HOLTEK

HT Touch Series

Holtek Touch MCU
Professional technical services
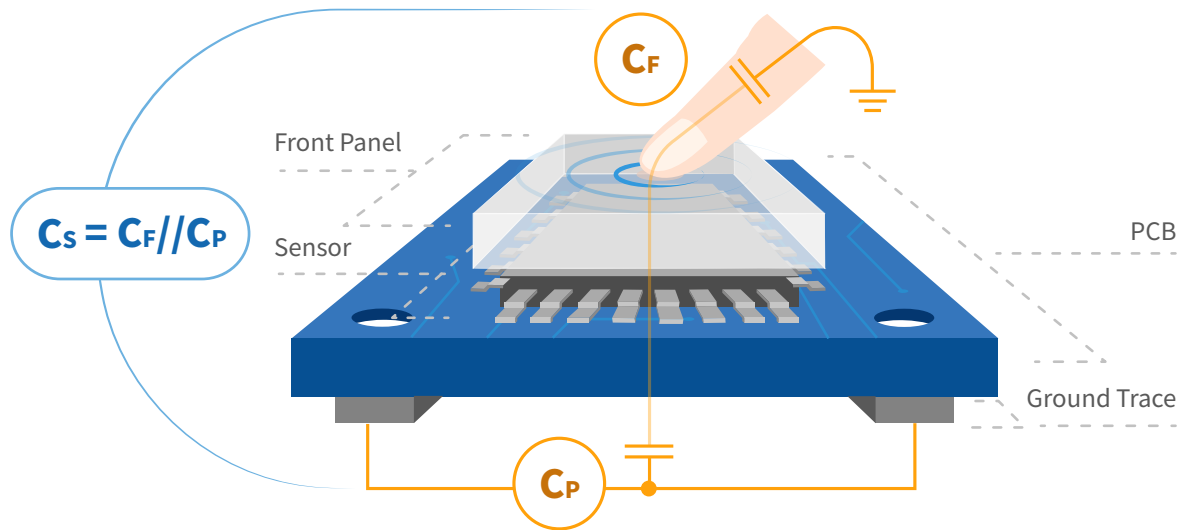and complete solutions
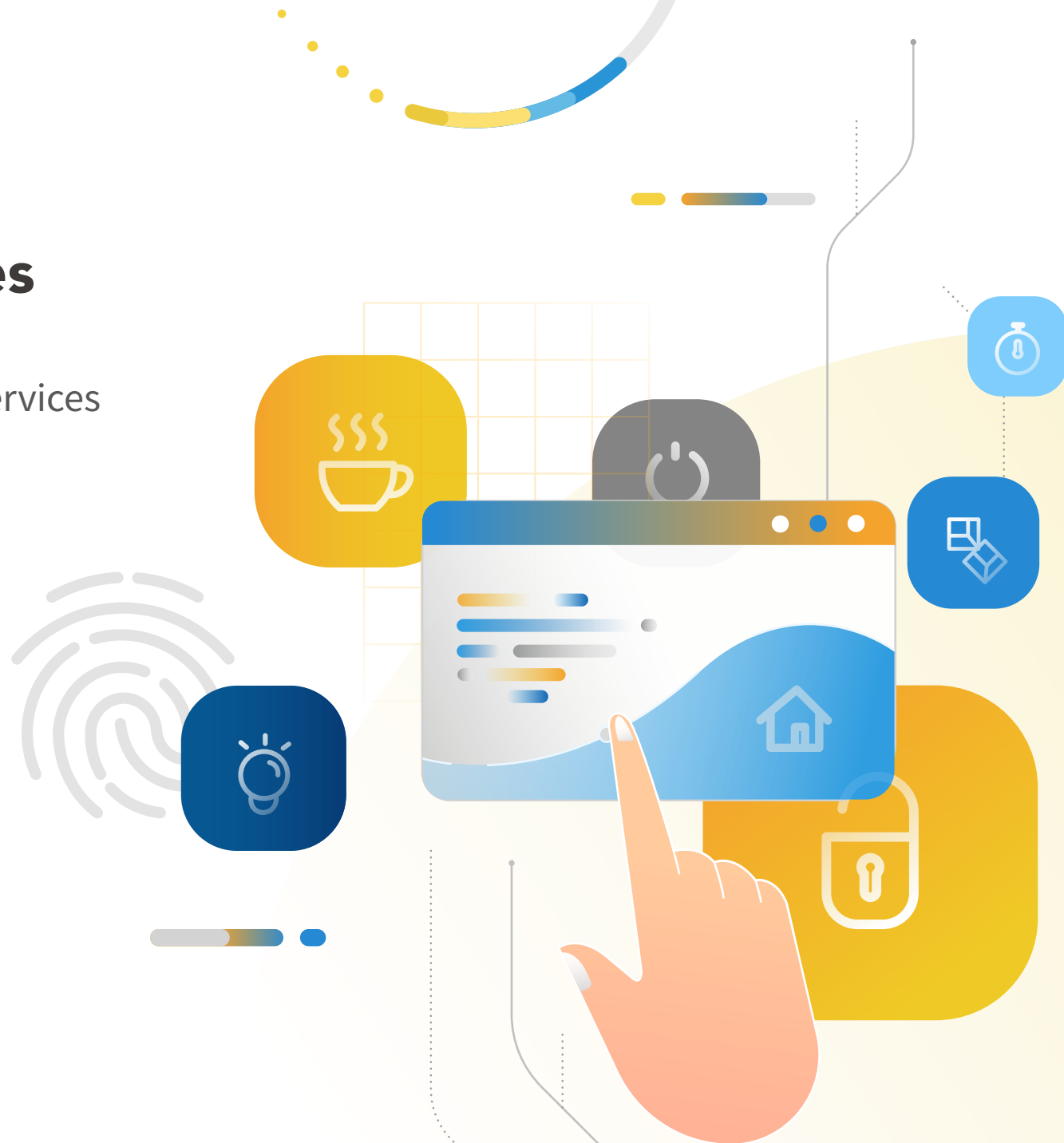
HT Capacitive Touch Sensing

