<br>SPI×1<br>I²C×1 | CRC    | 32QFN<br>48LQFP |
| HT32F61152* |            | 2.5V~5.5V | 128KB |      |     |                            |     |                   |                      |                   |                          |        |                 |

\* Under development, available in 4Q, 2026.

Note: 1. BFTM: Basic Function Timer, SCTM: Single-Channel Timer, GPTM: General-Purpose Timer.

2. Cap.: Input Capture.

3. SCI: ISO7816-3 Smart Card Interface.

4. USB 2.0 Full Speed device.

## 32-Bit Cortex®-M0+ Induction Cooker MCU

| Part No.    | Max. Freq. | VCC (HV) | VDD       | Flash | SRAM | Max. I/O | Timer <sup>*1</sup>      | PDMA | ADC                | CMP | PGA | IHTM     | Interface                       | Others   | Package |
|-------------|------------|----------|-----------|-------|------|----------|--------------------------|------|--------------------|-----|-----|----------|---------------------------------|----------|---------|
| HT32F68040* | 64MHz      | —        | 2.5V~5.5V | 64KB  | 8KB  | 56       | BFTM×2, SCTM×2<br>GPTM×1 | 6CH  | 2Msps<br>12-bit×14 | 12  | 2   | 16-bit×2 | USART×1, UART×2<br>SPI×1, I²C×1 | CRC, DIV | 64LQFP  |
| HT32F68045* |            | 9V~24V   | 2.5V~5.5V |       |      | 52       |                          |      |                    |     |     |          |                                 |          |         |

\* Under development, available in 4Q, 2026.

Note: BFTM: Basic Function Timer, SCTM: Single-Channel Timer, GPTM: General-Purpose Timer, IHTM: Induction Heating Timer.

## 8-Bit ASSP MCU

## Induction Cooker MCU

| Part No.   | Max. Freq. | VCC (HV) | VDD       | Program Memory | Data Memory | Data EEPROM | Stack | I/O | Timer                   | ADC       | PPG      | CMP | OVP | OPA | LDO | HVO | Interface       | Package         |
|------------|------------|----------|-----------|----------------|-------------|-------------|-------|-----|-------------------------|-----------|----------|-----|-----|-----|-----|-----|-----------------|-----------------|
| HT45F0058  | 16MHz      | —        | 3.3V~5.5V | 4K×16          | 256×8       | 32×8        | 8     | 13  | 8-bit×3                 | 12-bit×10 | 9-bit×1  | 4   | 1   | 1   | —   | —   | —               | 16NSOP          |
| HT45F0006  | 16MHz      | —        | 3.3V~5.5V | 8K×16          | 512×8       | 512×8       | 8     | 17  | 8-bit×4                 | 12-bit×14 | 9-bit×1  | 1   | 5   | 1   | —   | —   | I²C×1<br>UART×1 | 16NSOP<br>20SOP |
| HT45F0007* | 16MHz      | —        | 4.5V~5.5V | 16K×16         | 1024×8      | 1024×8      | 16    | 21  | 8-bit×6<br>10-bit PTM×2 | 12-bit×14 | 12-bit×1 | 1   | 6   | 1   | —   | —   | I²C×1<br>UART×2 | 20SOP<br>24SOP  |
| HT45F0059  | 16MHz      | 16V~20V  | 3.3V~5.5V | 4K×16          | 256×8       | 32×8        | 8     | 12  | 8-bit×3                 | 12-bit×9  | 9-bit×1  | 4   | 1   | 1   | 5V  | 1   | I²C×1           | 16NSOP          |
| HT45F0036  | 16MHz      | 16V~20V  | 3.3V~5.5V | 8K×16          | 512×8       | 512×8       | 8     | 16  | 8-bit×4                 | 12-bit×13 | 9-bit×1  | 1   | 5   | 1   | —   | 1   | I²C×1<br>UART×1 | 16NSOP<br>20SOP |
| HT45F0037* | 16MHz      | 9V~24V   | 4.5V~5.5V | 16K×16         | 1024×8      | 1024×8      | 16    | 18  | 8-bit×6<br>10-bit PTM×2 | 12-bit×13 | 12-bit×1 | 1   | 6   | 1   | —   | 2   | I²C×1<br>UART×2 | 20SOP<br>24SOP  |

\* Under development, available in 4Q, 2026.

## Induction Cooker OTP MCU

| Part No.  | Max. Freq. | VDD       | Program Memory | Data Memory | Stack | I/O | Timer   | ADC      | PPG     | CMP | OVP | OPA | Package |
|-----------|------------|-----------|----------------|-------------|-------|-----|---------|----------|---------|-----|-----|-----|---------|
| HT45R1005 | 16MHz      | 3.3V~5.5V | 4K×16          | 256×8       | 8     | 13  | 8-bit×4 | 12-bit×9 | 9-bit×1 | 1   | 4   | 1   | 16NSOP  |

## Half-bridge Induction Cooker MCU

| Part No.  | Max. Freq. | VDD       | Program Memory | Data Memory | Data EEPROM | MDU | Stack | I/O | Timer                        | ADC       | PWM      | OVP | OPA | CRC | Interface      | Package               |
|-----------|------------|-----------|----------------|-------------|-------------|-----|-------|-----|------------------------------|-----------|----------|-----|-----|-----|----------------|-----------------------|
| HT45F0075 | 16MHz      | 4.5V~5.5V | 16K×16         | 1024×8      | 1024×8      | √   | 8     | 24  | 10-bit CTM×4<br>10-bit PTM×1 | 12-bit×11 | 12-bit×1 | 9   | 1   | √   | UART/SPI/I²C×1 | 16NSOP<br>20/24/28SOP |

## LED Lighting with TRIAC Dimming OTP MCU

| Part No.  | Max. Freq. | VDD       | Program Memory | Data Memory | Stack | I/O | Timer               | ADC     | PWM     | VCC     | Topology      | PF   | Standby Power | Max. Output Power (110V <sub>AC</sub> /220V <sub>AC</sub> ) | Protection                    | Package |
|-----------|------------|-----------|----------------|-------------|-------|-----|---------------------|---------|---------|---------|---------------|------|---------------|-------------------------------------------------------------|-------------------------------|---------|
| HT45R5530 | 8MHz       | 2.0V~5.5V | 2K×15          | 96×8        | 4     | 6   | 8-bit×1<br>16-bit×1 | 8-bit×3 | 8-bit×1 | 10V~40V | Flyback (PSR) | >0.9 | < 500mW       | 75W / 150W                                                  | OVP, OCP, OSP, In-OTP, Ex-OTP | 16NSOP  |

### Bluetooth Low Energy (Bluetooth® LE)

#### 32-Bit Cortex®-M33/M0+ Dual Core Bluetooth® LE MCU

| Part No.   | Max. Freq. | VDD       | Flash  | SRAM  | DMA   | ADC      | Timer <sup>1</sup> | BQB | Data Rate              | Output Power | Sensitivity | Interface <sup>2</sup>                                         | Others <sup>3</sup>               | I/O | Package |
|------------|------------|-----------|--------|-------|-------|----------|--------------------|-----|------------------------|--------------|-------------|----------------------------------------------------------------|-----------------------------------|-----|---------|
| HT32F67595 | 64MHz      | 1.8V~3.6V | 1024KB | 256KB | 4CH×1 | 12-bit×2 | STIM×2<br>GPTM×4   | 5.3 | 125/500Kbps<br>1/2Mbps | +10dBm       | -94dBm      | UART×3, SPI×2<br>I <sup>2</sup> C×2, SCI×1, I <sup>2</sup> S×1 | AES128×1, TRNG×1<br>QE1×1, TSEN×1 | 16  | 28LGA   |

#### 32-Bit Cortex®-M0+ Bluetooth® LE MCU

| Part No.   | Max. Freq. | VDD       | Flash  | SRAM  | DMA   | ADC      | Timer <sup>1</sup> | BQB | Data Rate              | Output Power | Sensitivity | Interface <sup>2</sup>                                         | Others <sup>3</sup>               | I/O | Package |
|------------|------------|-----------|--------|-------|-------|----------|--------------------|-----|------------------------|--------------|-------------|----------------------------------------------------------------|-----------------------------------|-----|---------|
| HT32F67593 | 64MHz      | 1.8V~3.6V | 1024KB | 128KB | 6CH×1 | 12-bit×1 | STIM×1<br>GPTM×3   | 5.3 | 125/500Kbps<br>1/2Mbps | +10dBm       | -94dBm      | UART×2, SPI×1<br>I <sup>2</sup> C×2, SCI×1, I <sup>2</sup> S×1 | AES128×1, TRNG×1<br>QE1×1, TSEN×1 | 16  | 28LGA   |

Note: 1. STIM: System Timer, GPTM: General-Purpose Timer.  
2. SCI: ISO7816-3 Smart Card Interface.  
3. QE1: Quadrature Encoder Interface, TSEN: Temperature Sensor.

