

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, I²C, 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. The company will also be expanding its range of functional modules such as PIR modules, infrared modules, temperature/humidity modules 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, please visit: www.holtek.com.

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General Purpose MCU	Display MCU	1.8V~5.5V MCU
32-Bit Flash MCU3	8-Bit LCD Display Flash MCU8	1.8V~5.5V Flash MCU
8-Bit Flash MCU6	8-Bit LCD / LED Flash MCU9	
High Supply Voltage Flash MCU7		
USB MCU	Motor MCU & Peripheral	OPA MCU
USB Interface Flash MCU12	DC Motor Flash MCU13	OPA Flash MCU14
	Motor Driver Peripheral	
Health & Measurement	Security & Safety	Touch MCU & Peripheral
		-
24-Bit A/D MCU	Security & Safety MCU	Touch Flash MCU
Health Care Flash MCU	Security & Safety 10	High Supply Voltage Touch Flash MCU
Measurement Flash MCU		Touch Key IC
R to F MCU		,
Voice & Music MCU	Wireless	Communication
Cortex-M0+ 32-Bit Voice / Music MCU25	BLE26	Interface Bridge
Voice & Music Flash MCU25	2.4GHz RF	Telecom IC
Voice Record / Playback Flash MCU25	Sub-1GHz RF27	
Sound Effect Flash MCU25	NFC	
	FRS	
	RF Module28	
Dettern C Develop Newson	Diamless Delivers	Constitution and Maria
Battery & Power Management	Display Driver	Special Purpose MCU
Battery & Power Wanagement Battery Management	LCD Controller & Driver34	Bank & Commercial MCU37
Battery Management30	LCD Controller & Driver34	Bank & Commercial MCU37
Battery Management	LCD Controller & Driver	Bank & Commercial MCU 37 Special Purpose MCU 38
Battery Management 30 Li Battery & Power Management 31 AC Power Management Flash MCU 31 Inverter Flash MCU 31 LDO & Detector 32	LCD Controller & Driver	Bank & Commercial MCU 37 Special Purpose MCU 38 Low Power Flash MCU 38
Battery Management 30 Li Battery & Power Management 31 AC Power Management Flash MCU 31 Inverter Flash MCU 31 LDO & Detector 32 DC to DC Converter 33	LCD Controller & Driver	Bank & Commercial MCU 37 Special Purpose MCU 38 Low Power Flash MCU 38
Battery Management 30 Li Battery & Power Management 31 AC Power Management Flash MCU 31 Inverter Flash MCU 31 LDO & Detector 32	LCD Controller & Driver	Bank & Commercial MCU 37 Special Purpose MCU 38 Low Power Flash MCU 38
Battery Management 30 Li Battery & Power Management 31 AC Power Management Flash MCU 31 Inverter Flash MCU 31 LDO & Detector 32 DC to DC Converter 33	LCD Controller & Driver	Bank & Commercial MCU 37 Special Purpose MCU 38 Low Power Flash MCU 38
Battery Management 30 Li Battery & Power Management 31 AC Power Management Flash MCU 31 Inverter Flash MCU 31 LDO & Detector 32 DC to DC Converter 33 AC to DC Converter 33	LCD Controller & Driver	Bank & Commercial MCU 37 Special Purpose MCU 38 Low Power Flash MCU 38 CAN Bus Flash MCU 38
Battery Management 30 Li Battery & Power Management 31 AC Power Management Flash MCU 31 Inverter Flash MCU 31 LDO & Detector 32 DC to DC Converter 33 AC to DC Converter 33 Module	LCD Controller & Driver	Bank & Commercial MCU 37 Special Purpose MCU 38 Low Power Flash MCU 38 CAN Bus Flash MCU 38
Battery Management 30 Li Battery & Power Management 31 AC Power Management Flash MCU 31 Inverter Flash MCU 31 LDO & Detector 32 DC to DC Converter 33 AC to DC Converter 33 Module RF Module 39	LCD Controller & Driver	Bank & Commercial MCU
Battery Management 30 Li Battery & Power Management 31 AC Power Management Flash MCU 31 Inverter Flash MCU 31 LDO & Detector 32 DC to DC Converter 33 AC to DC Converter 33 Module RF Module 39	LCD Controller & Driver	Bank & Commercial MCU
Battery Management 30 Li Battery & Power Management 31 AC Power Management Flash MCU 31 Inverter Flash MCU 31 LDO & Detector 32 DC to DC Converter 33 AC to DC Converter 33 Module RF Module 39	LCD Controller & Driver	Bank & Commercial MCU
Battery Management	LCD Controller & Driver 34 LED Controller & Driver 35 White LED Backlight Driver 35 AC / DC LED Lighting Driver 36 VFD Controller & Driver 36 EPD Controller & Driver 36	Bank & Commercial MCU 37 Special Purpose MCU 38 Low Power Flash MCU 38 CAN Bus Flash MCU 38 Analog General OP Amplifier 42 Audio Amplifier 42 24-Bit A/D Peripheral 42
Battery Management	LCD Controller & Driver	Bank & Commercial MCU
Battery Management	LCD Controller & Driver	Bank & Commercial MCU
Battery Management	LCD Controller & Driver	Bank & Commercial MCU
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Battery Management	LCD Controller & Driver	Bank & Commercial MCU
Battery Management	LCD Controller & Driver	Bank & Commercial MCU



								3	2-Bit F	lash	MCL	J									
Cortex-M0	+ 32-B	it MC	U																		
Part No.	Max		VDD	Flasi	n SR	АМ	PDMA	AD	C Ti	ners ⁻¹		o.*2 or NM		m. /M ^{*3}	RTC	Inte	rface	Others	I/O	ı	Package
HT32F52220	4014		2.0V	16KB	41	(B		1 M:		TM×1							RT×1		19		24SSOP
HT32F52230	40MF	1Z	3.6V	32KB	41	(B	_	12- ×		CTM×2 PTM×1	'	6	-	_	_		PI×1 C×1	-	23 23		28SSOP 33QFN
HT32F52231	40MH	1	2.0V ~	32KB	41	(B		1 M:	sps sps	TM×2 CTM×4		12		3	√		RT×1 RT×2	CRC	19 23		24SSOP 28SSOP
HT32F52241	401011	12	3.6V	64KB	81	(B		×1	2 GI	PTM×1 CTM×1		12	,	3	v		PI×2 C×2	CRC	26 40		33QFN 48LQFP
HT32F52243	40MF	-lz	2.0V ~	64KB	81	(B	6CH	1 M:	sps bit S0	TM×2 CTM×4		12		3	√	UAI	RT×2 RT×4	CRC	26 38		33QFN 46QFN
HT32F52253	101111		3.6V	128KE	3 16	KB	0011	×1	2 GI	PTM×1 CTM×1		_			·		PI×2 C×3	DIV	40 52		48LQFP 64LQFP
Cortex-M0		it US	в мси																		
Part No.	Max. Freq.	VDD	Flash	SRAM	PDMA	ADC	СМР	DAC	Timers'	or PW		pm. VM ^{*3}	RTC	SCI"	USB	5 EBI"	I ² S	Inter- face	Others	I/O	Package
HT32F52331	48MHz	2.0V ~	32KB	4KB	_	1 Msps 12-bit	_	_	BFTM×2 SCTM×4			3	√	1	1	_	_	USART×1 UART×2	CRC	24	33QFN
HT32F52341		3.6V	64KB	8KB		×12			GPTM×1 MCTM×1									SPI×2 I ² C×2		38	48LQFP
HT32F52342	48MHz	2.0V ~	64KB	8KB	6CH	1 Msps 12-bit	2	_	BFTM×2 SCTM×2 GPTM×2	14		3	√	2	1	\ \	\ \	USART×2 UART×2 SPI×2	CRC	26 39	33QFN 48LQFP
HT32F52352		3.6V	128KB	16KB		×12			MCTM×1									I ² C×2		51	64LQFP
HT32F52344	60MHz	1.65V ~	64KB	8KB	6CH	1 Msps 12-bit	2	_	BFTM×2 SCTM×2 GPTM×1	10		3	\checkmark	_	√	1	_	UART×2 SPI×2	CRC	26 38 40	33QFN 46QFN 48LQFP
HT32F52354		3.6V	128KB	8KB		×12			MCTM×1									I ² C×1	DIV	54	64LQFP
HT32F52357	60MHz	1.65V	128KB	16KB	6CH	1 Msps 12-bit	2	500Ksps				3	√	2	1	1	\	USART×2 UART×4 SPI×2	AES CRC	37 39	46QFN 48LQFP
HT32F52367	OOM	3.6V	256KB	32KB	0011	×12	_	12-bit×2	GPTM×1				,		,	,	`	I ² C×2 QSPI×1	DIV	53 67	64LQFP 80LQFP
Cortex-M0	+ 32-B	it LCI	D MCU		· · · · · · · · · · · · · · · · · · ·														'		
Part No.	Max. Freq.	VDD	Flash	SRAN	PDMA	ADO	СМ	P DA	C Time	ers ⁻¹ O	ap. '² PWM	RTC	sc	i'⁴ U	SB ⁻⁵	I ² S L	.CD	Inter- face	Others	I/O	Package
HT32F57331	60MHz	1.65\	/ 32KB	4KB		1 Ms			BFTI		40	\ \			V	2	9x4	USART×1 UART×2	CRC	37	46QFN
HT32F57341	OUIVIHZ	3.6V	64KB	8KB	_	12-b ×10			PWI GPT		12				V	_ 2	~ !5x8	SPI×2 I ² C×2	DIV	39 53	48LQFP 64LQFP
HT32F57342	60MHz	1.65\	/ 64KB	8KB	6CH	1 Ms		500K	BFTI sps SCT		14	\ \		,	V	√ 3	7x4	USART×1 UART×2	AES	37 39	46QFN 48LQFP
HT32F57352	OUIVIHZ	3.6V	128KE	16KB		12-b ×10		12-bi	t×2 PWI GPT		14	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	2	2	٧		~ 3x8	SPI×2 I²C×2	CRC DIV	53 67	64LQFP 80LQFP
Cortex-MO	1 22 B	it EV	MCII																		