Holtek has been researching and designing capacitive touch key ICs and MCUs since 2006. Due to its low cost and high sensitivity, capacitive touch keys have been widely used in smart wearable devices, smart home control, large and small household appliances, kitchen and bathroom equipment, automobile electronic, industrial control and other terminal products.

Common capacitance touch sensing methods include RC oscillation, charge conversion, series capacity partial voltage comparison, shunt and so on. Holtek Touch MCU touch principle uses RC oscillation mode, and its principle is that when the IC pin is pressed by a finger, the equivalent capacitance will change, which in turn causes the oscillation frequency of the RC oscillator to change. After the IC internal hardware captures and counts, and then combines the software algorithm to determine the effectiveness of key pressing.

During the design and development of touch products, in addition to the hardware and software of the product itself and other professional knowledge and skills, problems caused by external factors such as moisture and water vapor changes in the surrounding environment, power RF interference and other external factors will lead to abnormal touch sensitivity, malfunction or even key failure in severe cases. Therefore, in order to improve the stability of touch products, achieve satisfactory user experience, and prevent various potential risk factors in the terminal products. Holtek established a professional touch technology service team in 2008, BEST SOLUTION INC., specializing in providing customers with professional technical services and solutions, in the shortest time to solve the development of touch products in the application of various difficulties and complications and achieve Time to Market.

BEST SOLUTION BEST SOLUTION INC.

$$C_S = C_F // C_P$$

▲ Figure 1. Fingers usually touch the electrode across the panel, resulting in an increase in the total capacitance C_S

HT Touch Product

32-bit Touch MCU

The HT32 M0+ MCUs feature an excellent energy-efficient Arm® Cortex®-M0+ processor core, with an optimal balance between price, power and performance. The M0+ core based MCUs are not only the first choice for new product design and development, but also the best choice for uprating traditional products based on an 8-bit MCU to 32-bit MCU-based products with higher performance.

Major Advantages

- 32-bit Arm® Cortex®-M0+ processor core
- Up to 60 MHz operating frequency
- Flash protection capability to prevent illegal access
- Multiple booting modes
- 24-bit SysTick timer
- 12-bit SAR A/D converter with a conversion rate of up to 1 Msps
- Touch keys：24 / 28 Keys
- I²C, SPI, USART and UART interfaces

8-bit Touch MCU

The HT8 MCUs have more resilient anti-power noise interference abilities (CS), higher touch key response sensitivity, better power saving logic characteristics and higher development convenience. These features combine to make the devices suitable for various AC or battery powered touch key product applications.