#### Bluetooth® LE Beacon IC

| Part No. | VDD       | Frequency         | Beacon Packet Handler | Output Power | Oscillator | BQB | Interface          | Package |
|----------|-----------|-------------------|-----------------------|--------------|------------|-----|--------------------|---------|
| BC7161   | 2.0V~3.6V | 2402/2426/2480MHz | Transmitter           | -10~+8dBm    | 32MHz      | 5.0 | I <sup>2</sup> C×1 | 8SOP-EP |

### 2.4GHz RF

#### 2.4GHz Transceiver IC

| Part No. | VDD       | Frequency    | Modulation | Data Rate       | Output Power | Sensitivity    | Oscillator | Interface | Package |
|----------|-----------|--------------|------------|-----------------|--------------|----------------|------------|-----------|---------|
| BC5602   | 1.9V~3.6V | 2402~2480MHz | GFSK       | 125/250/500kbps | -10~+6dBm    | -97dBm@250kbps | 16MHz      | SPI       | 16QFN   |

### NFC

#### NFC Reader IC

| Part No.  | VDD       | System Clock | RF Frequency | NFC Standards           | RF Data Rate                        | RF Output Current | NFC FIFO-buffer | CRC | Receiver AGC | Interface                   | Package |
|-----------|-----------|--------------|--------------|-------------------------|-------------------------------------|-------------------|-----------------|-----|--------------|-----------------------------|---------|
| BC45B4523 | 2.7V~5.5V | 27.12MHz     | 13.56MHz     | ISO14443A/B<br>ISO15693 | 106/212/424/848kbps<br>@ISO14443A/B | 250mA             | 64×8            | √   | √            | SPI×1                       | 24QFN   |
| BC45B4522 | 2.3V~5.5V | 27.12MHz     | 13.56MHz     | ISO14443A/B             | 106/212/424/848kbps<br>@ISO14443A/B | 230mA             | 64×8            | √   | √            | UART/SPI/I <sup>2</sup> C×1 | 32QFN   |

#### NFC Tag IC

| Part No.  | VDD       | Data EEPROM | RF Frequency | NFC Standards                | RF Data Rate | Energy Harvesting Voltage | SRAM Buffer | Security Mechanisms | Interface          | Package |
|-----------|-----------|-------------|--------------|------------------------------|--------------|---------------------------|-------------|---------------------|--------------------|---------|
| BC45B4211 | 2.0V~3.6V | 1K×8        | 13.56MHz     | ISO14443A<br>NFC Forum Type2 | 106kbps      | 3V                        | 64×8        | 32-bit Password     | I <sup>2</sup> C×1 | 8SOP    |

### Sub-1GHz RF

#### Sub-1GHz Transceiver IC

| Part No. | VDD       | Band                   | Modulation | Low Current | External Inductor | Data Rate                                                               | Max. Output Power | Sensitivity   | Package |
|----------|-----------|------------------------|------------|-------------|-------------------|-------------------------------------------------------------------------|-------------------|---------------|---------|
| BC3602   | 1.9V~3.6V | 315/433/470/868/915MHz | GFSK       | √           | √                 | 2/10/50/125/250kbps                                                     | 13dBm             | -120dBm@2kbps | 24QFN   |
| BC3603   | 1.8V~3.6V | 315/433/470/868/915MHz | OOK/GFSK   | √           | —                 | 2/10/50/125/250kbps                                                     | 20dBm             | -120dBm@2kbps | 16QFN   |
| BC3603A  | 1.8V~3.6V | 315/433/470/868/915MHz | OOK/(G)FSK | √           | —                 | TX: 0.5~100kbps (0.1k step), 125/250kbps<br>RX: 0.5~250kbps (0.1k step) | 20dBm             | -120dBm@2kbps | 16QFN   |

#### Sub-1GHz Transmitter MCU

| Part No.  | Max. Freq. | VDD       | Program Memory | Data Memory | Data EEPROM | Stack | IAP | I/O | Timer                        | Band               | OOK/FSK | OOK Symbol Rate | Output Power | Package            |
|-----------|------------|-----------|----------------|-------------|-------------|-------|-----|-----|------------------------------|--------------------|---------|-----------------|--------------|--------------------|
| BC68F2123 | 8MHz       | 2.2V~3.6V | 1K×14          | 64×8        | 32×8        | 2     | —   | 9   | 10-bit STM×1<br>10-bit PTM×1 | 315/433/868/915MHz | √       | 0.5~25ksps      | 0/5/10/13dBm | 16NSOP-EP          |
| BC68F2130 | 16MHz      | 2.0V~3.6V | 2K×16          | 256×8       | —           | 8     | √   | 8   | 10-bit CTM×1<br>10-bit PTM×1 | 315/433/868/915MHz | √       | 0.5~25ksps      | 0/10/13dBm   | 16NSOP-EP<br>16QFN |
| BC68F2140 | 16MHz      | 2.0V~3.6V | 4K×16          | 256×8       | —           | 8     | √   | 14  | 10-bit CTM×1<br>10-bit PTM×1 | 315/433/868/915MHz | √       | 0.5~25ksps      | 0/10/13dBm   | 24SSOP-EP<br>24QFN |
| BC68F2150 | 16MHz      | 2.0V~3.6V | 8K×16          | 256×8       | —           | 8     | √   | 14  | 10-bit CTM×1<br>10-bit PTM×1 | 315/433/868/915MHz | √       | 0.5~25ksps      | 0/10/13dBm   | 24SSOP-EP<br>24QFN |

#### Sub-1GHz Transmitter Hopping Code MCU

| Part No.  | Max. Freq. | VDD       | Program Memory | Data Memory | Data EEPROM | Stack | I/O | Timer        | Band               | OOK/FSK | OOK Symbol Rate | Output Power | Package            |
|-----------|------------|-----------|----------------|-------------|-------------|-------|-----|--------------|--------------------|---------|-----------------|--------------|--------------------|
| BC68F3132 | 12MHz      | 2.2V~3.6V | 2K×15          | 128×8       | 64×8        | 6     | 9   | 10-bit CTM×2 | 315/433/868/915MHz | √       | 0.5~25ksps      | 0/5/10/13dBm | 16NSOP-EP<br>16QFN |

#### Sub-1GHz Transmitter IC

| Part No. | VDD       | Band                   | Modulation | OOK Symbol Rate | FSK Data Rate                        | Output Power | Oscillator | Package |
|----------|-----------|------------------------|------------|-----------------|--------------------------------------|--------------|------------|---------|
| BC2102   | 2.2V~3.6V | 315/433/868/915MHz     | OOK/FSK    | 0.5~25ksps      | 0.5~50kbps                           | 0/5/10/13dBm | 16MHz      | 8SOP-EP |
| BC2113*  | 1.8V~3.6V | 315/433/470/868/915MHz | OOK/(G)FSK | 0.5~20ksps      | 0.5~100kbps (0.1K step), 125/250kbps | 0~20dBm      | 16MHz      | 16QFN   |

\* Under development, available in 3Q, 2026.

#### Sub-1GHz Transmitter IC with Encoder

| Part No. | VDD       | Band               | Modulation | OOK Symbol Rate | Output Power | Oscillator | Package                  |
|----------|-----------|--------------------|------------|-----------------|--------------|------------|--------------------------|
| BC2161   | 2.2V~3.6V | 315/433/868/915MHz | OOK        | 1.5~24ksps      | 0/5/10/13dBm | 16MHz      | 8SOP-EP<br>16NSOP-EP/QFN |

#### Sub-1GHz Receiver MCU

| Part No.    | Max. Freq. | VDD       | Program Memory | Data Memory | Data EEPROM | Stack | I/O | Timer                        | ADC       | Band               | Demod. | Symbol Rate   | Sensitivity     | Package   |
|-------------|------------|-----------|----------------|-------------|-------------|-------|-----|------------------------------|-----------|--------------------|--------|---------------|-----------------|-----------|
| BC66F2332-1 | 8MHz       | 2.4V~5.5V | 2K×14          | 64×8        | 32×8        | 4     | 8   | 10-bit STM×1                 | 12-bit ×4 | 315/433/868/915MHz | OOK    | 20ksps (Max.) | -106dBm @10ksps | 16NSOP-EP |
| BC66F2342-1 | 8MHz       | 2.4V~5.5V | 4K×15          | 128×8       | 32×15       | 6     | 13  | 10-bit STM×1<br>10-bit PTM×1 | 10-bit ×6 | 315/433/868/915MHz | OOK    | 20ksps (Max.) | -106dBm @10ksps | 24SSOP-EP |

#### Sub-1GHz Receiver IC

| Part No. | VDD       | Band                   | Demod.     | OOK Symbol Rate | FSK Symbol Rate         | Current Consumption          | Sensitivity    | Package |
|----------|-----------|------------------------|------------|-----------------|-------------------------|------------------------------|----------------|---------|
| BC2302C  | 2.4V~5.5V | 315/433MHz             | OOK        | 0.5~40ksps      | —                       | 4.0mA@433MHz                 | -108dBm@10ksps | 8SOP-EP |
| BC2302D  |           | 315/433/868/915MHz     |            |                 |                         | 5.5mA@868MHz                 |                |         |
| BC2513*  | 1.8V~3.6V | 315/433/470/868/915MHz | OOK/(G)FSK | 0.5~40ksps      | 0.5~250ksps (0.1k step) | 5.5mA@433MHz<br>6.5mA@868MHz | -120dBm@2Ksps  | 16QFN   |

\* Under development, available in 4Q, 2026.

## LDO &amp; Detector

## General LDO

| Part No.   | Max. Input Voltage | Output Voltage                                       | Max. Output Current | Current Consumption | Chip Enable | Tolerance | Protection             | Package          |
|------------|--------------------|------------------------------------------------------|---------------------|---------------------|-------------|-----------|------------------------|------------------|
| HT71xx-1   | 30V                | 2.1V/2.3V/2.5V/2.7V/3.0V<br>3.3V/3.6V/4.4V/5.0V      | 30mA                | 2.5μA               | —           | ±3%       | Soft-Start             | SOT23-5<br>SOT89 |
| HT75xx-1   | 30V                | 2.1V/2.3V/2.5V/2.7V/3.0V<br>3.3V/3.6V/4.0V/4.4V      | 100mA               | 2.5μA               | —           | ±3%       | Soft-Start             | SOT23-5<br>SOT89 |
|            |                    | 4.15V                                                | 100mA               |                     |             |           |                        | SOT89            |
|            |                    | 5.0V/6.0V/7.0V/8.0V/9.0V/10.0V/12.0V                 | 150mA               |                     |             |           |                        | SOT23-5<br>SOT89 |
| HT73xx-1   | 30V                | 2.1V/2.3V/2.5V/2.7V/3.0V<br>3.3V/3.6V/4.0V/4.4V/5.0V | 250mA               | 2.5μA               | —           | ±3%       | Soft-Start             | SOT89            |
| HT75Hxx    | 40V                | 2.1V/2.3V/2.5V/2.7V/3.0V<br>3.3V/3.6V/4.0V/4.4V/5.0V | 150mA               | 2.5μA               | √           | ±1.5%     | Soft-Start<br>OCP, OTP | SOT23-5<br>SOT89 |
| HT73Hxx    | 40V                | 2.1V/2.3V/2.5V/2.7V/3.0V<br>3.3V/3.6V/4.0V/4.4V/5.0V | 250mA               | 2.5μA               | √           | ±1.5%     | Soft-Start<br>OCP, OTP | SOT23-5<br>SOT89 |
| HT78Rxx    | 20V                | 1.5V/3.0V/3.3V/3.5V/5.0V                             | 500mA               | 3μA                 | √           | ±2%       | OCP, OTP               | SOT23-5<br>SOT89 |
| HT71Rxx-1  | 30V                | 2.3V/2.5V/3.0V/3.3V/3.6V/5.0V                        | 80mA                | 1μA                 | —           | ±1%       | Soft-Start             | SOT23-5<br>SOT89 |
| HT75Rxx-1  | 30V                | 2.1V/3.0V/3.3V/3.6V/5.0V/12V                         | 150mA               | 1μA                 | —           | ±1%       | Soft-Start             | SOT23-5<br>SOT89 |
| HT75Rxx-7  | 30V                | 3.0V/3.3V/3.6V/5.0V/12V                              | 150mA               | 2.5μA               | √           | ±2%       | Soft-Start<br>OCP, OTP | SOT23-5<br>SOT89 |
| HT73Rxx-1* | 30V                | 2.7V/3.0V/3.3V/5.0V                                  | 250mA               | 1μA                 | —           | ±1%       | Soft-Start             | SOT89            |
| HT73Rxx-7* | 30V                | 3.3V/5.0V                                            | 250mA               | 2.5μA               | √           | ±2%       | Soft-Start<br>OCP, OTP | SOT23-5<br>SOT89 |

\* Under development, available in 3Q, 2026.