Cortex-M0+	32-Bit 5	V MCU											
Part No.	Max. Freq.	VDD	Flash	SRAM	ADC	Timers*1	Cap. ^{·2} or PWM	Cpm. PWM ^{'3}	RTC	Interface	Others	I/O	Package
HT32F50220			16KB	4KB		BFTM×1 PWM×2	12	_		UART×2 SPI×2	DIV	18 19	24QFN 24SSOP
HT32F50230		2.5V	32KB	4KB	1 Msps	GPTM×1	12		,	I ² C×1	DIV	23 22	28SSOP 28SOP
HT32F50231	20MHz	5.5V	32KB	4KB	12-bit×12	BFTM×2 PWM×2		_	V	USART×1 UART×2	CRC	26 38	33QFN 46QFN
HT32F50241			64KB	8KB		GPTM×1 MCTM×1	16	3		SPI×2 I ² C×2	DIV	36 40	44LQFP 48LQFP

	Cortex-M0+	32-Bit 5	V USB M	CU											
	Part No.	Max. Freq.	VDD	Flash	SRAM	PDMA	ADC	Timers'1	Cap.'2 or PWM'3	RTC	USB ^{·5}	Interface	Others	I/O	Package
ŀ	HT32F50343	60MHz	2.5V ~ 5.5V	64KB	12KB	6CH	1 Msps 12-bit×12	BFTM×2 SCTM×2 8-PWM×3 GPTM×1	30	V	V	UART×2 SPI×2 I ² C×2 SLED×8 ¹⁷	CRC DIV	23 35 37 51	32QFN 46QFN 48LQFP 64LQFP

Note: 1. BFTM: Basic Function Timer, SCTM: Single-Channel Timers, 8-PWM: 8 Output channel PWM Timer, GPTM: General-Purpose Timers, MCTM: Motor Control Timer.

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Comp.: Input Capture.
 Comp.: Input Capture.
 Comp.: Input Capture.
 Comp.: PWM: Complementary PWM for 3-phase motor control or inverter application.
 Soci.: ISO/816-3 Smart Card Interface.
 Suss 2.0 Full Speed device.
 EBI: External Bus Interface for NOR Flash / SRAM / LCD.
 SLED: Strip LED Controller.



								32-B	Sit Fla	ash	MCU										
Cortex-M0	+ 32-Bi	t Musi	c Synt	hesiz	er MCL																
Part No.	Max. Freq.	VDD	Flash	Ext. Flash	SRAM	PDMA	Audio D/A	ADC	Timer	s'1	I²S F	RTC	USB'5	MIDI Engine	۰6 ۱	/oice	Sound Effect	Interfa	се	I/O	Package
HT32F0006	48MHz	2.0V~ 3.6V	128KB	SPI	16KB	6CH	16-bit ×2	1Msps 12-bit×16	BFTM: SCTM: GPTM:	×4	√	√	√	V	SB	Coding	Echo	USART UART× SPI×1 QSPI× I ² C×1	1 1	52	48/64LQFF
Cortex-M0)+ 32-Bi	t Data	Bridg	e MCl	J																
Part No.	Max. Freq.	v	DD	Flas	h s	SRAM	PDM	A Tin	ners'1	Cap or P		RT	С	USB'5	li	nterfac	e Oth	ers	I/O		Package
HT32F0008	60MHz	1.65\	/~3.6V	64KI	3	16KB	6CH	I PV	TM×2 VM×2 TM×1	1:	2	√	1	V		JSART× UART×′ SPI×1 I²C×1		RC	19 28 40 42		24QFN 33QFN 46QFN 48LQFP
Cortex-M0)+ 32-Bi	t BLD(C MCU																		
Part No.	Max. Freq.	VDI	D FI	ash	SRAM	PDMA	ADC	СМЕ	ОБ	PA	Timer [*]		ap.˙² PWM	Cpm. PWM ¹³	R	тс і	nterface	Other	s	I/O	Package
HT32F65230		2.5V	,_ 32	2KB	4KB	2011	1 Msps	×2			BFTM×2 SCTM×4		40	•			USART×1 UART×1	CRC		40	401.050
HT32F65240	60MHz	5.5\	64	4KB	8KB	6CH	12-bit×	10 3	2	- 1	GPTM× MCTM×		12	3		Λ	SPI×1 I²C×1	DIV		40	48LQFP
24-Bit A/D	Cortex	-MO+ 3	32-Bit	MCU																	
Part No.	Max. Freq.	v	DD	Flash	SR	AM	ı	\DC	Tir	mers [·]		ap.⁺² o PWM		Cpm. WM ^{'3}	RTC	Int	terface	Others	1/0	0	Package
HT32F59041	20MHz		5V~ .5V	64KB	8	KB	SAR ADC 1Msps 12-bit×12	Delta Sig ADC 24-bit×	ma P	FTM×2 WM×2 PTM×1 CTM×1		16		3	√	U	SART×1 IART×2 SPI×1 I ² C×1	CRC DIV	30	0	48LQFP
24-Bit A/D	Cortex	-M0+ 3	32-Bit	LCD N	ICU																
Part No.	Max. Freq.	VD	D F	lash	SRAM		ADC		Timers	·1 o	Cap. ^{·2} or PWM	RT	rc s	CI [∙] ⁴ US	B*5	LCD	Inter- face	Othe	rs	I/O	Package
HT32F59741	60MHz	1.65 3.6		64KB	8KB	SAR 1Ms 12-bi	sps	ta Sigma ADC 4-bit×4	BFTM× PWM×2 GPTM×	2	12	1	1	1	√	19×4 ~ 15×8	USART× UART×2 SPI×1 I ² C×1			43	64LQFP

- Note: 1. BFTM: Basic Function Timer, SCTM: Single-Channel Timers, 8-PWM: 8 Output channel PWM Timer, GPTM: General-Purpose Timers, MCTM: Motor Control Timer. 2. Cap.: Input Capture.
 3. Cpm. PWM: Complementary PWM for 3-phase motor control or inverter application.
 4. SCI: ISO7816-3 Smart Card Interface.
 5. USB 2.0 Full Speed device.
 6. 32-CH Music Synthesis Engine.