Major Advantages

- Multi-mode operation: FAST, SLOW, IDLE and SLEEP
- Excellent anti-interference ability
- High IC integration, reduce production costs
- Provide touch Library to simplify development difficulty
- Touch keys：1 / 2 / 4 / 8 / 12 / 16 / 24 Keys
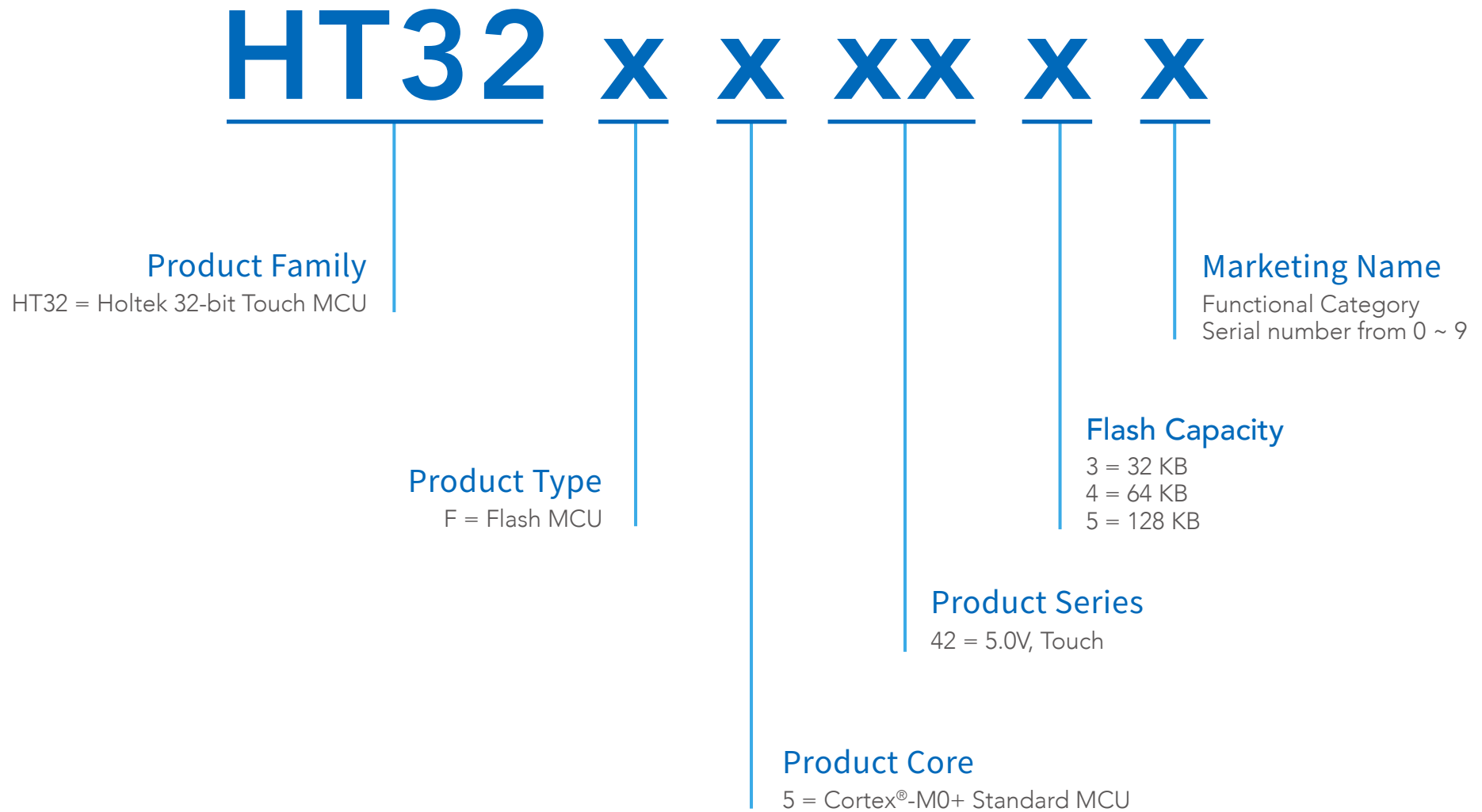- I²C, SPI and UART interfaces

Touch Key IC

Holtek standard Touch Key BS81xC-x series have excellent development convenience, allowing developers to apply them for use directly and quickly in products without requiring software development. Using IC external touch keys to sense the touch action of human hands, the internal circuits are able to implement automatic calibration according to environmental changes, which can further enhance the accuracy of touch detection. The devices include an IRQ function to provide an additional level of application flexibility.