## High Accuracy LDO

| Part No. | Max. Input Voltage | Output Voltage                                       | Max. Output Current | Current Consumption | Chip Enable | Tolerance | Protection | Package          |
|----------|--------------------|------------------------------------------------------|---------------------|---------------------|-------------|-----------|------------|------------------|
| HT71xx-2 | 30V                | 2.1V/2.3V/2.5V/2.7V/3.0V<br>3.3V/3.6V/4.4V/5.0V      | 30mA                | 2.5μA               | —           | ±1%       | Soft-Start | SOT23-5<br>SOT89 |
| HT75xx-2 | 30V                | 2.1V/2.3V/2.5V/2.7V/3.0V<br>3.3V/3.6V/4.0V/4.4V      | 100mA               | 2.5μA               | —           | ±1%       | Soft-Start | SOT23-5<br>SOT89 |
|          |                    | 5.0V/6.0V/7.0V/8.0V/9.0V/10.0V/12.0V                 | 150mA               |                     |             |           |            |                  |
| HT73xx-2 | 30V                | 2.1V/2.3V/2.5V/2.7V/3.0V<br>3.3V/3.6V/4.0V/4.4V/5.0V | 250mA               | 2.5μA               | —           | ±1%       | Soft-Start | SOT89            |

## Low Power LDO

| Part No. | Max. Input Voltage | Output Voltage                                  | Max. Output Current | Current Consumption | Chip Enable | Tolerance | Protection             | Package          |
|----------|--------------------|-------------------------------------------------|---------------------|---------------------|-------------|-----------|------------------------|------------------|
| HT71xx-3 | 30V                | 2.1V/2.3V/2.5V/2.7V/3.0V<br>3.3V/3.6V/4.4V/5.0V | 30mA                | 1.0μA               | —           | ±2%       | Soft-Start             | SOT23-5<br>SOT89 |
| HT73Lxx  | 6.6V               | 1.8V/2.5V/3.0V/3.3V/3.6V                        | 250mA               | 1.35μA              | √           | ±2%       | Soft-Start<br>OCP, OTP | SOT23-5          |

### LDO & Detector

#### Voltage Detector

| Part No.  | Max. Input Voltage | Detector Voltage ( $V_{DET}$ )             | Hysteresis Width       | Current Consumption | Tolerance | Package                 |
|-----------|--------------------|--------------------------------------------|------------------------|---------------------|-----------|-------------------------|
| HT70xxA-1 | 30V                | 2.2V/2.4V/2.7V/3.3V<br>3.9V/4.4V/5.0V/8.2V | $0.05V \times V_{DET}$ | 3.0 $\mu$ A         | $\pm 3\%$ | SOT23, SOT23-5<br>SOT89 |
| HT70xxA-2 | 30V                | 2.2V/2.4V/2.7V/3.3V<br>3.9V/4.4V/5.0V/8.2V | $0.05V \times V_{DET}$ | 2.5 $\mu$ A         | $\pm 1\%$ | SOT23-5<br>SOT89        |
| HT70Rxx   | 30V                | 2.2V/2.4V/2.7V/3.9V/4.4V/5.0V              | $0.05V \times V_{DET}$ | 1.0 $\mu$ A         | $\pm 1\%$ | SOT23-5<br>SOT89        |

### DC to DC

#### Asynchronous Step-Down DC to DC Converter

| Part No. | Max. Input Voltage | Output Voltage | Output Current | Switching Frequency | Current Limit | Accuracy           | Shutdown Current | Operation Current | Efficiency | Mode    | Package |
|----------|--------------------|----------------|----------------|---------------------|---------------|--------------------|------------------|-------------------|------------|---------|---------|
| HT7463C  | 60V                | 0.8V~36V       | 0.6A           | 1250kHz             | 1.2A          | 0.794V $\pm 2.0\%$ | 0.1 $\mu$ A      | 0.5mA             | 95%        | PWM/PSM | SOT23-6 |
| HT7463D  |                    |                |                | 550kHz              |               |                    |                  |                   |            |         |         |

#### Asynchronous Step-Up DC to DC Converter

| Part No. | Input Voltage | Output Voltage           | Output Current  | Switching Frequency | Accuracy            | Shutdown Current | Operation Current | Efficiency | Mode | Package                 |
|----------|---------------|--------------------------|-----------------|---------------------|---------------------|------------------|-------------------|------------|------|-------------------------|
| HT77xxB  | 0.7V~6.0V     | 1.8V/2.2V                | 0.1A            | 115kHz              | $V_{OUT} \pm 2.5\%$ | 0.1 $\mu$ A      | 5 $\mu$ A         | 80%        | PFM  | SOT23, SOT23-5<br>SOT89 |
|          |               | 2.7V/3.0V/3.3V/3.7V/5.0V |                 |                     |                     |                  |                   | 85%        |      |                         |
| HT77xxC  | 0.7V~6.0V     | 1.8V/2.2V                | —<br>(External) | 115kHz              | $V_{OUT} \pm 2.5\%$ | 0.1 $\mu$ A      | 5 $\mu$ A         | 80%        | PFM  | SOT23-5<br>SOT89        |
|          |               | 2.7V/3.0V/3.3V/3.7V/5.0V |                 |                     |                     |                  |                   | 85%        |      |                         |

#### Synchronous Step-Up DC to DC Converter

| Part No. | Input Voltage | Output Voltage           | Output Current | Switching Frequency | Current Limit | Accuracy          | Shutdown Current | Operation Current | Efficiency | Mode | Package                 |
|----------|---------------|--------------------------|----------------|---------------------|---------------|-------------------|------------------|-------------------|------------|------|-------------------------|
| HT77xxFA | 0.85V~6.0V    | 2.7V/3.0V/3.3V/3.7V/5.0V | 0.2A           | —                   | —             | $V_{OUT} \pm 2\%$ | 0.1 $\mu$ A      | 4 $\mu$ A         | 95%        | PFM  | SOT23, SOT23-5<br>SOT89 |

#### Charge Pump DC to DC Converter

| Part No. | Input Voltage | Output Voltage        | Output Current | Switching Frequency | Accuracy            | Operation Current | Efficiency | Package |
|----------|---------------|-----------------------|----------------|---------------------|---------------------|-------------------|------------|---------|
| HT7660   | 3V~12V        | $-V_{DD} \sim V_{DD}$ | 20mA           | 10kHz               | $V_{OUT} \pm 4.0\%$ | 0.08mA            | 98%        | 8SOP    |

| AC to DC                                    |                                 |       |               |                                                              |                              |                        |                                                            |         |
|---------------------------------------------|---------------------------------|-------|---------------|--------------------------------------------------------------|------------------------------|------------------------|------------------------------------------------------------|---------|
| AC/DC Converter                             |                                 |       |               |                                                              |                              |                        |                                                            |         |
| Part No.                                    | Topology                        | PF    | Standby Power | Max. Output Power (110V <sub>AC</sub> / 220V <sub>AC</sub> ) | Power MOSFET Maximum Voltage | Protection             | Package                                                    |         |
| HT7A6312                                    | Flyback (SSR), Buck, Buck-Boost | < 0.7 | < 100mW       | 8W / 13W                                                     | 730V                         | OVP, OCP, In-OTP       | 8SOP                                                       |         |
| HT7A6322                                    | Flyback (SSR), Buck, Buck-Boost | < 0.7 | < 100mW       | 12W / 20W                                                    | 730V                         | OVP, OCP, In-OTP       | 8SOP                                                       |         |
| AC/DC Controller                            |                                 |       |               |                                                              |                              |                        |                                                            |         |
| Part No.                                    | Topology                        | PF    | Standby Power | Max. Output Power (110V <sub>AC</sub> / 220V <sub>AC</sub> ) | Max. Switching Frequency     | Function               | Protection                                                 | Package |
| HT7A8006                                    | Flyback (CV PSR)                | > 0.9 | < 500mW       | 75W / 150W                                                   | 180kHz                       | —                      | OVP, OCP, OSP, In-OTP, Ex-OTP                              | 8SOP    |
| HT7A8007*                                   | Flyback (CV PSR)                | > 0.9 | < 500mW       | 75W / 150W                                                   | 180kHz                       | —                      | AC: Programmable UVP, OVP<br>OVP, OCP, OSP, In-OTP, Ex-OTP | 8SOP    |
| HT7A4001N                                   | Flyback (CV SSR)                | < 0.7 | < 75mW        | 150W / 250W                                                  | 70kHz                        | —                      | AC: Programmable UVP<br>Vo: OVP, OCP, OSP                  | SOT23-6 |
| HT7A4001H                                   |                                 |       |               |                                                              | 135kHz                       |                        |                                                            |         |
| HT7A4001F                                   |                                 |       |               |                                                              | 70kHz                        | —                      | AC: Programmable UVP, OVP<br>Vo: OVP, OCP, OSP             | 8SOP    |
| HT7L5502                                    | Flyback (CC PSR)                | > 0.9 | < 500mW       | 75W / 150W                                                   | 180kHz                       | Secondary Side Dimming | OVP, OCP, OSP, In-OTP, Ex-OTP                              | 8SOP    |
| HT7L5503                                    | Flyback (CC PSR)                | > 0.9 | < 500mW       | 75W / 150W                                                   | 180kHz                       | Primary Side Dimming   | OVP, OCP, OSP, In-OTP, Ex-OTP                              | 8SOP    |
| * Under development, available in 4Q, 2026. |                                 |       |               |                                                              |                              |                        |                                                            |         |