32-Bit Flash MCU

Cortex-M3	32-Bit	MCU																	
Part No.	Max. Freq.	VDD	Flash	SRAM	PDMA	ADC	СМР	Timers ^{*1}	Cap. 2 or PWM	Cpm. PWM ^{*3}	RTC	SCI ⁻⁴	USB'5	EBI'6	I2S	Inter- face	Others	I/O	Package
HT32F1653	72MHz	2.7V ~	32KB	8KB	8CH	1 Msps 12-bit	2	BFTM×2 GPTM×2	16	6	√	1	√	√	√	USART×2 UART×2 SPI×2	CRC	37 51	48LQFP 64LQFP
HT32F1654		3.6V	64KB	16KB		×12		MCTM×2								12C×2		51	64LQFP
HT32F12345	96MHz	2.0V ~ 3.6V	64KB	16KB	12CH	1 Msps 12-bit ×12	2	BFTM×2 GPTM×2 MCTM×2	16	6	√	_	√	√	√	SDIO×1 USART×2 UART×2 SPI×2 I ² C×2	CRC	37 37 51	46QFN 48LQFP 64LQFP
HT32F12365		2.0V	256KB	64KB		1 Msps		BFTM×2								SDIO×1 USART×2	AES	37 37	46QFN 48LQFP
HT32F12366	96MHz	3.6V	256KB	128KB	12CH	12-bit ×16	2	GPTM×2 MCTM×2	16	6	√	2	√	√	V	UART×2 SPI×2 I ² C×2	CRC	51 80	64LQFP 100LQFP
HT32F12364	72MHz	1.65V ~ 3.6V	256KB	128KB	6CH	1 Msps 12-bit ×8	_	BFTM×2 SCTM×2 PWM×1 GPTM×1	10	_	V	1	V	V	_	USART×1 UART×2 SPI×2 I ² C×2	AES CRC	32 38 52	40QFN 48LQFP 64LQFP
Cortex-M3	32-Bit	Finge	rprint	MCU															
	Max.								Cap. '2	Cpm.		001:4			CSIF	Inter-			

Part No.	Max. Freq.	VDD	Flash	SRAM	PDMA	ADC	СМР	Timers ⁻¹	Cap. '2 or PWM	Cpm. PWM'3	RTC	SCI ⁻⁴	USB'5	EBI.e	CSIF	Inter- face	Others	I/O	Package
HT32F22366	96MHz	2.0V ~ 3.6V	256KB	128KB	12CH	1 Msps 12-bit ×16	2	BFTM×2 GPTM×2 MCTM×2	16	6	√	2	√	V	V	SDIO×1 USART×2 UART×2 SPI×2 I ² C×2	AES CRC	37 37 51 80	46QFN 48LQFP 64LQFP 100LQFP

Note: 1. BFTM: Basic Function Timer, SCTM: Single-Channel Timers, GPTM: General-Purpose Timers, MCTM: Motor Control Timer.
2. Cap.: Input Capture.
3. Cpm. PWM: Complementary PWM for 3-phase motor control or inverter application.
4. SCI: ISO7816-3 Smart Card Interface.
5. USB 2.0 Full Speed device.
6. EBI: External Bus Interface for NOR Flash / SRAM / LCD.
7. CSIF: CMOS Sensor Interface.



	n MCU	

Small Pack	cage Flash	MCU v	with EEPF	ROM									
Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	A/D	Timer	PWM	Comp- arator	Stack	Package
HT68F0017	8MHz	1.8V~ 5.5V	8MHz or 32kHz	0.5K×12	16×8	_	8	_	8-bit×1	_	_	2	8/10SOP
HT66F302	4MHz 8MHz	1.8V~ 5.5V	4MHz, 8MHz or 32kHz	1K×14	64×8	32×8	8	12-bit×4	10-bit STM×1 10-bit PTM×1	_	_	2	8/10SOP
HT68F002		2.2V~ 5.5V				32×8	8	_	10-bit STM×1	_			8SOP, 10MSOP
HT66F0021]	1.8V~ 5.5V	8MHz or	1K×14		32×14#	6	10-bit×4	8-bit×1	8-bit×1		2	8SOP
HT66F002	8MHz		32kHz		64×8			12-bit×4			_		8SOP, 10MSOP
HT68F0025]	2.2V~ 5.5V		017:-4.4		32×8	8	_	10-bit STM×1	_		,	0/4000D
HT66F0025				2K×14				12-bit×4				4	8/10SOP
HT66F007	4MHz 8MHz 12MHz	2.2V~ 5.5V	400kHz~ 20MHz or 32kHz	2K×16	160×8	512×8	8	12-bit×5	10-bit CTM×2 16-bit STM×1	_	1	8	8DIP/SOP 10MSOP
HT66F008	4MHz 8MHz 12MHz	2.2V~ 5.5V	400kHz~ 20MHz or 32kHz	4K×16	256×8	1024×8	8	12-bit×5	10-bit CTM×2 16-bit STM×1	_	1	8	8DIP/SOP 10MSOP

Note: # Emulated EEPROM.

Flash MCL	J with EE	PROM											
Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	A/D	Timer	PWM	SCOM	Stack	Package
HT68F003		2.2V~ 5.5V				32×8	14	_	10-bit STM×1 10-bit PTM×1	-			
HT66F0031	8MHz	1.8V~ 5.5V	8MHz or 32kHz	1K×14	64×8	32×14#	14	10-bit×4	8-bit×1	8-bit×1	_	2	16NSOP
HT66F003		2.2V~ 5.5V				32×8	14	12-bit×4	10-bit STM×1 10-bit PTM×1	_			
HT66F004	- 8MHz	2.2V~ 5.5V	8MHz or	2K×15	96×8	32×8	18	12-bit×8	10-bit PTM×2	_	4	4	16NSOP 20DIP/SOP/SSOP/NSOP
HT66F0041	OIVIFIZ	1.8V~ 5.5V	32kHz	2K×14	64×8	32×14#	10	10-bit×4	8-bit×1	8-bit×1	_	4	16/20NSOP, 20SSOP

Note: # Emulated EEPROM.

Flash MCU	with Hig	h Current	Driver									
Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	High Current I/O	Timer	PWM	Stack	Package
HT68F0036	8MHz	1.8V~5.5V	8MHz or 32kHz	1K×14	64×8	32×14#	13	7	8-bit×1	8-bit×1	2	16NSOP
Note: # Emulat	ed EEPROM.											

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0	D:4		a b	B/A	
О-	Bit	Піа	SIL	IAI	GU.

	Inton -		Cuntage	Duamma	Dete	Dete					Commi	SCON!	Himb Comment	Inter		
Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	RTC	A/D	Timer	Comp- arator	SCOM/ SSEG	High Current LED Driver	Inter- face	Stack	Package
HT66F017	8MHz	2.2V~ 5.5V	400kHz~ 20MHz or 32kHz	2K×16	128×8	64×8	14	_	12-bit ×4	16-bit CTM×1 16-bit STM×1	1	_	_	_	8	16NSOP
HT66F0172	- 8MHz					_	18	_								20SOP/SSOP
HT66F0174	OIVITZ		400kHz~				10					_	_	_		2030P/330P
HT66F0175	8MHz 12MHz	2.2V~ 5.5V	20MHz or 32kHz	2K×16	128×8	64×8	22	√	12-bit ×8	10-bit PTM×2	_	SCOM×6	22	SPI/I ² C×1	8	20SOP/SSOP 24SOP/SSOP
HT66F0176	16MHz						22					SSEG×14	22	SPI/I ² C×1 UART×1		16/20NSOP 24SOP/SSOP
HT66F0181	8MHz	1.8V~ 5.5V	8MHz or 32kHz	4K×15	128×8	32×15#	18	_	10-bit ×8	10-bit PTM×1 10-bit STM×1	_		18		6	16/20NSOP 20SOP/SSOP
HT66F018	8MHz 12MHz 16MHz		400kHz~ 20MHz or 32kHz	4K×16	192×8	64×8	18	V	12-bit ×8	10-bit PTM×1 16-bit CTM×1 16-bit STM×1	1	_	_	_	8	16/20NSOP 20SOP/SSOP 20QFN
HT66F0184	8MHz	2.2V~ 5.5V	8MHz	4K×15		32×15#	26	_	10-bit ×4	10-bit STM×1 10-bit CTM×2	_	SCOM×6 SSEG×18			6	24/28SOP/SSOF
HT66F0185	8MHz 12MHz	5.5V	400kHz~	4K×16	256×8	128×8	26	√	12-bit	10-bit PTM×1 16-bit CTM×1	1	SCOM×6	26	SPI/I ² C×1	8	24SOP/SSOP 28SOP/SSOP
HT66F0186	16MHz		20MHz or 32kHz	4K×16	1024×8	4096×8	26	√	×8	16-bit STM×1	1	SSEG×18	26	UART×1	8	20NSOP 24/28SOP/SSOF
HT66F019	8MHz	2.2V~	400kHz~	01740	256×8	64×8	18	J	12-bit ×8	10-bit PTM×1	1	_	18	SPI/I ² C×1	8	20NSOP
HT66F0195	12MHz 16MHz	5.5V	16MHz or 32kHz	8K×16	512×8	128×8	26		12-bit ×12	16-bit CTM×1 16-bit STM×1	1	SCOM×6 SSEG×18	26	UART×1	8	24/28SOP/SSOF
HT66F3185	8MHz	1.8V~	400kHz~	4K×16	256×8			V	12-bit	10-bit PTM×1		(SCOM/		SPI/I ² C×1		20SOP
HT66F3195	12MHz 16MHz	5.5V	16MHz or 32kHz	8K×16	512×8	128×8	26	\ \ \	×12	16-bit CTM×1 16-bit STM×1	1	SSEG)×22 SSEG×4	26	UART×1	8	24/28SOP/SSOF 24/28QFN
HT66F489	8MHz	2.2V~ 5.5V	400kHz~ 16MHz or 32kHz	8K×16	384×8	64×8	26	V	12-bit ×8	10-bit CTM×1 16-bit STM×1 10-bit PTM×2	_	SCOM×6 SSEG×20	26	SPI/I ² C×1 UART×1	8	28SOP/SSOP

Note: # Emulated EEPROM.