Major Advantages

- Standby and normal operating modes
- Low standby current
- Auto-calibration
- Adaptive voltage drop and water-tolerant touch functions
- Level Hold, selectable active level-low or high
- Provides 1~16 touch keys for selection
- Both serial interface and parallel outputs
- Sensitivity adjustment using an external capacitor
- Minimal number of external components

Naming Rules - HT32 Series

HT32 x x xx x x

Product Family

HT32 = Holtek 32-bit Touch MCU

Product Type

F = Flash MCU

Product Core

5 = Cortex®-M0+ Standard MCU

Product Series

42 = 5.0V, Touch

Flash Capacity

3 = 32 KB
4 = 64 KB
5 = 128 KB

Marketing Name

Functional Category
Serial number from 0 ~ 9

Naming Rules - BS Series

BS xx x xx xx

Product Family

BS = Holtek 8-bit Touch MCU

MCU Versions

C/CA = Enhanced
L = Low Power

Touch Key Amount

01 = 1 Key	12 = 12 Keys
02 = 2 Keys	16 = 16 Keys
04 = 4 Keys	24 = 24 Keys
08 = 8 Keys	

Flash Capacity

A = ≤ 1 KB	D = 8 KB
B = 2~3 KB	E = 16 KB
C = 4 KB	

Product Series

23 = Touch I/O OTP MCU
24 = Touch A/D OTP MCU
45 = Touch ASSP MCU
67 = Touch A/D Flash MCU with LCD Driver
81/21 = Touch Key IC
82 = Touch I/O Flash MCU with LED / LCD Driver
83 = Touch I/O Flash MCU
84 = Touch A/D Flash MCU
86 = Enhanced Touch A/D Flash MCU with LED Driver

5

HT Touch MCU Lineup for Wide Application Ranges

Series	Keys	512 B	1 KB	2 KB	3 KB	4 KB	8 KB	16 KB	32 KB	64 KB	128 KB
HT32 Series General Purpose	24								HT32F54231	HT32F54241	
	28									HT32F54243	HT32F54253
BS23 Series OTP General Purpose	2		BS23A02CA								
	4			BS23B04CA							
	8			BS23B08CA							
BS24 Series OTP With A/D	4			BS24B04CA							
	8					BS24C08CA					
BS82 Series With LED/LCD Driver	16					BS82C16CA					
	20						BS82D20CA				
BS83 Series General Purpose	1	BS83A01C									
	2		BS83A02C								
	4		BS83A04C	BS83B04C							
	8			BS83B08C							
	12			BS83B12C							
	16			BS83B16C							
	24				BS83B24C						

6

Series	Keys	512 B	1 KB	2 KB	3 KB	4 KB	8 KB	16 KB	32 KB	64 KB	128 KB
BS83 Series General Purpose Ultra-Low Power	2		BS83A02L								
	4			BS83B04L							
BS84 Series With A/D	4			BS84B04C							
	8				BS84B08C						
	12					BS84C12CA					
	20						BS84D20CA				
BS86 Series With A/D & LED Driver	12					BS86C12CA					
	20						BS86D20CA	BS86E20CA			
BS67 Series With A/D & LCD Driver	24						BS67F350C				
	28							BS67F360			
	36								BS67F370		
BS45F60 Series With 24-bit A/D	4						BS45F6052				
BS45F38 Series With Ultrasonic Atomiser	4			BS45F3833							
	8					BS45F3843					
BS45F32 Series Proximity Sensing Flash MCU	–			BS45F3232 BS45F3235							

Series	Keys	512 B	1 KB	2 KB	3 KB	4 KB	8 KB	16 KB	32 KB	64 KB	128 KB
BS45F33 Series Touch Proximity Sensing Flash MCU	2			BS45F3332 BS45F3335 BS45F3337							
	4					BS45F3340 BS45F3345					