### LCD Controller & Driver

#### LCD Controller & Driver (I<sup>2</sup>C)

| Part No.  | VDD       | Segment × Common  | LCD Voltage       | Bias          | Built-in OSC. | Key-scan           | LED | Buzzer     | Interface        | Package        |
|-----------|-----------|-------------------|-------------------|---------------|---------------|--------------------|-----|------------|------------------|----------------|
| HT16C21A  | 2.4V~5.5V | 20×4, 16×8        | ≤ V <sub>DD</sub> | 1/3, 1/4      | √             | —                  | —   | —          | I <sup>2</sup> C | 24SSOP, 28SSOP |
| HT16C22A  | 2.4V~5.5V | 44×4              | ≤ V <sub>DD</sub> | 1/2, 1/3      | √             | —                  | —   | —          | I <sup>2</sup> C | 48LQFP         |
| HT16C22AG |           |                   |                   |               |               |                    |     |            |                  | Gold Bump      |
| HT16C23A  | 2.4V~5.5V | 56×4, 52×8        | 2.4V~5.5V         | 1/3, 1/4      | √             | —                  | —   | —          | I <sup>2</sup> C | 48LQFP, 64LQFP |
| HT16C23AG |           |                   |                   |               |               |                    |     |            |                  | Gold Bump      |
| HT16C24A  | 2.4V~5.5V | 72×4, 68×8, 60×16 | 2.4V~5.5V         | 1/3, 1/4, 1/5 | √             | —                  | —   | —          | I <sup>2</sup> C | 64LQFP, 80LQFP |
| HT16C24AG |           |                   |                   |               |               |                    |     |            |                  | Gold Bump      |
| HT16K23A  | 2.4V~5.5V | 20×4, 16×8        | = V <sub>DD</sub> | 1/3, 1/4      | √             | 20×1               | —   | —          | I <sup>2</sup> C | 28SSOP         |
| HT16K24   | 2.4V~5.5V | 24×4, 22×6, 20×8  | = V <sub>DD</sub> | 1/3, 1/4      | √             | 24×1, 22×1<br>20×1 | 8   | 1/2/4/8kHz | I <sup>2</sup> C | 32QFN          |

#### LCD Controller & Driver (4-Wire)

| Part No. | VDD       | Segment × Common | LCD Voltage         | Bias     | Built-in OSC. | Ext. Crystal | Interface | Package                   |
|----------|-----------|------------------|---------------------|----------|---------------|--------------|-----------|---------------------------|
| HT1620   | 2.4V~3.3V | 32×2, 32×3, 32×4 | 3/2×V <sub>DD</sub> | 1/2, 1/3 | —             | √            | 4-Wire    | 64LQFP                    |
| HT1621   | 2.4V~5.2V | 32×2, 32×3, 32×4 | ≤ V <sub>DD</sub>   | 1/2, 1/3 | √             | √            | 4-Wire    | 44LQFP, 48SSOP,<br>48LQFP |
| HT1621G  | 2.4V~5.2V |                  |                     |          |               |              |           | Gold Bump                 |
| HT1622   | 2.7V~5.2V | 32×8             | ≤ V <sub>DD</sub>   | 1/4      | √             | —            | 4-Wire    | 44LQFP, 64LQFP            |
| HT16220  | 2.7V~5.2V | 32×8             | ≤ V <sub>DD</sub>   | 1/4      | —             | √            | 4-Wire    | 64LQFP                    |
| HT1623   | 2.7V~5.2V | 48×8             | ≤ V <sub>DD</sub>   | 1/4      | √             | √            | 4-Wire    | 100LQFP                   |
| HT1625   | 2.7V~5.2V | 64×8             | ≤ V <sub>DD</sub>   | 1/4      | √             | √            | 4-Wire    | 100LQFP                   |

### LED Controller & Driver

#### LED Controller & Driver

| Part No.  | VDD       | Row × Common | Row Source Current | Row Sink Current | Com Source Current | Com Sink Current | PWM Gray            | Key-scan   | Interface        | Package        |
|-----------|-----------|--------------|--------------------|------------------|--------------------|------------------|---------------------|------------|------------------|----------------|
| HT1632D   | 4.5V~5.5V | 32×8, 24×16  | 50mA               | 12mA             | 45mA               | 250mA            | 16 Level for Global | —          | 4-Wire           | 48LQFP, 52LQFP |
| HT1632D-2 |           | 28×8         |                    |                  |                    |                  |                     |            |                  | 48LQFP         |
| HT1635C   | 4.5V~5.5V | 44×8         | 50mA               | 10mA             | 45mA               | 250mA            | 16 Level for Global | —          | 4-Wire           | 64LQFP         |
| HT1635D   |           |              |                    |                  |                    |                  |                     |            | I <sup>2</sup> C |                |
| HT16K33A  | 4.5V~5.5V | 16×8, 12×8   | 20mA±5%            | 6mA              | 20mA               | 160mA            | 16 Level for Global | 13×3, 10×3 | I <sup>2</sup> C | 24SSOP, 28SSOP |

#### Advanced LED Controller & Driver

| Part No.  | VDD       | Row × Common                | Com Source Current | Com Sink Current | Constant Current     | PWM Gray                         | Fade | RGB Group Control | Auto Scrolling | Over Temp. Detection | Open/Short Detection | Interface        | Package            |
|-----------|-----------|-----------------------------|--------------------|------------------|----------------------|----------------------------------|------|-------------------|----------------|----------------------|----------------------|------------------|--------------------|
| HT16D31A  | 2.7V~5.5V | 8×9                         | 270mA              | —                | 33mA±3%<br>Max. 48mA | 256 Level for each dot           | √    | —                 | √              | √                    | √                    | 3-Wire SPI       | 16NSOP-EP<br>16QFN |
| HT16D31B  |           |                             |                    |                  |                      |                                  |      |                   |                |                      |                      | I <sup>2</sup> C |                    |
| HT16D33A  | 2.7V~5.5V | 9×10 + 9×10<br>12×12, 16×16 | 315mA              | —                | 33mA±3%<br>Max. 48mA | 256 Level for each dot           | √    | —                 | √              | √                    | √                    | 3-Wire SPI       | 28SSOP<br>32QFN    |
| HT16D33B  |           |                             |                    |                  |                      |                                  |      |                   |                |                      |                      | I <sup>2</sup> C |                    |
| HT16D35A  | 2.7V~5.5V | 28×8                        | 250mA              | 45mA             | 30mA±3%<br>Max. 45mA | 64 Level for each dot            | √    | —                 | √              | √                    | —                    | 3-Wire SPI       | 48LQFP-EP          |
| HT16D35B  |           |                             |                    |                  |                      |                                  |      |                   |                |                      |                      | I <sup>2</sup> C |                    |
| HT26D24A* | 2.7V~5.5V | 24×1                        | —                  | —                | 24mA±3%<br>Max. 60mA | Max.<br>65536 Level for each dot | √    | √                 | —              | √                    | √                    | 3-Wire SPI       | 24QFN<br>32QFN     |
| HT26D24B* |           |                             |                    |                  |                      |                                  |      |                   |                |                      |                      | I <sup>2</sup> C |                    |

\* Under development, available in 1Q, 2027.

## RF Module

### Sub-1GHz Receiver

| Part No.     | Supply Voltage | Band   | Demod.     | Symbol Rate                                | Current Consumption | Sensitivity                                    | Interface        | Dimension      |
|--------------|----------------|--------|------------|--------------------------------------------|---------------------|------------------------------------------------|------------------|----------------|
| BM2302-64-2  | 2.4V~5.5V      | 433MHz | OOK        | 20Ksps (Max.)                              | 4mA                 | -108dBm@10ksps                                 | I <sup>2</sup> C | 16×15×2.6 (mm) |
| BM2502-64-2  | 2.5V~5.5V      | 433MHz | OOK/FSK    | 40Ksps (OOK Max.)<br>50Ksps (FSK Max.)     | 4.5mA               | -110dBm@10ksps (OOK)<br>-108dBm@10ksps (FSK)   | I <sup>2</sup> C | 16×15×2.6 (mm) |
| BM2513-24-1* | 1.8V~3.6V      | 433MHz | OOK/(G)FSK | 40Ksps (OOK Max.)<br>250Ksps ((G)FSK Max.) | 5.5mA               | -112dBm@10Ksps (OOK)<br>-120dBm@2Ksps ((G)FSK) | SPI              | 16×16×2.6 (mm) |

\* Under development, available in 4Q, 2026.

### Sub-1GHz Transceiver

| Part No.      | Supply Voltage | Band   | Data Rate   | Output Power | Rx Current Consumption | Sensitivity                      | Interface | Dimension        |
|---------------|----------------|--------|-------------|--------------|------------------------|----------------------------------|-----------|------------------|
| BM3602-04-1   | 2.0V~3.6V      | 433MHz | 2~250Kbps   | 13dBm (Max.) | 4.2mA@50Kbps           | -113dBm@10Kbps<br>-110dBm@50Kbps | SPI       | 15×18.5×2.6 (mm) |
| BM3603-04-1   | 1.8V~3.6V      | 433MHz | 2~250Kbps   | 20dBm (Max.) | 6mA@2Kbps              | -120dBm@2Kbps<br>-111dBm@50Kbps  | SPI       | 15×18.5×2.6 (mm) |
| BM3603A-14-1* | 1.8V~3.6V      | 433MHz | 0.5~250Kbps | 20dBm (Max.) | 5.5mA@2Kbps            | -120dBm@2Kbps<br>-111dBm@50Kbps  | SPI       | 15×13.5×2.6 (mm) |

\* Under development, available in 3Q, 2026.