SCOM/SSEG: Software Control LCD Common/Segment.

A/D Flash	MCU with Hig	gh Accu	racy / Low Currer	nt LIRC							
Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	A/D	Timer	Stack	Package
HT66F2630	2/4/8MHz	1.8V~ 5.5V	400kHz~8MHz or 32kHz	2K×16	128×8	64×8	18	12-bit ×4	16-bit PTM×1	8	8SOP, 10MSOP 16SSOP, 16/20NSOP
Advanced	A/D Flash MC	211									

Advanced	A/D Fla	sh MC	U													
Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	scom	RTC	A/D	Timer	Comp- arator	CRC	Interface	Stack	Package
HT66F2350	8MHz 12MHz 16MHz	2.2V~ 5.5V	400kHz~ 16MHz or 32kHz	8K×16	768×8	256×8	44	4	1	12-bit ×12	10-bit PTM×2 16-bit PTM×2 16-bit STM×3	2	√	SPI/I ² C×1 SPIA×1 UART×2	16	48LQFP
HT66F2360	8MHz	2.2V~ 5.5V	400kHz~	16K×16	1536×8	256×8	58	4	.,	12-bit	10-bit PTM×2 16-bit PTM×2	2	.,	SPI/I ² C×1	16	48/64LQFP
HT66F2362	12MHz 16MHz	1.8V~ 5.5V	16MHz or 32kHz	100.410	2048×8	1024×8	44	4	l v	×16	16-bit STM×3	2	\ \ \	SPIA×1 UART×2	10	28SOP, 32QFN 44/48LQFP
HT66F2370	8MHz 12MHz 16MHz	2.2V~ 5.5V	400kHz~ 16MHz or 32kHz	32K×16	3072×8	512×8	58	4	V	12-bit ×16	10-bit PTM×2 16-bit PTM×2 16-bit STM×3	2	V	SPI/I ² C×1 SPIA×1 UART×3	16	48/64LQFP
HT66F2390	8MHz 12MHz 16MHz	2.2V~ 5.5V	400kHz~ 16MHz or 32kHz	64K×16	4096×8	1024×8	58	4	V	12-bit ×16	10-bit PTM×2 16-bit PTM×2 16-bit STM×3	2	V	SPI/I ² C×1 SPIA×1 UART×3	16	48/64LQFP

Note: These devices are European standard IEC 60730 and U.S. standard UL 60730 certified.

High Supply Voltage Flash MCU 12V High Current Driver A/D Flash MCU Internal Clock LDO Output Voltage VCC (HV) System Clock Program Memory Inter-face Data Memory Data EEPROM Part No. VDD I/O HVIO Timer A/D Stack Package 16NSOP-EP 10-bit STM×1 10-bit PTM×1 12-bit ×4 20NSOP 24SOP/SSOP-EP HT66F2730 10 4 2K×16 128×8 64×8 4.5V~ 5.5V SPI/I²C/ UART×1 7.5V~ 12V 32kHz~ 8/12/16MHz 10 5.0V 16MHz 10-bit STM×1 10-bit PTM×1 16NSOP-EP 24SSOP-EP 12-bit HT66F2740 14 8 4K×16 256×8 128×8 1 ×8 10-bit CTM×1 24/28SOP



8-Bit LCD Display Flash MCU

A/D Flash	MCU with	LCD D	river													
Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	LCD	Timer	RTC	A/D	IAP	Comp- arator	Inter- face	Stack	Package
HT67F30	4MHz 8MHz 12MHz	2.2V~ 5.5V	400kHz~ 16MHz or 32kHz	2K×15	128×8	64×8	32	20×4 21×3	10-bit CTM×1 10-bit ETM×1	√	12-bit ×8	_	2	SPI/I ² C×1 SPIA×1	4	48LQFP
HT67F40	4MHz 8MHz 12MHz	2.2V~ 5.5V	400kHz~ 16MHz or 32kHz	4K×15	256×8	128×8	44	32×4 33×3	10-bit CTM×1 10-bit ETM×1 16-bit STM×1	√	12-bit ×8	_	2	SPI/I ² C×1 SPIA×1	8	48/64LQFP
HT67F50	4MHz 8MHz 12MHz	2.2V~ 5.5V	400kHz~ 16MHz or 32kHz	8K×16	384×8	256×8	52	40×4 41×3	10-bit CTM×2 10-bit ETM×1 16-bit STM×1	√	12-bit ×8	_	2	SPI/I ² C×1 SPIA×1	8	48/64/80 LQFP
HT67F60A	4MHz 8MHz 12MHz	2.2V~ 5.5V	400kHz~ 16MHz or 32kHz	16K×16	1024×8	128×8	47	56×4	10-bit CTM×2 10-bit ETM×1 16-bit STM×3	V	12-bit ×12	√	2	SPI/I ² C×1 SPIA×1	16	48/64/80 LQFP
HT67F70A	4MHz 8MHz 12MHz	2.2V~ 5.5V	400kHz~ 16MHz or 32kHz	32K×16	2048×8	128×8	47	56×4	10-bit CTM×2 10-bit ETM×1 16-bit STM×3	√	12-bit ×12	√	2	SPI/I ² C×1 SPIA×1	16	48/64/80 LQFP
HT67F86A	8MHz 12MHz 16MHz	2.2V~ 5.5V	400kHz~ 16MHz or 32kHz	48K×16	2304×8	128×8	20	64×16	10-bit PTM×3 16-bit STM×1	√	12-bit ×12	√	_	SPI/I ² C×1 SPIA×1 UART×1	16	Dice

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Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	LCD	RTC	A/D	Timer	Interface	Stack	Package
HT67F2432	4MHz	1.8V~ 5.5V	4MHz or 32kHz	2K×16	128×8	32×16#	26	20×4	√	10-bit ×5	9-bit Timer×1 10-bit CTM×1	UART×1	6	24/28SOP/SSOP

Note: # Emulated EEPROM.

Advanced	A/D Flas	h MCU	with LCI	D Driver												
Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	LCD	RTC	A/D	Timer	Comp- arator	CRC	Inter- face	Stack	Package
HT67F2350	8MHz 12MHz 16MHz	2.2V~ 5.5V	400kHz~ 16MHz or 32kHz	8K×16	768×8	256×8	57	46×4 44×6 42×8	V	12-bit ×12	10-bit PTM×6 16-bit PTM×2 16-bit STM×3	2	V	SPI/I ² C×1 SPIA×1 UART×2	16	48/64LQFP
HT67F2360	8MHz 12MHz	2.2V~ 5.5V	400kHz~ 16MHz or	16K×16	1536×8	256×8	71	56×4 54×6 52×8	V	12-bit	10-bit PTM×6 16-bit PTM×2	2	-/	SPI/I ² C×1 SPIA×1	16	64/80LQFP
HT67F2362	16MHz	1.8V~ 5.5V	32kHz	100.*10	2048×8	1024×8	57	46×4 44×6 42×8	V	×16	16-bit STM×3	2	V	UART×2	16	48/64LQFP
HT67F2370	8MHz 12MHz 16MHz	2.2V~ 5.5V	400kHz~ 16MHz or 32kHz	32K×16	3072×8	512×8	71	56×4 54×6 52×8	V	12-bit ×16	10-bit PTM×6 16-bit PTM×2 16-bit STM×3	2	V	SPI/I ² C×1 SPIA×1 UART×3	16	64/80LQFP
HT67F2390	8MHz 12MHz 16MHz	2.2V~ 5.5V	400kHz~ 16MHz or 32kHz	64K×16	4096×8	1024×8	71	56×4 54×6 52×8	V	12-bit ×16	10-bit PTM×6 16-bit PTM×2 16-bit STM×3	2	√	SPI/I ² C×1 SPIA×1 UART×3	16	64/80LQFP

Note: These devices are European standard IEC 60730 and U.S. standard UL 60730 certified.



8-Bit LCD / LED Flash MCU

A/D Flash	MCU wit	th six 1	Timer & H	ligh Curre	ent LED D	river									
Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	RTC	A/D	Timer	SCOM	High Current LED Driver	Inter- face	Stack	Package
HT66F0042	8MHz 12MHz	2.2V~	32kHz~	2K×15	96×8	32×8	22		12-bit	10-bit PTM×4	4	22	SPI/I ² C×1	6	20SOP/SSOP 24SOP/SSOP
HT66F0082	16MHz	5.5V	16MHz	4K×16	128×8	64×8	26	\ \ \	×8	10-bit CTM×2	4	26	3FI/I C^1	0	24SOP/SSOP

Note: The HT66F0042/0082 devices include 6 Timer Modules and are suitable for use in products requiring multiple PWM functions such as RGB lighting.