Series	Keys	Active Low	Serial Interface	I²C
BS21X & BS81X Series Touch Key	1	BS211C-1		
	2	BS212C-1		
	3	BS213C-1		
	4	BS214C-1	BS214C-2	
	6	BS216C-1		
	8		BS218C-2	BS218C-3
	12			BS8112C-3
	16			BS8116C-3

HT Touch MCU Selection Guide

32-Bit 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, 32/46QFN 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	32/46QFN 48/64LQFP
HT32F54253			128KB	16KB										

Note:
BFTM: Basic Function Timer
GPTM: General Purpose Timer
SCTM: Single Channel Timer
MCTM: Motor Control Timer
DIV: Hardware Divider
LEDC: LED controller

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 A/D 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 16NSOP
BS24C08CA	16MHz	2.0V~5.5V	4K×16	384×8	6	22	10-bit PTM×1 10-bit CTM×3	12-bit ×8	8	SPI/I²C×1	16NSOP, 20SOP 24SOP/SSOP

Touch I/O Flash 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 10-bit PTM×1	(SCOM/ SSEG) ×26	16	√	26	√	UART×1 I²C×1	24/28SOP/SSOP
BS82D20CA	16MHz	1.8V~ 5.5V	8K×16	768×8	512×8	8	42	10-bit CTM×2 10-bit PTM×2	(SCOM/ SSEG) ×34	20	√	42	√	UART×1 I²C×1	28SOP/SSOP 48LQFP

Please refer to the official website for product selection information.

Touch I/O Flash 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 SOT23-6
BS83A02C	8MHz	2.2V~5.5V	1K×16	96×8	—	4	4	8-bit×1	2	4	—	—	6DFN, 8SOP 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, 10DFN 10MSOP
BS83B04C	8MHz	1.8V~5.5V	2K×16	128×8	32×8	4	8	10-bit CTM×1	4	8	—	I²C×1	8SOP 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 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 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 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

Ultra-Low Power Touch I/O Flash MCU

Part No.	Max. Freq.	VDD	Program Memory	Data Memory	Data EEPROM	Stack	I/O	Timer	Touch Key	Interface	Package
BS83A02L	8MHz	1.8V~5.5V	1K×14	64×8	—	2	4	8-bit×1	2	—	6DFN, 8SOP SOT23-6
BS83B04L	8MHz	1.8V~5.5V	2K×16	128×8	32×8	4	8	10-bit CTM×1	4	I²C×1	8SOP 10DFN/MSOP

Note: The standby current is less than 150nA at 3.0V (1 Key).

Touch A/D Flash 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/DFN 16NSOP/WLCSP
BS84B08C	16MHz	2.2V~5.5V	3K×16	288×8	64×8	6	—	22	10-bit PTM×1	12-bit ×8	8	22	SPI/I²C×1	16NSOP/SSOP 20/24SOP/SSOP
BS84C12CA	16MHz	1.8V~5.5V	4K×16	512×8	512×8	6	√	26	10-bit CTM×1 10-bit PTM×1	12-bit ×8	12	26	UART×1 SPI/I²C×1	16NSOP 20/24/28SOP/SSOP
BS84D20CA	16MHz	1.8V~5.5V	8K×16	768×8	512×8	8	√	46	10-bit CTM×1 10-bit PTM×1 16-bit STM×1	12-bit ×12	20	46	UART×1 SPI/I²C×1	28SOP/SSOP 48LQFP

Please refer to the official website for product selection information.

Touch A/D Flash 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 10-bit PTM×1	12-bit ×8	12	26	√	√	UART×1 I²C×1	24/28 SOP/SSOP
BS86D20CA	16MHz	1.8V~5.5V	8K×16	768×8	512×8	8	√	26	10-bit CTM×1 10-bit PTM×2	12-bit ×8	20	26	√	√	UART×1 SPI/I²C×1	24/28 SOP/SSOP
BS86E20CA	16MHz	1.8V~5.5V	16K×16	1024×8	1024×8	12	√	46	10-bit CTM×2 10-bit PTM×2	12-bit ×8	20	46	√	√	UART×1 UART/SPI/I²C×1	28SOP/SSOP 44/48LQFP