### 2.4GHz Transceiver

| Part No.    | Supply Voltage | Band         | Data Rate       | Output Power | Sensitivity    | Interface | Dimension    |
|-------------|----------------|--------------|-----------------|--------------|----------------|-----------|--------------|
| BM5602-60-1 | 1.9V~3.6V      | 2402~2480MHz | 125/250/500Kbps | 7dBm (Max.)  | -98dBm@125Kbps | SPI       | 17×16×2 (mm) |

### 5.8GHz Microwave Radar

| Part No.    | Supply Voltage | Sensing Distance | Light Detector | Current Consumption | Parameters Setting | Interface | Dimension      |
|-------------|----------------|------------------|----------------|---------------------|--------------------|-----------|----------------|
| BM22S4422-1 | 4V~12V         | 20m              | optional       | 13mA                | √                  | UART      | 20×20×3.2 (mm) |

## Digital Sensor & Module

### Infrared Sensing Module

| Part No.    | Supply Voltage | Current Consumption                                               | Detection Range                             | Application       | Interface   | Dimension       |
|-------------|----------------|-------------------------------------------------------------------|---------------------------------------------|-------------------|-------------|-----------------|
| BM32S2031-1 | 3V~5V          | 14μA @3.3V/85cm/scanning time=0.5s                                | 1~100cm                                     | Proximity Sensing | UART or I/O | 12.7×10×7.2(mm) |
| BM32S3031-1 | 3V~5V          | Operation: 1.8mA @3.3V<br>Standby: 45μA @3.3V/scanning time=128ms | 1~25cm (Z Axis)<br>±7.5cm (X Axis) @ Z=25cm | 1D Gesture        | UART        | 30×8×10.5(mm)   |
| BM32S4021-1 | 3V~5V          | Operation: 3.8mA @3.3V<br>Standby: 85μA @3.3V/scanning time=128ms | 1~25cm (Z Axis)<br>±4cm (X Axis) @ Z=25cm   | 2D Gesture        | UART+INT    | 20×20×11.5(mm)  |

### Thermopile Digital Sensor

| Part No.     | Supply Voltage | Current Consumption                          | Detection Range | Application                      | Interface        | Dimension |
|--------------|----------------|----------------------------------------------|-----------------|----------------------------------|------------------|-----------|
| BM42S2022-1* | 3V~5V          | Operation: <2mA @3.3V<br>Standby: <3μA @3.3V | -20~+380°C      | Infrared temperature measurement | I <sup>2</sup> C | TO-5      |

\* Under development, available in 4Q, 2026.

### VCSEL Proximity Sensor

| Part No.     | Supply Voltage | Current Consumption | Detection Range | Operating Temperature | Interface        | Package | Dimension   |
|--------------|----------------|---------------------|-----------------|-----------------------|------------------|---------|-------------|
| BM32S2122-1  | 1.8V~5.5V      | 10μA @3.3V          | ≤10cm           | -20~+85°C             | I <sup>2</sup> C | OLGA8   | 4×3×0.9(mm) |
| BM32S2123-1* | 1.8V~5.5V      | 10μA @3.3V          | ≤30cm           | -20~+85°C             | I <sup>2</sup> C | OLGA8   | 4×3×0.9(mm) |
| BM32S2125-1* | 1.8V~5.5V      | 16.5μA @3.3V        | ≤70cm           | -20~+85°C             | I <sup>2</sup> C | OLGA8   | 4×3×0.9(mm) |
| BM32S2127-1* | 1.8V~5.5V      | 16.9μA @3.3V        | ≤100cm          | -20~+85°C             | I <sup>2</sup> C | OLGA8   | 4×3×0.9(mm) |

\* Under development, available in 3Q, 2026.

### Laser Ranging Module

| Part No.    | Supply Voltage | Current Consumption                                                | Accuracy | Measurement Distance | Distance Resolution | Operating Temperature | Interface                 | Dimension   |
|-------------|----------------|--------------------------------------------------------------------|----------|----------------------|---------------------|-----------------------|---------------------------|-------------|
| BM42S5321-1 | 3V~5.5V        | Operation: <16.3mA @5V<br>Standby: <560μA @5V/scanning time = 0.5s | ≤2%      | 4~400cm              | 1mm                 | -20~+85°C             | UART/I <sup>2</sup> C+INT | 23×15×9(mm) |

### pH Detection Module

| Part No.    | Supply Voltage | pH Range   | pH Resolution | Accuracy      | Temperature Compensation | Interface             | Dimension          |
|-------------|----------------|------------|---------------|---------------|--------------------------|-----------------------|--------------------|
| BM25S4421-1 | 3V~5.5V        | 0.0~14.0pH | 0.01pH        | ±0.1pH@5~60°C | 0~60°C(unfrozen)         | UART/I <sup>2</sup> C | 65.6×27.9×18.3(mm) |

## Digital Sensor & Module

### TDS Detection Module

| Part No.    | Supply Voltage | TDS Range | TDS Resolution                                                                   | Accuracy   | Temperature Compensation | Interface | Detection channels | Dimension         |
|-------------|----------------|-----------|----------------------------------------------------------------------------------|------------|--------------------------|-----------|--------------------|-------------------|
| BM25S4021-1 | 3.1V~5.5V      | 0~5000ppm | 0.1ppm@0~500ppm<br>0.5ppm@500~1500ppm<br>5ppm@1500~2500ppm<br>10ppm@2500~5000ppm | ±6%@5~60°C | 0(unfrozen)~60°C         | UART      | 2                  | 35.3×34.3×7.3(mm) |

### Turbidity Ddetection Module

| Part No.    | Supply Voltage | Turbidity Range | Turbidity Resolution | Accuracy                              | Temperature Compensation | Interface | Dimension           |
|-------------|----------------|-----------------|----------------------|---------------------------------------|--------------------------|-----------|---------------------|
| BM25S4221-1 | 5.0V±5%        | 0~1000NTU       | 1NTU                 | ±50NTU@0~800NTU<br>±75NTU@800~1000NTU | 0(unfrozen)~85°C         | UART      | 34.8×30.3× 37.8(mm) |

### Electrochemical Alcohol Detection Module

| Part No.    | Supply Voltage | Alcohol Range  | Alcohol Resolution | Accuracy                                          | Temperature Compensation | Interface | Dimension      |
|-------------|----------------|----------------|--------------------|---------------------------------------------------|--------------------------|-----------|----------------|
| BM22S3331-1 | 3V~5.5V        | 0~2mg/L (BrAC) | 0.001mg/L (BrAC)   | 0~-0.040mg/L@0~0.4mg/L<br>0~-10%@0.4~2mg/L (BrAC) | 0~40°C                   | UART      | 75×30×18.5(mm) |

### Ultrasonic Oxygen Module

| Part No.    | Supply Voltage | Oxygen concentration Range | Oxygen concentration Resolution | Oxygen concentration Accuracy | Flow Range | Flow Resolution | Flow Accuracy                                  | Operating Temp. | Interface | Dimension     |
|-------------|----------------|----------------------------|---------------------------------|-------------------------------|------------|-----------------|------------------------------------------------|-----------------|-----------|---------------|
| BM62S5601-1 | 4.75V~13.2V    | 21~95.6%                   | 0.1%                            | ±1.8%@5~45°C                  | 0~10L/Min  | 0.1L/Min        | ±0.2L/Min or ±5%, whichever is greater @5~45°C | 5~50°C          | UART      | 120×29×21(mm) |
| BM62S5602-1 |                |                            |                                 |                               |            |                 |                                                |                 |           | 79×29×21(mm)  |

## DALI Module

### DALI Control Module

| Part No.    | Supply Voltage | MCU    | Operating Temperature | Operating Current | On-Board Switch | PWM Output | Fault Detection | DALI-2 Protocol            | Interface | Dimension     |
|-------------|----------------|--------|-----------------------|-------------------|-----------------|------------|-----------------|----------------------------|-----------|---------------|
| BM82D8011-1 | 7.0V~30V       | 8-bit  | -25°C~85°C            | <10mA             | —               | 1kHz×1     | 12-bit ADC×1    | IEC62386-101/102/207       | DALI      | 40×17×6.5(mm) |
| BM82D8021-1 |                | 8-bit  |                       |                   | —               | 1kHz×2     | 12-bit ADC×2    | IEC62386-101/102/207/209Tc |           |               |
| BM82D8022-1 |                | 32-bit |                       |                   | √               | 1kHz×2     | 12-bit ADC×2    | IEC62386-101/102/207/209Tc |           |               |

## Interface Process Module

### CAN Interface Module

| Part No.    | Description                      | Supply Voltage | Operating Temperature | Operating Current | CAN Protocol           | Interface Data Rate                                         | Isolation Voltage | Interface                | Dimension          |
|-------------|----------------------------------|----------------|-----------------------|-------------------|------------------------|-------------------------------------------------------------|-------------------|--------------------------|--------------------|
| BM42D5601-1 | USB to CAN Module                | 4.5V~5.5V      | -40°C~105°C           | 24mA@5V           | CAN 2.0A/B ISO 11898-1 | CAN up to 1Mbps                                             | —                 | USB×1<br>CAN×1           | 18×17(mm)          |
| BM42D7611-1 | SPI/UART to CAN Module           | 3.15V~3.6V     | -40°C~125°C           | 13mA@3.3V         | CAN 2.0A/B ISO 11898-1 | UART up to 128Kbps<br>SPI up to 500KHz<br>CAN up to 1Mbps   | —                 | UART×1<br>SPI×1<br>CAN×1 | 18×21.6(mm)        |
| BM42D7631-1 | Isolation SPI/UART to CAN Module | 3.0V~3.6V      | -40°C~105°C           | 25mA@3.3V         | CAN 2.0A/B ISO 11898-1 | UART up to 921.6Kbps<br>SPI up to 1.5MHz<br>CAN up to 1Mbps | 3000VDC           | UART×1<br>SPI×1<br>CAN×1 | 32.05×20.4×8.2(mm) |