RGB LED C	ontroller i	Flash MCU										
Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	I/O	Timer	Multiple RGB LED	Constant Current	Interface	Stack	Package
HT45F0060	8MHz	2.2V~5.5V	8MHz	1K×14	64×8	8	10-bit CTM×3	_	3	Cascading Transceiver	2	8SOP/DFN 10SOP
HT45F0062	8MHz	2.2V~5.5V	8MHz	2K×16	128×8	14	10-bit CTM×1	√	12	l ² C×1, Cascading Transceiver	4	16NSOP-EP 16QFN
HT45F0063	8MHz	2.2V~5.5V	8MHz	4K×16	256×8	20	10-bit CTM×1	√	15	l ² C×1, Cascading Transceiver	4	24SSOP-EP 24QFN

A/D Flash	MCU wit	h LCD	& High (Current Li	ED Driver										
Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	LCD	High Current LED Driver	Timer	RTC	A/D	Inter- face	Stack	Package
HT67F489	OMLIZ	2.2V~	400kHz~ 16MHz or	8K×16	256×8	64×8	42	20×8 20×4	0	10-bit CTM×3		12-bit	UART×1	۰	44LQFP
HT67F4892	8MHz	5.5V	32kHz	0N×10	384×8	04*0	50	32×4/32×8 28×4/28×8	0	10-bit PTM×1		×10	SPI/I ² C×1 UART×1	0	48/52LQFP

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1.8V~5.5V I/U	Flash MCU								
Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	I/O	Timer	Stack	Package
HT68F0017	8MHz	1.8V~5.5V	8MHz or 32kHz	0.5K×12	16×8	8	8-bit×1	2	8/10SOP

1.8V~5.5\	V Advanc	ed A	/D Flash	MCU												
Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	RTC	A/D	Timer	SCOM/ SSEG	Comp- arator	High Current LED Driver	Inter- face	Stack	Package
HT66F317	12MHz 5.5V or 32kHz 4MHz 4.8V/2 400kHz~			2K×16	128×8	64×8	22	√	12-bit ×8	10-bit PTM×2	SCOM×4	_	22	-	8	16NSOP 20/24SOP/SSOP
HT66F318	4MHz 8MHz 12MHz	1.8V~ 5.5V	400kHz~ 16MHz or 32kHz	4K×16	192×8	64×8	26	√	12-bit ×8	10-bit PTM×1 16-bit CTM×1 16-bit STM×1	SCOM×4	1	26	I ² C×1 UART×1	8	20/24/28SOP/SSOP
HT66F319	4MHz 8MHz 12MHz	1.8V~ 5.5V	400kHz~ 16MHz or 32kHz	8K×16	256×8	64×8	26	√	12-bit ×8	10-bit PTM×1 16-bit CTM×1 16-bit STM×1	SCOM×4	1	26	I ² C×1 UART×1	8	16NSOP 20/24/28SOP/SSOP
HT66F3185	8MHz 12MHz	1.8V~	400kHz~ 16MHz	4K×16	256×8	128×8	26	1	12-bit	10-bit PTM×1 16-bit CTM×1	(SCOM/ SSEG)×22	4	26	SPI/I ² C×1	8	20SOP 24SOP/SSOP/QFN
HT66F3195	16MHz	5.5V	or 32kHz	8K×16	512×8	120*0	20	V	×12	16-bit STM×1	SSEG)*22 SSEG×4	'	20	UART×1	•	28SOP/SSOP/QFN 28SOP/SSOP/QFN

Note: SCOM/SSEG: Software Control LCD Common/Segment.

Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	scom	RTC	A/D	Timer	Comp- arator	Interface	CRC	Stack	Package
HT66F2362	8MHz 12MHz 16MHz	1.8V~ 5.5V	400kHz~ 16MHz or 32kHz	16K×16	2048×8	1024×8	44	4	1	12-bit ×16	10-bit PTM×2 16-bit PTM×2 16-bit STM×3	2	SPI/I ² C×1 SPIA×1 UART×2	√	16	28SOP, 32QFN 44/48LQFP

Note: These devices are European standard IEC 60730 and U.S. standard UL 60730 certified.

1.8V~5.5V	/ A/D Flas	sh MCU w	ith EEPROM										
Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	A/D	Timer	PWM	High Current LED Driver	Stack	Package
HT66F302	4/8MHz	1.8V~5.5V	4MHz,	1K×14	64×8	32×8	8	12-bit×4	10-bit STM×1	_		2	8/10SOP
HT66F303	4/OIVITIZ	1.60~5.50	8MHz or 32kHz	IK^14	04^0	32^0	14	12-011^4	10-bit PTM×1		_	2	16NSOP
HT66F0181	8MHz	1.8V~5.5V	8MHz or 32kHz	4K×15	128×8	32×15#	18	10-bit×8	10-bit PTM×1 10-bit STM×1	_	18	6	16/20NSOP 20SSOP/SOP
HT66F0021	8MHz	1.8V~5.5V	8MHz or 32kHz	1K×14	64×8	32×14#	6	10-bit×4	8-bit×1	8-bit×1	_	2	8SOP
HT66F0031	8MHz	1.8V~5.5V	8MHz or 32kHz	1K×14	64×8	32×14#	14	10-bit×4	8-bit×1	8-bit×1	_	2	16NSOP
HT66F0041	8MHz	1.8V~5.5V	8MHz or 32kHz	2K×14	64×8	32×14#	18	10-bit×4	8-bit×1	8-bit×1	_	4	16/20NSOP 20SSOP

Note: # Emulated EEPROM.

1.8V~5.5\	/ Flash MC	CU with	ı LCD Driv	/er												
Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	LCD	Timer	RTC	A/D	IAP	Power Switch	Inter- face	Stack	Package
HT69F340	4/8/12MHz	1.8V~ 5.5V	400kHz~ 16MHz or 32kHz	4K×16	256×8	64×8	39	24×4 25×3	10-bit PTM×1 10-bit CTM×1	√	-	√	_	SPI/I ² C×1	8	48LQFP
HT69F3742	2/4/8MHz	1.8V~ 5.5V	400kHz~ 8MHz or 32kHz	4K×16	128×8	128×8	9	23×4 24×3	10-bit STM×1	_	_	_	V	_	4	46QFN
HT69F350	4/8/12MHz	1.8V~ 5.5V	400kHz~ 16MHz or 32kHz	8K×16	512×8	64×8	55	36×4 37×3	10-bit PTM×1 10-bit CTM×1 16-bit STM×1	√	_	√	_	SPI/I ² C×1	8	48/64LQFP
HT69F360	4/8/12MHz	1.8V~ 5.5V	400kHz~ 16MHz or 32kHz	16K×16	1024×8	128×8	63	48×4 49×3	10-bit PTM×2 10-bit CTM×1 16-bit STM×1	V	_	√	_	SPI/I ² C×1 UART×1	8	64/80LQFP
HT67F370	4/8/12MHz	1.8V~ 5.5V	400kHz~ 20MHz or 32kHz	32K×16	2048×8	256×8	63	48×4 49×3	10-bit PTM×2 10-bit CTM×1 16-bit STM×1	√	12-bit ×12	V	_	SPI/I ² C×1 UART×1	8	64/80LQFP

1.8V~5.5V Advanced A/D Flash MCU with LCD Driver

Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	LCD	RTC	A/D	Timer	Comp- arator	Inter- face	CRC	Stack	Package
HT67F2362	8MHz 12MHz 16MHz	1.8V~ 5.5V	400kHz~ 16MHz or 32kHz	16K×16	2048×8	1024×8	57	46×4 44×6 42×8	V	12-bit ×16	10-bit PTM×6 16-bit PTM×2 16-bit STM×3	2	SPI/I ² C×1 SPIA×1 UART×2	V	16	48/64LQFP

Note: These devices are European standard IEC 60730 and U.S. standard UL 60730 certified.

1.8V~5.5V	A/D Flash	MCU v	with LCD	Driver & H	igh Accur	acy HIRC								
Part No. Internal Clock VDD System Clock Program Memory Data Data Memory Data														Package
HT67F2432	4MHz	1.8V~ 5.5V	4MHz or 32kHz	2K×16	128×8	32×16#	26	20×4	√	10-bit ×5	9-bit Timer×1 10-bit CTM×1	UART×1	6	24/28SOP/SSOP



Note: # Emulated EEPROM.