Touch A/D Flash 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 10-bit CTM×1	10-bit ×4	8	15×4	√	—	UART×1	28SSOP 32QFN
BS67F350C	16MHz	2.2V~5.5V	8K×16	768×8	128×8	8	√	43	10-bit CTM×2 16-bit STM×1 10-bit PTM×1	12-bit ×8	24	32×4	√	√	UART×1 SPI/I²C×1	48LQFP 64LQFP
BS67F360	16MHz	2.2V~5.5V	16K×16	1024×8	128×8	12	√	43	10-bit CTM×2 16-bit STM×1 10-bit PTM×1	12-bit ×8	28	40×4	√	√	UART×1 SPI/I²C×1	48LQFP 64LQFP
BS67F370	16MHz	2.2V~5.5V	32K×16	1536×8	128×8	16	√	59	10-bit CTM×2 16-bit STM×1 10-bit PTM×1	12-bit ×8	36	48×4	√	√	UART×1 SPI/I²C×1	48LQFP 64LQFP 80LQFP

* Under development, available in 4Q, 2023.

Touch 24-bit A/D Flash MCU

Part No.	Max. Freq.	VDD	Program Memory	Data Memory	Data EEPROM	Stack	IAP	I/O	Timer	ADC	Touch Key	Temperature Sensor	LVD	Interface	Package
BS45F6052	8MHz	1.8V~5.5V	8K×16	512×8	512×8	12	√	11	10-bit CTM×2	24-bit ×6	4	√	√	UART×1 I²C×1	16QFN 18WLCSP

Touch Ultrasonic Atomiser Flash 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 10-bit STM×1 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 10-bit STM×1 10-bit PTM×1	12-bit ×8	8	√	√	UART×1	16NSOP 24/28SSOP

Please refer to the official website for product selection information.

Proximity Sensing Flash 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 OPA×2	—	UART/SPI/I²C×1	8SOP 16NSOP/QFN
BS45F3235											V$_M$=7.5V		24SSOP

Touch Proximity Sensing Flash 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 OPA×1	—	—	8SOP 16NSOP
BS45F3335							11					V$_M$=7.5V		24SSOP
BS45F3337							9					NMOS RDS(on)=120mΩ		16NSOP
BS45F3340	8MHz	1.8V~5.5V	4K×16	192×8	32×8	6	20	10-bit CTM×1 10-bit STM×1	12-bit ×8	4	IR×2 OPA×2	—	UART×1	16NSOP/QFN 24SSOP
BS45F3345							17					V$_M$=7.5V		16NSOP 24/28SSOP

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-Wrie Binary Parallel Mode	16NSOP
BS218C-3	8-Key	2.2V~5.5V	3.5µA/2.5µA	I²C	16NSOP
BS8112C-3	12-Key	2.2V~5.5V	4.0µA/2.5µA	I²C	16NSOP, 20SSOP
BS8116C-3	16-Key	2.2V~5.5V	4.0µA/2.5µA	I²C	20/24SSOP

Please refer to the official website for product selection information.

HT Touch MCU Development Environment

Good MCU development tools are a necessary requirement for any design process. In order to support the Holtek Touch series of MCUs, Holtek and external vendors offer a complete set of software and hardware tools to assist users with easy prototyping and debugging. Holtek's starter kit contains all the basic hardware, including an embedded e-Link32 Pro, e-Link and BS-eBridge that provides a simple connection to a PC, allowing users to develop products quickly.

▶ Hardware Development Tool

e-Link

An online debug adaptor of OCDS architecture Flash MCUs. Together with the HT-IDE3000 software, it allows users to program and debug programs on their target boards.

e-Link32 Pro

Arm SWD USB debug adapter for the HT32 MCUs, CMSIS-DAP compliant.

BS-eBridge

Touch IC calibration tool, with calibration software can adjust the key sensitivity.

e-WriterPro

As a programming tool for all of Holtek OTP and Flash devices during the development stage.

Development/Test Board (EV Chip)
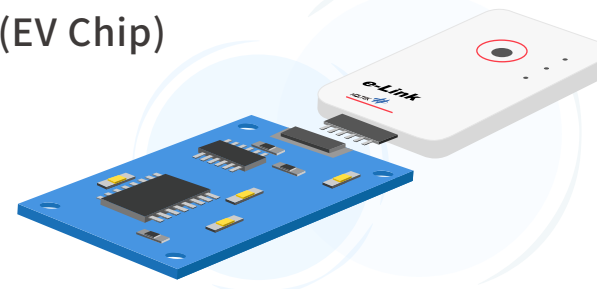
BS8 X Development Board

The quick start development board of touch MCU design can be directly connected with e-Link, convenient for users to get started quickly, evaluate the MCU functions and characteristics, and conduct high-efficiency and low-risk product for prototyping.