## Atomization Module

### Atomization Module

| Part No.    | Supply Voltage | Operating Current | Atomization Power | Atomization Frequency | Adjustable Atomizing Level | Water Shortage Detection | Piezoelectric Transducer installation | Interface | Dimension          |
|-------------|----------------|-------------------|-------------------|-----------------------|----------------------------|--------------------------|---------------------------------------|-----------|--------------------|
| BM52D5021-1 | 5V             | 400mA@5V          | 2W                | 108kHz                | UART Mode: 3 Levels        | —                        | above water                           | UART      | 35.8×33.5×15.5(mm) |
| BM52D5121-1 | 18V~26.5V      | 420mA@24V         | VR Mode: 5W~10W   | 1.7/2.4MHz            | UART Mode: 32 Levels       | √                        | under water                           | UART      | 65.3×39.2×14.0(mm) |
| BM52O5221-1 | 24V            | 670mA@24V         | VR Mode: 8W~16W   | 1.7MHz                | PWM Mode: 3 Levels         | √                        | under water                           | PWM       | 55.0×55.0×38.0(mm) |

## OP Amplifier

### General Purpose OP Amplifier

| Part No. | VDD       | Description                     | OP No. | BW     | Offset Voltage | Slew Rate  | Current/OP | Package |
|----------|-----------|---------------------------------|--------|--------|----------------|------------|------------|---------|
| HT92232A | 2.1V~5.5V | Rail to Rail, Dual OP amplifier | 2      | 300kHz | 5mV            | 150 (V/ms) | 16μA @OP   | 8SOP    |
| HT92252A | 2.1V~5.5V | Rail to Rail, Dual OP amplifier | 2      | 1MHz   | 5mV            | 500 (V/ms) | 40μA @OP   | 8SOP    |

### Precision OP Amplifier

| Part No. | VDD       | Description                     | OP No. | BW     | Offset Voltage | Slew Rate  | Current   | Package |
|----------|-----------|---------------------------------|--------|--------|----------------|------------|-----------|---------|
| HT92632  | 2.0V~5.5V | Rail to Rail, Dual OP amplifier | 2      | 300kHz | 0.04mV         | 150 (V/ms) | 30μA @OP  | 8SOP    |
| HT92652  | 2.0V~5.5V | Rail to Rail, Dual OP amplifier | 2      | 1.5MHz | 0.01mV         | 500 (V/ms) | 500μA @OP | 8SOP    |

### Low Power OP Amplifier

| Part No. | VDD       | Description                     | OP No. | BW     | Offset Voltage | Slew Rate | Current   | Package |
|----------|-----------|---------------------------------|--------|--------|----------------|-----------|-----------|---------|
| HT92112  | 1.4V~5.5V | Rail to Rail, Dual OP amplifier | 2      | 14kHz  | 3mV            | 24 (V/ms) | 0.6μA @OP | 8SOP    |
| HT92122  | 1.4V~5.5V | Rail to Rail, Dual OP amplifier | 2      | 100kHz | 3mV            | 3 (V/ms)  | 0.6μA @OP | 8SOP    |

## Audio Amplifier

### Class AB Audio Amplifier

| Part No. | VDD       | Description                                     | Output Power   | Mute/Shutdown Function | Package |
|----------|-----------|-------------------------------------------------|----------------|------------------------|---------|
| HT82V73A | 2.2V~5.5V | 1500mW mono audio power amplifier with shutdown | 1500mW into 8Ω | √                      | 8SOP-EP |

## Comparator

### Low Power Comparator

| Part No. | VDD       | Description                     | CMP No. | Output     | Offset Voltage | Propagation Delay                                      | Current | Package         |
|----------|-----------|---------------------------------|---------|------------|----------------|--------------------------------------------------------|---------|-----------------|
| HT93111  | 1.4V~5.5V | Rail to Rail, Single comparator | 1       | Push Pull  | 12mV           | High to Low: 1.6μs (Max.)<br>Low to High: 5.0μs (Max.) | 1.3μA   | SOT23-5<br>8SOP |
| HT93121  |           |                                 |         | Open-Drain |                |                                                        |         |                 |

| Interface Bridge                          |                                |            |                          |                 |                                |                                 |                             |                             |                      |
|-------------------------------------------|--------------------------------|------------|--------------------------|-----------------|--------------------------------|---------------------------------|-----------------------------|-----------------------------|----------------------|
| USB Bridge IC                             |                                |            |                          |                 |                                |                                 |                             |                             |                      |
| Part No.                                  | Description                    | VDD        | Virtual COM              | HID             | FIFO/Buffer                    | Interface Data Rate             | VDDIO                       | Interface                   | Package              |
| HT42B532-1                                | USB to I <sup>2</sup> C Bridge | 3.3V~5.5V  | √                        | —               | TX: 62 bytes<br>RX: 62 bytes   | Up to 400kHz                    | √                           | USB×1<br>I <sup>2</sup> C×1 | 8SOP                 |
| HT42B533-1                                | USB to SPI Bridge              | 3.3V~5.5V  | √                        | —               | TX: 128 bytes<br>RX: 128 bytes | Up to 8MHz                      | √                           | USB×1<br>SPI×1              | 16NSOP               |
| HT42B534-2                                | USB to UART Bridge             | 3.3V~5.5V  | √                        | —               | TX: 128 bytes<br>RX: 128 bytes | Up to 3Mbps<br>Baud             | √                           | UART×1<br>USB×1             | 8SOP,10SOP<br>16NSOP |
| HT42B564-1                                | USB to UART Bridge             | 3.3V~5.5V  | —                        | √               | TX: 32 bytes<br>RX: 32 bytes   | Up to 115.2kbps<br>Baud         | √                           | UART×1<br>USB×1             | 10SOP                |
| CAN Bridge IC                             |                                |            |                          |                 |                                |                                 |                             |                             |                      |
| Part No.                                  | Description                    | VDD        | CAN Protocol             | Message Objects | Temperature                    | Interface Data Rate             | Interface                   | Package                     |                      |
| HT42B536-1                                | USB to CAN Bridge              | 3.3V~5.5V  | CAN 2.0A/B<br>ISO11898-1 | 1               | -40°C~+105°C                   | —                               | USB×1<br>CAN×1              | 16NSOP                      |                      |
| HT42B216-1                                | I <sup>2</sup> C to CAN Bridge | 3.0V~5.5V  | CAN 2.0A/B<br>ISO11898-1 | 30              | -40°C~+105°C                   | Up to 400kHz                    | I <sup>2</sup> C×1<br>CAN×1 | 16NSOP                      |                      |
| HT42B316-1                                | SPI to CAN Bridge              | 3.0V~5.5V  | CAN 2.0A/B<br>ISO11898-1 | 30              | -40°C~+105°C                   | Up to 12MHz                     | SPI×1<br>CAN×1              | 16NSOP                      |                      |
| HT42B416-1                                | UART to CAN Bridge             | 3.0V~5.5V  | CAN 2.0A/B<br>ISO11898-1 | 30              | -40°C~+105°C                   | Up to 115.2kbps Baud            | UART×1<br>CAN×1             | 16NSOP                      |                      |
| Note: Based on BOSCH CAN IP module C_CAN. |                                |            |                          |                 |                                |                                 |                             |                             |                      |
| CAN Bus Controller IC                     |                                |            |                          |                 |                                |                                 |                             |                             |                      |
| Part No.                                  | VDD                            | Max. Freq. | Protocol                 | Message Objects | Temperature Range              | Interface                       | Package                     |                             |                      |
| HT45B3305H                                | 3.0V~5.5V                      | 24MHz      | CAN 2.0A/B<br>ISO11898-1 | 32              | -40°C~+125°C                   | CAN×1<br>SPI/I <sup>2</sup> C×1 | 16NSOP<br>16QFN             |                             |                      |
| HT45B3315                                 | 3.0V~5.5V                      | 24MHz      | CAN 2.0A/B<br>ISO11898-1 | 32              | -40°C~+105°C                   | CAN×1<br>SPI/I <sup>2</sup> C×1 | 16NSOP<br>16QFN             |                             |                      |
| Note: Based on BOSCH CAN IP module C_CAN. |                                |            |                          |                 |                                |                                 |                             |                             |                      |

### CCD/CIS Analog Signal Processor

#### CCD/CIS Analog Signal Processor

| Part No. | AVDD/VDD    | ADC    | Input Channel | MSPS     | PGA         | Offset DAC | Full Scale | Power Consumption | LED Driver | Package       |
|----------|-------------|--------|---------------|----------|-------------|------------|------------|-------------------|------------|---------------|
| HT82V38  | 3.15V~3.45V | 16-bit | 3/2/1         | 30/30/20 | 1~5.85V/V   | ±250mV     | 1.6V/2V    | 300mW             | —          | 28SSOP, 32QFN |
| HT82V39A | 3.15V~3.45V | 16-bit | 3/2/1         | 40/40/20 | 1~5.85V/V   | ±250mV     | 1.6V/2V    | 390mW             | 3CH        | 40QFN         |
| HT82V42  | 3.0V~3.6V   | 16-bit | 1             | 15       | 0.7~7.84V/V | ±315mV     | 2V         | 188mW             | —          | 20SSOP        |
| HT82V42A | 3.15V~3.45V | 16-bit | 1             | 15       | 0.7~7.84V/V | ±315mV     | 2V         | 188mW             | 3CH        | 32QFN         |
| HT82V48  | 3.0V~3.6V   | 16-bit | 3×2           | 60×2     | 0.65~6.0V/V | ±290mV     | 1.2V/2V    | 925mW             | —          | 48LQFP-EP     |

### Real-Time Clock

#### Real-Time Clock (RTC) / Calendar

| Part No. | VDD       | V <sub>BAT</sub> | I <sub>DD</sub> (μA) | I <sub>BAT</sub> (μA) | I <sub>STB</sub> (μA) | External X'tal Osc. | Integrated Load Capacitor (C <sub>L</sub> ) | Data EEPROM | Oscillator Compensation | Interface                    | Package      |
|----------|-----------|------------------|----------------------|-----------------------|-----------------------|---------------------|---------------------------------------------|-------------|-------------------------|------------------------------|--------------|
| HT1381A  | 2.0V~5.5V | —                | 1.0@5V               | —                     | 0.1                   | 32.768kHz           | 9pF                                         | —           | —                       | 3-Wire SPI                   | 8SOP         |
| HT1381B  | 2.0V~5.5V | —                | 1.2@5V               | —                     | 0.1                   | 32.768kHz           | 7pF                                         | —           | —                       | 3-Wire SPI                   | 8SOP         |
| HT1382   | 2.7V~5.5V | 2.0V~5.5V        | 15@3V                | 1.20@3V               | 0.1                   | 32.768kHz           | 12.5pF                                      | 4 Bytes     | √                       | 3-Wire SPI, I <sup>2</sup> C | 8SOP, 10MSOP |