1.8V~5.5V Flash MCU

1.8V~5.5V	Ultra-Low F	ower	Flash MC	U with LC	D Driver										
Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	MDU#	I/O	LCD	RTC	A/D	Timer	Interface	Stack	Package
HT66F2560	1/2/4/8/12MHz	1.8V~ 5.5V	400kHz~ 16MHz or 32kHz	16K×16	2048×8	256×8	16-bit	42	SCOM ×4	1	12-bit ×8	16-bit PTM×2 16-bit STM×3	SPI/I ² C×1 SPIA×1 UART×2	16	48LQFP
HT69F2562	4/8/12MHz	1.8V~ 5.5V	400kHz~ 12MHz or 32kHz	16K×16	2304×8	128×8	_	19	32×4	V	_	10-bit CTM×2 16-bit STM×1	SPI×1 SPI/I ² C/UART×1	16	64LQFP

Note: # MDU: Multiplier Divider Unit.
The power consumption of the RTC on standby current is less than 200nA at 3V.

1.8V~5.5V	Ultra-Low	Power	Flash MO	CU with E	PD Drive	r								
Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	EPD#	RTC	A/D	Timer	Interface	Stack	Package
HT67F2567	4/8/12MHz	1.8V~	400kHz~ 12MHz or	16K×16	2304×8	128×8	19	SEG×64 COM×1	-1	12-bit	10-bit CTM×2	SPI×1	16	100LQFP
HT67F2567G	4/0/12IVITZ	5.5V	32kHz	101/2/10	2304×6	120*0	19	BG×1	V	×8	16-bit STM×1	SPI/I ² C/UART×1	10	Gold Bump

Note: # EPD: Electronic Paper Displays.
The power consumption of the RTC on standby current is less than 200nA at 3V.

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46QFN 48LQFP

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SPI/I²C×1 SPIA×1 UART×1



						US	SB II	nterf	асе	Flash	МС	U								
I/O Flash	USB MC	CU (US	B 2.0 L	ow Speed)															
Part No.	Inter		VDD	System Clock		rogram lemory	_	ata mory	I/O	Time	er		nd- I	LDO Drivi Current	- DW	M In	terfac	e S	tack	Package
HT68FB240	12MI	Hz 2	2V~5.5V	32kHz~16l	ИНz	4K×16	16	8×08	34	10-bit C	ΓM×2		3	20mA		3 S	PI/I ² C×1	1	8	48LQFP
I/O Flash	USB MC	CU (US	B 2.0 F	ull Speed)																
Part No.	Interna Clock		/DD	System Clock	Progra Memo		ata mory	I/O	т	imer	En poir				/O VDD Option	Inter	face	Stac	:k	Package
HT68FB550	12MHz	2.2\	/~5.5V 3	32kHz~16MHz	8K×1	6 5 ⁻	12×8	25	10-b	it CTM×2 it STM×1 it STM×1	6		70	mA	√	SPI/I ² SPI/		8	2	24/28SSOP 48LQFP
HT68FB560	12MHz	2.2\	/~5.5V 3	32kHz~16MHz	16K×1	6 76	8×8	37	10-b	it CTM×2 it STM×1 it STM×1	8		70	mA	V	SPI/I ² SPI/		12	2	24/28SSOP 48LQFP
A/D Flash	USB MO	CU (U	SB 2.0 F	ull Speed)															
Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPRO	м 1/0	RTC	A/D	Time	r	/IDU#	End- points	LDO Driving Current		Comp			Stack	Package
HT66FB540	12MHz	2.2V~ 5.5V	400kHz~ 16MHz or 32kHz		512×8	_	25	1	12-bit ×8	10-bit CTI 10-bit STI 16-bit STI	Л×1	_	4	70mA	V	2	SPI/I		8	28SSOP 48LQFP
HT66FB542	12MHz	2.2V~ 5.5V	400kHz~ 16MHz oi 32kHz		256×8	_	17	-	12-bit ×4	10-bit CTI 10-bit STI 16-bit STI	Л×1	_	4	70mA	1	1	SPI/I		8	24SSOP
HT66FB550	12MHz	2.2V~ 5.5V	400kHz~ 16MHz or 32kHz		768×8	_	37	1	12-bit ×16	10-bit CTI 10-bit STI 16-bit STI	Л×1	-	6	70mA	1	2	SPI/I		8	28SSOP 48LQFP
HT66FB560	12MHz	2.2V~ 5.5V	400kHz~ 16MHz or 32kHz		1024×8	_	45	V	12-bit ×16	10-bit CTI 10-bit STI 16-bit STI	Л×1	_	8	70mA	V	2	SPI/I		12	48/64LQFF
HT66FB570	12MHz	2.2V~ 5.5V	400kHz~ 16MHz oi 32kHz		1024×8	256×8	55	1	12-bit ×24	10-bit PTI 16-bit STI		-	8	70mA	1	2	SPI/I ² SPI/ UAR	A×1	12	48/64LQFF
			4001411=														CDI/I	20 4		

Note: # MDU: Multiplier Divider Unit.

12MHz

HT66FB582

2.2V~ 5.5V

400kHz~ 16MHz or 32kHz

48K×16

1024×8

16K×8

41

USB Flas	h RGB L	ED M	CU (USE	3 2.0 Full	Speed)													
Part No.	Internal Clock	VDD	System Clock	Program Memory		Data EEPROM	I/O	A/D	Timer	End- points	LDO Driving Current	I/O VDD Option	Inter- face	RGB LED Driver	LED PWM	Const. Current	Stack	Package
HT68FB541	12MHz	3.0V~ 5.5V	400kHz~ 16MHz or 32kHz	4K×16	256×8	64×8	18	_	16-bit×2	4	70mA	√	SPI×1	8	3×8	_	8	24SSOP
HT68FB571	12MHz	3.0V~ 5.5V	400kHz~ 16MHz or 32kHz	8K×16	512×8	64×8	41	_	16-bit×2	4	70mA	√	SPI×1	42	16×8	_	8	28SSOP 48LQFP
HT66FB572	12MHz	2.2V~ 5.5V	400kHz~ 16MHz or 32kHz	8K×16	1024×8	256×8	34	12-bit ×8	10-bit PTM×3 16-bit STM×1	8	70mA	√	SPI/I ² C×1 SPIA×1 UART×1	40	15×8	15	12	48/64LQFP
HT66FB574	12MHz	2.2V~ 5.5V	400kHz~ 16MHz or 32kHz	16K×16	1024×8	256×8	38	12-bit ×12	10-bit PTM×3 16-bit STM×1	8	70mA	√	SPI/I ² C×1 SPIA×1 UART×1	64	24×8	24	12	48/64/80 LQFP
HT66FB576	12MHz	2.2V~ 5.5V	400kHz~ 16MHz or 32kHz	32K×16	1024×8	256×8	52	12-bit ×16	10-bit PTM×3 16-bit STM×1	8	70mA	V	SPI/I ² C×1 SPIA×1 UART×1	128	48×8	48	12	80LQFP 128LQFP-EP

12-bit ×16

10-bit PTM×5 16-bit STM×1

70mA

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2

8

16-bit



-	3.5		11011
	Motor	Lizeh	IVIE I

Power Too	ol Controll	er Fla	sh MCU												
Part No.	Internal Clock	VCC (HV)	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	Timer	A/D	ОСР	Inter- face	Level Shift	Stack	Package
HT45F3630	8MHz 32kHz	12V	2.2V~ 5.5V	400kHz~ 8MHz or 32kHz	2K×16	64×8	32×8	12	10-bit PTM×2	12-bit×8	1	I ² C×1	1	6	16SSOP

Servo Motor Flash MCU with H-Bridge Driver

Part No.	Internal Clock	VCC (HV)	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	Timer	A/D	H-Bridge Driver	IAP	LDO	Stack	Package
HT45F4830	8MHz	3.5V~ 10V	3.0V	32kHz~ 8MHz	2K×16	128×8	32×8	4	10-bit PTM×1 16-bit PTM×1	12-bit ×4	600mA Min.	_	3.0V	4	8SOP-EP
HT45F4840	16MHz	6.0V~	3.3V	32kHz~	4K×16	256×8		8	10-bit PTM×1 16-bit STM×1	12-bit	_	-1	3.3V		10SOP 16NSOP/QFN
HT45F4842	TOWNZ	12V	or 5.0V	16MHz	41/4/10	Z00×0	_	6	16-bit CTM×1	×4	√	V	or 5.0V	0	10SOP-EP 24QFN

BLDC Motor Flash MCU

Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	Timer	A/D	ОСР	PWM	Comp- arator	ОРА	Inter- face	Stack	Package
HT66FM5230	20MHz	4.5V~ 5.5V	32kHz~ 20MHz	2K×16	256×8	32×8	18	10-bit CTM×1 10-bit STM×1 16-bit CAPTM×1 16-bit CTM×1	10-bit ×6	1	10-bit ×3	3	_	I ² C×1	6	16NSOP 20SSOP
HT66FM5240	20MHz	4.5V~ 5.5V	32kHz~ 20MHz	4K×16	256×8	64×8	26	10-bit PTM×2 16-bit PTM×2 16-bit CAPTM×1	12-bit ×8	1	10-bit ×3	3	_	I ² C×1 UART×1	8	20/28SSOP 24QFN
HT66FM5242	20MHz	4.5V~ 5.5V	32kHz~ 20MHz	4K×16	256×8	_	18	10-bit PTM×2 16-bit PTM×2 16-bit CAPTM×1	12-bit ×7	1	10-bit ×3	_	_	_	8	16NSOP 20SSOP
HT66FM5440	16MHz	4.5V~ 5.5V	32kHz~ 16MHz	4K×16	384×8	_	26	10-bit PTM×2 16-bit PTM×2 16-bit CAPTM×1	12-bit ×9	1	10-bit ×3	3	2	I ² C×1 UART×1	8	28SSOP

Note: HT66FM5440 is a new HT8-1T architecture MCU which takes one clock cycle to execute one instruction. It improves 4 times the CPU performance of the original HT8-4T architecture MCU which takes four clock cycles to execute one instruction.