▶ Software PC Software

Program Development Platform
HT-IDE3000 ┃ for 8-bit MCU

Emulates Holtek 8-bit MCUs and the basic functions of all HT-ICE emulators.

Signal Monitoring Platform
HXT-Editor

The platform digitizes the touch signals and displays then on the PC to help users debug the touch effect of the product.

Program Development Platform
Keil C ┃ for 32-bit MCU

Emulates Holtek 32-bit MCUs.

Touch Development Platform

The platform helps users shorten the development time of touch products and lower the technical threshold for entering the touch product field.

Development Resources

Touch Library

Supports all touch MCUs, which contains a complete touch algorithm and various parameters and functions.

▶ PC Software

Program Development Platform
HT-IDE3000
for 8-bit MCU

Program Development Platform
Keil C
for 32-bit MCU

Signal Monitoring Platform
HXT-Editor

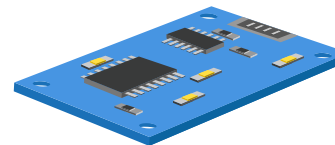### Touch Development Platform

Programmer
HOPE3000
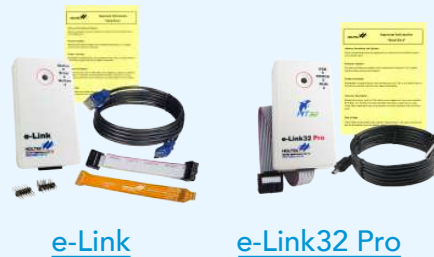
▶ Development Tool

e-Link   e-Link32 Pro

BS-eBridge

e-WriterPro

▶ Development/ Test Board (EV Chip)

BS8 X Development Board

▶ Reference Documents

Library Architecture Introduction

Introduce the Best Solution library architecture, process, functions and provide usage examples.

32-bit Touch MCU Library User Guide

The HT32 touch key library developed by Best Solution is a library that integrates into the MCU all of the touch key underlying driver library files. The library has pre-configured the touch-related MCU hardware, and provides intuitive and flexible touch key sensitivity settings, while integrating common functions such as key detection and power-saving sleep modes.

8-bit Touch MCU Library User Guide

The resources used by the library, as well as various functions and parameters, have been explained in detail, allowing for an easier development process.

Touch Product PCB / ITO / FPC Application Guidelines

This application note has provided developers with key points regarding touch key layout design. This should assist designers to improve their PCB/ITO/FPC layout and shorten the product development time.

▶ Demo Board

Name	1-Key Capacitive Touch Sensing Module	2-Key Capacitive Touch Sensing Module	3-Key Capacitive Touch Sensing Module	4-Key Capacitive Touch Sensing Module
Type	BMS000A0	BMS000B0	BMS000C0	BMS000D0
Name	6-Key Capacitive Touch Sensing Module	8-Key Capacitive Touch Sensing Module	12-Key Capacitive Touch Sensing Module	16-Key Capacitive Touch Sensing Module
Type	BMS000F0	BMS00070	BMS00080	BMS00090
Name	Wheel Capacitive Touch Sensing Module	Slide Capacitive Touch Sensing Module		
Type	BMS00030	BMS00040		

🛒 Holtek various development tools can be purchased at Best Modules Online Shop

▶ BMduino Shield

Name	16-Key Capacitive Touch Sensing Shield
Type	BMK52T016
Name	Slide + 4-Key Capacitive Touch Sensing Shield
Type	BMK54T004
Name	Wheel + 4-Key Capacitive Touch Sensing Shield
Type	BMK56T004