### Encoder / Decoder

#### 2<sup>12</sup> Encoder/Decoder

| Part No. | Encoder/Decoder | VDD      | Addr. No. | Addr./Data No. | Data No. | Data Type | Check Times | Pair  | Package |
|----------|-----------------|----------|-----------|----------------|----------|-----------|-------------|-------|---------|
| HT12D    | Decoder         | 2.4V~12V | 8         | 0              | 4        | Latch     | 3           | HT12E | 20SOP   |

### Telecom IC

#### Telecom Peripheral

| Part No. | Description    | VDD       | OSC Frequency | Package |
|----------|----------------|-----------|---------------|---------|
| HT9200A  | DTMF Generator | 2.5V~5.5V | 3.58MHz       | 8SOP    |
| HT9200B  |                |           |               | 14SOP   |
| HT9170D  | DTMF Receiver  | 2.5V~5.5V | 3.58MHz       | 18SOP   |

**Part Number Index**

|                   |    |                   |    |                    |    |
|-------------------|----|-------------------|----|--------------------|----|
| BA45F25240.....   | 17 | BA45F6753.....    | 20 | BH66F2455.....     | 15 |
| BA45F25240-2..... | 17 | BA45F6756.....    | 20 | BH66F2475.....     | 15 |
| BA45F25250.....   | 17 | BA45F6758.....    | 20 | BH66F2560.....     | 15 |
| BA45F25260.....   | 17 | BA45F6760.....    | 20 | BH66F2570*.....    | 15 |
| BA45F25260B*..... | 17 | BA45F6763.....    | 20 | BH66F2665.....     | 16 |
| BA45F25343.....   | 17 | BA45F6766.....    | 20 | BH66F5345*.....    | 14 |
| BA45F25353.....   | 17 | BA76220.....      | 21 | BH66F5355.....     | 14 |
| BA45F25363.....   | 17 | BC2102.....       | 31 | BH66R2040.....     | 15 |
| BA45F25363B*..... | 17 | BC2113*.....      | 31 | BH66R2232*.....    | 16 |
| BA45F25543.....   | 18 | BC2161.....       | 31 | BH66R2445*.....    | 15 |
| BA45F25553.....   | 18 | BC2302C.....      | 31 | BH67F2132.....     | 16 |
| BA45F25563.....   | 18 | BC2302D.....      | 31 | BH67F2142.....     | 16 |
| BA45F25563B*..... | 18 | BC2513*.....      | 31 | BH67F2265.....     | 15 |
| BA45F25752.....   | 18 | BC3602.....       | 31 | BH67F2472.....     | 15 |
| BA45F25762.....   | 18 | BC3603.....       | 31 | BH67F2475.....     | 15 |
| BA45F3631.....    | 19 | BC3603A.....      | 31 | BH67F2476.....     | 15 |
| BA45F3641.....    | 19 | BC45B4211.....    | 30 | BH67F2493.....     | 15 |
| BA45F4140.....    | 21 | BC45B4522.....    | 30 | BH67F2495.....     | 15 |
| BA45F5220.....    | 17 | BC45B4523.....    | 30 | BH67F5255.....     | 14 |
| BA45F5240.....    | 17 | BC5602.....       | 30 | BH67F5265.....     | 14 |
| BA45F5240-2.....  | 17 | BC66F2332-1.....  | 31 | BH67F5275.....     | 14 |
| BA45F5240A*.....  | 17 | BC66F2342-1.....  | 31 | BH67F5372A.....    | 14 |
| BA45F5250.....    | 17 | BC68F2123.....    | 31 | BH67R2136*.....    | 16 |
| BA45F5260.....    | 17 | BC68F2130.....    | 31 | BM22S3331-1.....   | 37 |
| BA45F5320.....    | 17 | BC68F2140.....    | 31 | BM22S4422-1.....   | 36 |
| BA45F5340.....    | 17 | BC68F2150.....    | 31 | BM2302-64-2.....   | 36 |
| BA45F5343A*.....  | 17 | BC68F3132.....    | 31 | BM2502-64-2.....   | 36 |
| BA45F5350.....    | 17 | BC7161.....       | 30 | BM2513-24-1*.....  | 36 |
| BA45F5360.....    | 17 | BD66FM5245.....   | 9  | BM25S4021-1.....   | 37 |
| BA45F5420.....    | 18 | BD66FM5252.....   | 9  | BM25S4221-1.....   | 37 |
| BA45F5440.....    | 18 | BD66FM6352A.....  | 11 | BM25S4421-1.....   | 36 |
| BA45F5440A*.....  | 18 | BD66FM6352G*..... | 11 | BM32S2031-1.....   | 36 |
| BA45F5450.....    | 18 | BD66FM6445A.....  | 11 | BM32S2122-1.....   | 36 |
| BA45F5460.....    | 18 | BD66FM6446B.....  | 11 | BM32S2123-1*.....  | 36 |
| BA45F5541.....    | 19 | BD66FM6446C.....  | 11 | BM32S2125-1*.....  | 36 |
| BA45F5542.....    | 18 | BD66FM6452A.....  | 11 | BM32S2127-1*.....  | 36 |
| BA45F5542-2.....  | 18 | BD66FM6545G.....  | 11 | BM32S3031-1.....   | 36 |
| BA45F5542A*.....  | 18 | BD66FM6546G.....  | 11 | BM32S4021-1.....   | 36 |
| BA45F5552.....    | 18 | BD66FM6550G.....  | 11 | BM3602-04-1.....   | 36 |
| BA45F5562.....    | 18 | BD66FM6746G.....  | 11 | BM3603-04-1.....   | 36 |
| BA45F5640.....    | 18 | BD66FM6752G.....  | 11 | BM3603A-14-1*..... | 36 |
| BA45F5650.....    | 18 | BD66FM8345C.....  | 12 | BM42D5601-1.....   | 37 |
| BA45F5660.....    | 18 | BD66FM8346F*..... | 12 | BM42D7611-1.....   | 37 |
| BA45F6622.....    | 21 | BD66FM8446F.....  | 12 | BM42D7631-1.....   | 37 |
| BA45F6630.....    | 21 | BD66FM8452F.....  | 12 | BM42S2022-1*.....  | 36 |
| BA45F6730.....    | 20 | BD66RM2441B.....  | 11 | BM42S5321-1.....   | 36 |
| BA45F6740.....    | 20 | BD66RM2541G.....  | 11 | BM52D5021-1.....   | 37 |
| BA45F6746.....    | 20 | BD66RM3341C.....  | 12 | BM52D5121-1.....   | 37 |
| BA45F6750.....    | 20 | BH45B1225.....    | 14 | BM52O5221-1.....   | 37 |
| BA45F6752.....    | 20 | BH45B1525.....    | 14 | BM5602-60-1.....   | 36 |

|                  |    |                  |    |                  |    |
|------------------|----|------------------|----|------------------|----|
| BM62S5601-1..... | 37 | BX66R004.....    | 8  | HT32F50020.....  | 4  |
| BM62S5602-1..... | 37 | BX66R006.....    | 8  | HT32F50030.....  | 4  |
| BM82D8011-1..... | 37 | BX68R002.....    | 8  | HT32F50220.....  | 4  |
| BM82D8021-1..... | 37 | BX68R003.....    | 8  | HT32F50230.....  | 4  |
| BM82D8022-1..... | 37 | BX68R004.....    | 8  | HT32F50231.....  | 4  |
| BS211C-1.....    | 27 | BX68R2420.....   | 7  | HT32F50241.....  | 4  |
| BS212C-1.....    | 27 | HT12D.....       | 40 | HT32F50343.....  | 4  |
| BS213C-1.....    | 27 | HT1381A.....     | 40 | HT32F50431.....  | 4  |
| BS214C-1.....    | 27 | HT1381B.....     | 40 | HT32F50441.....  | 4  |
| BS214C-2.....    | 27 | HT1382.....      | 40 | HT32F50442.....  | 4  |
| BS216C-1.....    | 27 | HT1620.....      | 35 | HT32F50452.....  | 4  |
| BS218C-2.....    | 27 | HT1621.....      | 35 | HT32F52220.....  | 3  |
| BS218C-3.....    | 27 | HT1621G.....     | 35 | HT32F52230.....  | 3  |
| BS23A02CA.....   | 25 | HT1622.....      | 35 | HT32F52231.....  | 3  |
| BS23B04CA.....   | 25 | HT16220.....     | 35 | HT32F52234.....  | 3  |
| BS23B08CA.....   | 25 | HT1623.....      | 35 | HT32F52241.....  | 3  |
| BS24B04CA.....   | 25 | HT1625.....      | 35 | HT32F52243.....  | 3  |
| BS24C08CA.....   | 25 | HT1632D.....     | 35 | HT32F52244.....  | 3  |
| BS45B2210.....   | 27 | HT1632D-2.....   | 35 | HT32F52253.....  | 3  |
| BS45F3232.....   | 26 | HT1635C.....     | 35 | HT32F52331.....  | 4  |
| BS45F3235.....   | 26 | HT1635D.....     | 35 | HT32F52341.....  | 4  |
| BS45F3332.....   | 26 | HT16C21A.....    | 35 | HT32F52342.....  | 4  |
| BS45F3335.....   | 26 | HT16C22A.....    | 35 | HT32F52344.....  | 4  |
| BS45F3340.....   | 26 | HT16C22AG.....   | 35 | HT32F52352.....  | 4  |
| BS45F3345.....   | 26 | HT16C23A.....    | 35 | HT32F52354.....  | 4  |
| BS45F3833.....   | 26 | HT16C23AG.....   | 35 | HT32F52357.....  | 4  |
| BS45F3843.....   | 26 | HT16C24A.....    | 35 | HT32F52367.....  | 4  |
| BS45R2141.....   | 23 | HT16C24AG.....   | 35 | HT32F53231.....  | 5  |
| BS65F2042.....   | 27 | HT16D31A.....    | 35 | HT32F53241.....  | 5  |
| BS67F2432.....   | 7  | HT16D31B.....    | 35 | HT32F53242.....  | 5  |
| BS67F2432.....   | 26 | HT16D33A.....    | 35 | HT32F53252.....  | 5  |
| BS67F360CA.....  | 26 | HT16D33B.....    | 35 | HT32F53742*..... | 5  |
| BS8112C-3.....   | 27 | HT16D35A.....    | 35 | HT32F53752*..... | 5  |
| BS8116C-3.....   | 27 | HT16D35B.....    | 35 | HT32F54231.....  | 5  |
| BS82C16CA.....   | 26 | HT16K23A.....    | 35 | HT32F54231.....  | 25 |
| BS83A01C.....    | 25 | HT16K24.....     | 35 | HT32F54241.....  | 5  |
| BS83A02C.....    | 25 | HT16K33A.....    | 35 | HT32F54241.....  | 25 |
| BS83A04C.....    | 25 | HT26D24A*.....   | 35 | HT32F54243.....  | 5  |
| BS83B04C.....    | 25 | HT26D24B*.....   | 35 | HT32F54243.....  | 25 |
| BS83B08C.....    | 25 | HT32F12345.....  | 3  | HT32F54253.....  | 5  |
| BS83B12C.....    | 25 | HT32F12364.....  | 3  | HT32F54253.....  | 25 |
| BS83B16C.....    | 25 | HT32F12365.....  | 3  | HT32F57331.....  | 4  |
| BS83B24C.....    | 25 | HT32F12366.....  | 3  | HT32F57341.....  | 4  |
| BS84B04C.....    | 25 | HT32F22366.....  | 3  | HT32F57342.....  | 4  |
| BS84C12CA.....   | 25 | HT32F42366*..... | 3  | HT32F57352.....  | 4  |
| BS84D20CA.....   | 25 | HT32F42386*..... | 3  | HT32F5828.....   | 29 |
| BS86C12CA.....   | 26 | HT32F42386*..... | 9  | HT32F59041.....  | 5  |
| BS86D20CA.....   | 26 | HT32F49041.....  | 3  | HT32F59041.....  | 14 |
| BS86E20CA.....   | 26 | HT32F49153.....  | 3  | HT32F59741.....  | 5  |
| BX66R002.....    | 8  | HT32F49163.....  | 3  | HT32F59741.....  | 14 |
| BX66R0025.....   | 8  | HT32F49365.....  | 3  | HT32F61031*..... | 23 |
| BX66R003.....    | 8  | HT32F49395.....  | 3  | HT32F61049.....  | 23 |