BLDC Motor Flash MCU with Gate-Driver / Driv	ver
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Part No.	Internal Clock	VCC (HV)	VDD	System Clock	Program Memory	Data Memory	I/O	Timer	A/D	ОСР	PWM	Comp- arator	Gate- Driver	LDO	Stack	Package
HT66FM5340	20MHz	6V~ 15V	4.5V~ 5.5V	32kHz~ 20MHz	4K×16	256×8	19	10-bit PTM×2 16-bit PTM×2 16-bit CAPTM×1	12-bit ×8	1	10-bit ×3	3	√	5V	8	24SSOP

Motor Driver Peripheral

H-Bridge D	river								
Part No.	Supply Voltage	Max. Motor Voltage	Typ. Motor Peak Current (A)	Typ. Motor RMS Current (A)	Max. Sleep Current (μA)	Max. PWM Frequency (Hz)	# of H-Bridge	Protections	Package
HT7K1201	1.8V~6.0V	6V	1.3	0.8	0.1	200K	4	UVLO, OCP	SOT23-6
HT7K1211	1.60~0.00	7.5V	2.1	1.5	0.1	200K		OTP, OSP	8SOP-EP
HT7K1311	2.5V~5.5V	15V	3.0	2.4	1.0	200K	1	UVLO, OCP	8SOP-EP
HT7K1312	2.50~5.50	150	3.0	2.4	1.0	200K	ļ	OTP, OSP	8DFN
HT7K1401	2.5V~5.5V	24V	2.0	1.8	1.0	200K	1	UVLO, OCP	8SOP-EP
HT7K1411	2.50~5.50	240	3.2	2.5	1.0	200K		OTP, OSP	630F-EF



							OP/	A Flas	sh M	CU								
Flash MC	CU with (OPA																
Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	Timer	RTC	A/D	D/A	PWM	PFD	ОРА	Comp- arator	Inter- face	Stack	Package
HT45F23A	910kHz 2MHz 4MHz 8MHz	2.2V~ 5.5V	400kHz~ 8MHz or 32kHz	2K×15	128×8	64×8	22	8-bit×1 16-bit×1	V	12-bit×6	12-bit ×1	8-bit ×2	V	2	2	SPI/I ² C ×1	6	16NSOP 20/24SSOP
HT45F24A	910kHz 2MHz 4MHz 8MHz	2.2V~ 5.5V	400kHz~ 8MHz or 32kHz	4K×16	192×8	64×8	26	8-bit×1 16-bit×1	√	12-bit×8	12-bit ×1	8-bit ×2	V	2	2	SPI/I ² C ×1	6	20/24/28SSOP
Advance	d Flash	MCU v	vith OPA															
Part No.	Internal Clock	Inpu Voltag				Data EEPROM	I/C	RTC	т	imer	A/D	D/A	Voice D/A	Comp- arator		Inter- face	Stac	k Package
HT66F4530	2MHz 4MHz 8MHz	2.2V~ 5.5V			128×8	32×8	18	V		t STM×1 t PTM×1	12-bit ×5	8-bit ×3	_	2	2	SPI/I ² C×	1 6	16NSOP 20SSOP
HT66F4540	2MHz 4MHz 8MHz	2.2V~ 5.5V			256×8	64×8	26	V		t STM×1 t PTM×2	12-bit ×8	8-bit ×3	_	2	2	SPI/I ² C× UART×1		24/28SSOP
HT66F4550	2MHz 4MHz 8MHz	2.2V~ 5.5V			384×8	64×8	26	1		t STM×2 t PTM×2	12-bit ×8	8-bit ×3	16-bit ×1	2	2	SPI/I ² C× UART×1		24/28SSOP
HT66F4560	2MHz 4MHz 8MHz	2.2V~ 5.5V			512×8	128×8	46	V	1	t STM×2 t PTM×2	12-bit ×8	8-bit ×3	16-bit ×1	2	2	SPI/I ² C× UART×1		28SSOP 48LQFP
Note: The M	CUs interna	ıl OPA ga	in bandwidt	h are softwar	e programma	ible.												



						2	24-Bi	it A/D	MCI	U										
24-Bit A/E	D Flash M	CU																		
Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	Tin	ner	A/D	MDU#	RTC	IAF	OF	PA	Inter	face	Stack	F	Package
BH66F5232	4MHz 8MHz 12MHz	2.2V~ 5.5V	4/8/12MHz or 32kHz	2K×16	128×8	32×8	4	10-bit (CTM×1	24-bit ×2	_	_	_	-	-	SPI/I² UAR	-	4		10SOP
3H66F5233	4MHz 8MHz 12MHz	2.2V~ 5.5V	4/8/12MHz or 32kHz	2K×16	96×8	32×8	14	10-bit (CTM×1	24-bit ×2	_	_	-	-	-	SPI/I ²	C×1	4	16	10SOP 6/20NSOP
3H66F5242	4MHz 8MHz 12MHz	2.2V~ 5.5V	4/8/12MHz or 32kHz	4K×16	256×8	64×8	14	10-bit (16-bit F		24-bit ×12	-	_	_	1	S	SPI/I²C/U	JART×1	6		NSOP/SSOF NSOP/QFN
3H66F5250	4MHz 8MHz 12MHz	2.2V~ 5.5V	400kHz~ 16MHz or 32kHz	8K×16	512×8	128×8	37	16-bit 5 10-bit F		24-bit ×16	16-bit	√	V	1	8	SPI/I²C/L SPI		8		48LQFP
BH66F5252	8MHz	2.2V~ 5.5V	8MHz or 32kHz	8K×16	256×8	32×8	23	10-bit 0 16-bit F		24-bit ×4	-	_	-	-	- 8	SPI/I ² C/U	JART×1	8	24	4/28SSOP
Note: # MDU	: Multiplier Di	vider Un	it.																	
Enhance	d 24-Bit A	/D Fla	sh MCU																	
Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	Ti	mer	A/I	EN	ов ѕо	юм	Com arato		CRC I	nterface	Sta	ck	Package
BH66F5362	8MHz 12MHz 16MHz	1.8V~ 5.5V	400kHz~ 16MHz or 32kHz	16K×16	2048×8	1024×8	32	16-bit	PTM×2 PTM×2 STM×1	12-bi 24-bi			4	2		√	SPI/I ² C×1 SPI×1 UART×2	×1 16		48LQFP
BLE Beac	on 24-Bi	t A/D F	lash MCU																	
Part No.	Interna Clock	l VD	D Syste				Data EPRON	ı I/O	1	imer	A	D I	Frequ	ency		ata ate	Output Power	Sta	ck	Package
BH66F71252	2 8MHz	2.2			<16 2	!56×8	32×8	25		it CTM>			02/242 MF	26/2480 Hz	11	Mbps	-10~+8 dBm	8		46QFN
24-Bit A/[D Flash M	CU wi	th LCD Dr	iver																
Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	LCD	Time	er .	A/D R	C IAI	МЕ)U## ¹	Гоисі Кеу	h In	terface	Sta	ack	Package
BH67F5235	8MHz	2.2V~ 5.5V	8MHz or 32kHz	3K×16	192×8	32×16#	5	16×4	10-bit CT	ΓM×1 2	24-bit ×2 -	- -		-	2		_		4	24/28SSOF 32QFN
BH67F5245	4MHz 8MHz 12MHz	2.2V~ 5.5V	4/8/12MHz or 32kHz	4K×16	256×8	32×8	21	17×4	10-bit CT	ΓM×1	24-bit ×4 –	- -		-	4	ι	JART×1		6	24/28SSOF
BH67F5250	4MHz 8MHz 12MHz	2.2V~ 5.5V	400kHz~ 16MHz or 32kHz	8K×16	512×8	128×8	46	28×4 26×6 24×8	10-bit PT 16-bit ST		24-bit ×16	1 1	16	6-bit	_	SPI/I	² C/UART ² SPI×1	د1 ا	8	64LQFP
3H67F5260	4MHz 8MHz 12MHz	2.2V~ 5.5V	400kHz~ 16MHz or 32kHz	16K×16	1024×8	256×8	46	42×4 40×6 38×8	10-bit PT 16-bit ST	- 1	24-bit ×16	/ √	16	6-bit	_		² C/UART ² SPI×1	¹	8	64/80LQFF
BH67F5270	4MHz 8MHz 12MHz	2.2V~ 5.5V	400kHz~ 16MHz or 32kHz	32K×16	2048×8	512×8	46	42×4 40×6 38×8	10-bit PT 16-bit ST		24-bit ×16	1 1	16	6-bit	-	SPI/I	² C/UART ² SPI×1	¹ 1	6	64/80LQFP
	ated EEPRO U: Multiplier [nit.																	
Enhance	d 24-Bit A	/D Fla	sh MCU v	vith LCD	Driver													<u> </u>		
Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	LCD	Tir	mer	A/D	EN	OB R	тс с		Comp- trators	Interfa	ce St	ack	Package
3H67F5362	8MHz 12MHz	1.8V~	400kHz~ 16MHz or	16K×16	2048×8	1024×8	45	36×4 34×6		PTM×5 PTM×2		14 19	.4	√ .	V	2	SPI/I ² C SPI×		16	64LQFP