Holtek Touch MCU Application Products

Bathroom Appliances

1. Bathroom Ceiling Heater and Ventilator
2. Water Heater
3. Smart Bathtub
4. Smart Toilet
5. Foot Bath Machine

Personal Care

6. Mirror Lamp
7. Shaver
8. Hair Removal Device
9. Massage Chair
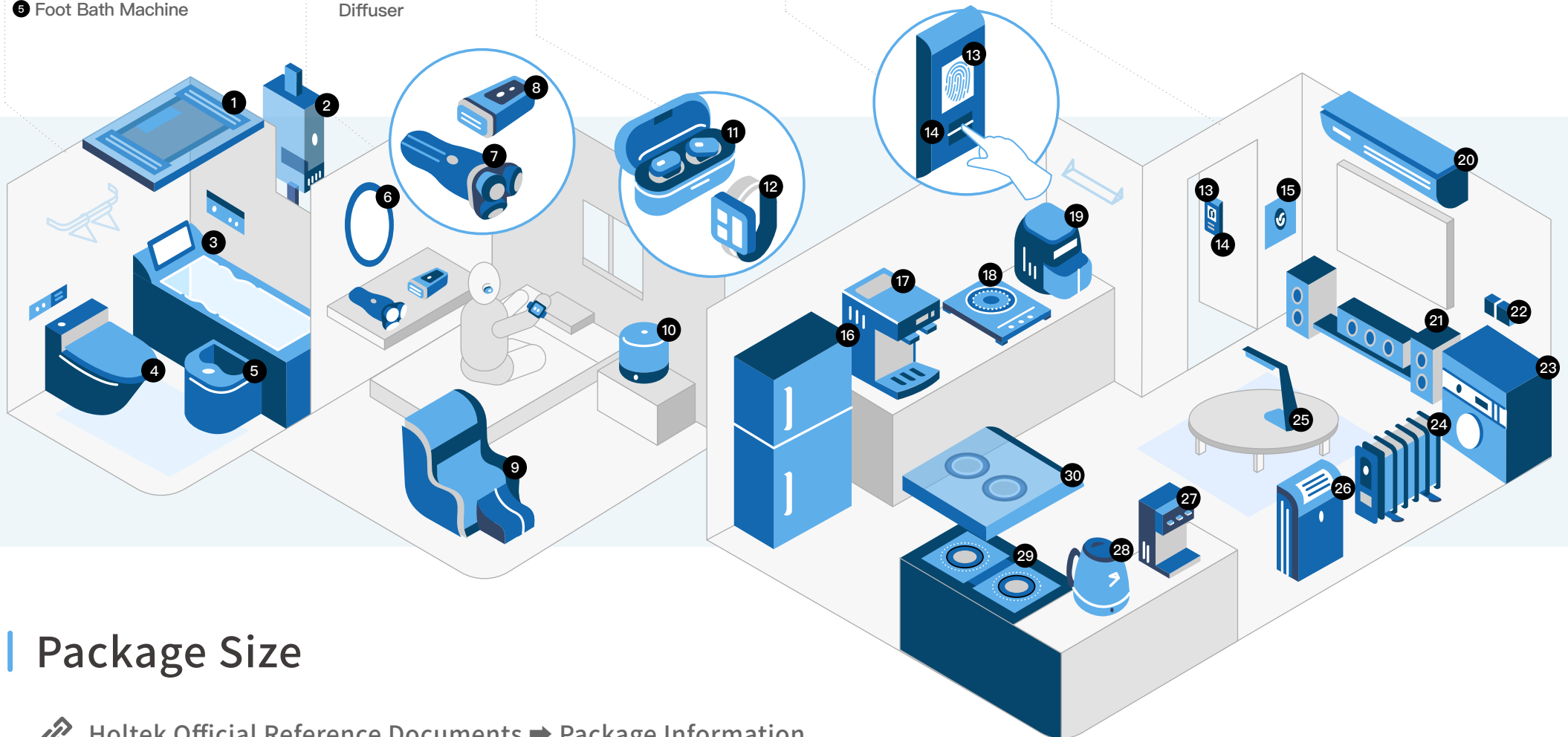10. Humidifier/Fragrance Diffuser

Wearable Devices

11. TWS Bluetooth Headset
12. Smart Bracelet

Security Products

13. Fingerprint Module
14. Smart Door Lock
15. Gate Entry Recording

White Goods & Kitchen Appliances

16. Refrigerator
17. Coffee Machine
18. Induction Cooker
19. Air Fryer
20. Air Conditioner
21. Audio
22. Wall Switch
23. Dryer
24. Electric Heater
25. Table Lamp
26. Air Purifier
27. Water Dispenser
28. Electric Kettle
29. Integrated Stove
30. Range Hood

Package Size

Holtek Official Reference Documents ➡ Package Information

HOLTEK

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Sharing Success Through Excellence

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