|                   |    |                  |    |                 |    |
|-------------------|----|------------------|----|-----------------|----|
| HT32F61141.....   | 29 | HT45F0058.....   | 29 | HT66F3185.....  | 6  |
| HT32F61152*.....  | 29 | HT45F0059.....   | 29 | HT66F3195.....  | 6  |
| HT32F61244.....   | 28 | HT45F0062.....   | 8  | HT66F31A5.....  | 6  |
| HT32F61245.....   | 28 | HT45F0075.....   | 29 | HT66F3352.....  | 8  |
| HT32F61355.....   | 28 | HT45F2140.....   | 23 | HT66F3362.....  | 8  |
| HT32F61356.....   | 28 | HT45F2440.....   | 23 | HT66F4640.....  | 7  |
| HT32F61357.....   | 28 | HT45F4MA.....    | 22 | HT66FV140.....  | 28 |
| HT32F61730.....   | 24 | HT45F5N.....     | 22 | HT66L2530A..... | 7  |
| HT32F61741.....   | 24 | HT45F5Q-2A.....  | 22 | HT66L2540A..... | 7  |
| HT32F65233.....   | 9  | HT45F5Q-3.....   | 22 | HT66L2550A..... | 7  |
| HT32F65240.....   | 9  | HT45F5Q-5.....   | 22 | HT67F2355.....  | 7  |
| HT32F65333A.....  | 10 | HT45F5Q-6.....   | 22 | HT67F2362A..... | 7  |
| HT32F65333G*..... | 10 | HT45F5QC-5.....  | 22 | HT67F2372A..... | 7  |
| HT32F65433A.....  | 10 | HT45F5QC-6.....  | 22 | HT67F2432.....  | 7  |
| HT32F65532G.....  | 10 | HT45F6Q-3A*..... | 22 | HT67F2452.....  | 7  |
| HT32F65533G.....  | 10 | HT45F6Q-5A*..... | 22 | HT67F489.....   | 7  |
| HT32F65733G.....  | 10 | HT45F7550.....   | 23 | HT67F4892.....  | 7  |
| HT32F65B33F*..... | 12 | HT45F8662.....   | 24 | HT67L2540A..... | 7  |
| HT32F65C32F.....  | 12 | HT45F8750.....   | 24 | HT67L2550A..... | 7  |
| HT32F65C33F.....  | 12 | HT45F8762.....   | 24 | HT68F2420.....  | 7  |
| HT32F66246.....   | 9  | HT45F9160.....   | 22 | HT68FB541.....  | 8  |
| HT32F66256*.....  | 9  | HT45FH5N.....    | 22 | HT68FB550.....  | 8  |
| HT32F66446A.....  | 10 | HT45R1005.....   | 29 | HT68FB560.....  | 8  |
| HT32F66546G.....  | 10 | HT45R2140.....   | 23 | HT68FB571.....  | 8  |
| HT32F66746G.....  | 10 | HT45R5530.....   | 29 | HT68FV022.....  | 28 |
| HT32F67593.....   | 30 | HT45R5Q-2.....   | 22 | HT68FV024.....  | 28 |
| HT32F67595.....   | 30 | HT45R5Q-3.....   | 22 | HT68RV032.....  | 28 |
| HT32F72388*.....  | 4  | HT45R6Q-2.....   | 22 | HT68RV033.....  | 28 |
| HT32L52231.....   | 4  | HT45R6Q-3.....   | 22 | HT68RV034.....  | 28 |
| HT32L52241.....   | 4  | HT45R7130.....   | 23 | HT68RV034L..... | 28 |
| HT32L52343.....   | 4  | HT66F002.....    | 6  | HT68RV035.....  | 28 |
| HT32L52353.....   | 4  | HT66F0021.....   | 6  | HT68RV036.....  | 28 |
| HT32L57231*.....  | 4  | HT66F0025.....   | 6  | HT69F340.....   | 7  |
| HT32L57241*.....  | 4  | HT66F003.....    | 6  | HT69F350.....   | 7  |
| HT32L59046*.....  | 16 | HT66F0031.....   | 6  | HT69F360.....   | 7  |
| HT32L62141.....   | 17 | HT66F004.....    | 6  | HT70Rxx.....    | 33 |
| HT32L64041*.....  | 19 | HT66F0041.....   | 6  | HT70xxA-1.....  | 33 |
| HT32L64141*.....  | 19 | HT66F018.....    | 6  | HT70xxA-2.....  | 33 |
| HT42B216-1.....   | 39 | HT66F0181.....   | 6  | HT71Rxx-1.....  | 32 |
| HT42B316-1.....   | 39 | HT66F0185.....   | 6  | HT71xx-1.....   | 32 |
| HT42B416-1.....   | 39 | HT66F0195.....   | 6  | HT71xx-2.....   | 32 |
| HT42B532-1.....   | 39 | HT66F2030.....   | 6  | HT71xx-3.....   | 32 |
| HT42B533-1.....   | 39 | HT66F2040.....   | 6  | HT73Hxx.....    | 32 |
| HT42B534-2.....   | 39 | HT66F2050.....   | 6  | HT73Lxx.....    | 32 |
| HT42B536-1.....   | 39 | HT66F2362.....   | 6  | HT73Rxx-1*..... | 32 |
| HT42B564-1.....   | 39 | HT66F2372.....   | 6  | HT73Rxx-7*..... | 32 |
| HT45B3305H.....   | 39 | HT66F302.....    | 6  | HT73xx-1.....   | 32 |
| HT45B3315.....    | 39 | HT66F303.....    | 6  | HT73xx-2.....   | 32 |
| HT45F0006.....    | 29 | HT66F3126.....   | 6  | HT7463C.....    | 33 |
| HT45F0007*.....   | 29 | HT66F3132.....   | 6  | HT7463D.....    | 33 |
| HT45F0036.....    | 29 | HT66F3142.....   | 6  | HT75Hxx.....    | 32 |
| HT45F0037*.....   | 29 | HT66F3152*.....  | 6  | HT75Rxx-1.....  | 32 |

|                 |    |                     |    |               |    |
|-----------------|----|---------------------|----|---------------|----|
| HT75Rxx-7 ..... | 32 | HT7K1311.....       | 13 | HT82V42 ..... | 40 |
| HT75xx-1 .....  | 32 | HT7K1312 .....      | 13 | HT82V42A..... | 40 |
| HT75xx-2 .....  | 32 | HT7K1411.....       | 13 | HT82V48 ..... | 40 |
| HT7660.....     | 33 | HT7K6875*.....      | 13 | HT82V73A..... | 38 |
| HT77xxB.....    | 33 | HT7K6970 .....      | 13 | HT9170D ..... | 40 |
| HT77xxC.....    | 33 | HT7K6975*.....      | 13 | HT9200A.....  | 40 |
| HT77xxFA.....   | 33 | HT7K9316-50** ..... | 13 | HT9200B ..... | 40 |
| HT78Rxx.....    | 32 | HT7K9416-50*.....   | 13 | HT92112 ..... | 38 |
| HT7A4001F ..... | 34 | HT7L5502.....       | 34 | HT92122.....  | 38 |
| HT7A4001H.....  | 34 | HT7L5503.....       | 34 | HT92232A..... | 38 |
| HT7A4001N.....  | 34 | HT7Q1521 .....      | 24 | HT92252A..... | 38 |
| HT7A6312 .....  | 34 | HT7Q2552.....       | 24 | HT92632.....  | 38 |
| HT7A6322 .....  | 34 | HT7Q5751*.....      | 24 | HT92652.....  | 38 |
| HT7A8006 .....  | 34 | HT7Q5951*.....      | 24 | HT93111 ..... | 38 |
| HT7A8007*.....  | 34 | HT82B45R.....       | 8  | HT93121.....  | 38 |
| HT7K1201 .....  | 13 | HT82V38 .....       | 40 |               |    |
| HT7K1211.....   | 13 | HT82V39A.....       | 40 |               |    |