			24-	Bit A/D Periphe	eral			
Enhanced 24-l	Bit A/D Peripher	ral						
Part No.	Internal Clock	VDD	A/D	ENOB	Data Rate	PGA	Interface	Package
BH45B1225	4.91MHz	2.4V~5.5V	24-bit×4	19.4@5V	5Hz~1.6kHz	1~128	I ² C×1	8SOP, 16NSOP

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Health	Cara	Elach	MCII
		FIRSH	

Ear Thern	nometer F	lash M	CU												
Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	IAP	LCD	Timer	A/D	ОРА	Inter- face	Stack	Package
BH67F2742	4MHz 8MHz 12MHz	2.2V~ 5.5V	400kHz~ 16MHz or 32kHz	4K×16	256×8	32×8	21	_	17×4 15×6	10-bit CTM×1	24-bit ×8	1	SPI/I ² C/UART×1	6	28SSOP 32QFN
BH67F2752	8MHz	2.2V~ 5.5V	8MHz or 32kHz	8K×16	384×8	128×8	17	_	32×4 30×6	10-bit CTM×2	24-bit ×8	2	SPI×1 UART×1	6	48/64LQFP
BH67F2762	4MHz 8MHz 12MHz	2.2V~ 5.5V	4/8/12MHz or 32kHz	16K×16	1024×8	256×8	38	√	39×4 37×6	10-bit CTM×2 16-bit PTM×1	24-bit ×8	2	SPI/I ² C/UART×1	8	48/64LQFP
HT67F5652	4.91MHz 9.83MHz 14.74MHz	2.2V~ 5.5V	400kHz~ 20MHz or 32kHz	8K×16	512×8	128×8	32	V	40×4	10-bit CTM×1 16-bit STM×1 10-bit PTM×2	24-bit ×8	1	SPI/I ² C×1 UART×1	8	64/80LQFP

Glucose I	Meter Fla	ash M	CU																
Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	IAP	MDU#	Timer	RTC	LCD	A/D	Inter- face	ОРА	D/A	Audio D/A	Stack	Package
HT45F67	4MHz 8MHz 12MHz	2.2V~ 5.5V	400kHz~ 16MHz or 32kHz	32K×16	512×8	-	59	√	_	10-bit CTM×2 16-bit STM×1 10-bit ETM×1	√	32×4 30×6	12-bit ×8	SPI/I ² C×1 SPIA×1 UART×1	2	10-bit ×1	16-bit ×1	12	64/80 LQFP
BH45F68	4MHz 8MHz 12MHz	2.2V~ 5.5V	400kHz~ 16MHz or 32kHz	32K×16	1024×8	64×8	57	√	_	10-bit CTM×2 16-bit STM×1	√	32×4 30×6 28×8	12-bit ×10	SPI/I ² C/ UART×1	2	12-bit ×1	-	12	64/80 LQFP
BH66F2470	4MHz 8MHz 12MHz	2.2V~ 5.5V	400kHz~ 16MHz or 32kHz	32K×16	512×8	64×8	39	√	16-bit	10-bit PTM×3 16-bit STM×1	√	_	12-bit ×4	SPI/I ² C×1 SPIA×1 UART×2	1	10-bit ×1	ı	8	48LQFP
BH67F2470	4MHz 8MHz 12MHz	2.2V~ 5.5V	400kHz~ 16MHz or 32kHz	32K×16	768×8	64×8	34	√	16-bit	10-bit PTM×3 16-bit STM×1	√	48×4 46×6 44×8	12-bit ×4	SPI/I ² C×1 SPIA×1 UART×2	1	10-bit ×1	-	8	64/80 LQFP
BH67F2480	4MHz 8MHz 12MHz	2.2V~ 5.5V	400kHz~ 16MHz or 32kHz	48K×16	1024×8	64×8	46	√	16-bit	10-bit PTM×3 16-bit STM×1	√	48×4 46×6 44×8	12-bit ×6	SPI/I ² C×1 SPIA×1 UART×2	2	12-bit ×1	_	12	64/80 LQFP

Note: # MDU: Multiplier Divider Unit.

	AC Impedance and Electrochemical Measurement Flash MCU
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Part No.	Internal Clock	VDD		Program Memory	Data Memory	Data EEPROM	I/O	IAP	MDU#	Timer	RTC	LCD	A/D	Inter- face	ОРА	Phase Detect	D/A	Stack	Package
BH67F2485	4MHz 8MHz 12MHz	2.2V~ 5.5V	400kHz~ 16MHz or 32kHz	48K×16	4096×8	128×8	44	√	16-bit	10-bit PTM×3 16-bit STM×1	√	36×4 34×6 32×8	24-bit ×6	SPI/I ² C×1 SPIA×1 UART×2	4	√	12-bit ×2	12	64/80LQFP

Note: # MDU: Multiplier Divider Unit.

Rody	y Fat Measurement Flash MCU
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Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	IAP	MDU#	Timer	RTC	LCD	A/D	Inter- face	Electrode	Stack	Package
BH66F2632	8MHz	2.2V~ 5.5V	8MHz or 32kHz	3K×16	256×8	32×8	9	_	_	10-bit CTM×1	1	_	24-bit ×2	SPI/I ² C/ UART×1	4	6	24QFN
BH66F2650	4MHz 8MHz 12MHz	2.2V~ 5.5V	400kHz~ 16MHz or 32kHz	8K×16	256×8	64×8	28	√	16-bit	10-bit PTM×3 16-bit STM×1	V	_	24-bit ×4	SPI/I ² C×1 UART×1	8	8	48LQFP
BH66F2652	8MHz	2.2V~	8MHz or	8K×16	384×8	32×8	17		_	10-bit CTM×1	_		24-bit	SPI×1	4	8	32QFN
BH66F2652-2	OIVITIZ	5.5V	32kHz	01/2/10	304^0	32^0	14	_	_	10-bit CTWAT	_	_	×4	UART×1	4	0	28SSOP
BH66F2660	4MHz 8MHz 12MHz	2.2V~ 5.5V	400kHz~ 16MHz or 32kHz	16K×16	1024×8	256×8	28	√	16-bit	10-bit PTM×3 16-bit STM×1	V	_	24-bit ×4	SPI/I ² C×1 UART×1	8	8	48LQFP
BH66F2662	8MHz	2.2V~	8MHz or	16K×16	512×8	64×8	17			10-bit CTM×1			24-bit	SPI×1	4	8	32QFN
BH66F2662-2	OIVITZ	5.5V	32kHz	101/×10	312*0	04*0	14	_	_	10-bit STM×1	_	_	×4	UART×1	4	0	28SSOP
BH67F2662	8MHz	2.2V~ 5.5V	8MHz or 32kHz	16K×16	512×8	64×8	12	_	_	10-bit CTM×1 10-bit STM×1	_	16×4 14×6	24-bit ×4	SPI×1 UART×1	4	8	48LQFP

Note: # MDU: Multiplier Divider Unit.

E	LE	Bead	con l	Body	Fat	Mea	sure	mer	ıt F	lash	MC	U

Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	Timer	A/D	Frequency	Data Rate	Output Power	Stack	Package
BH66F71652		2.2V~	8MHz or	8K×16	384×8	32×8		10-bit CTM×1	24-bit	2402/2426/2480		-10~+8		
BH66F71662	8MHz	3.6V	32kHz	16K×16	512×8	64×8	17	10-bit CTM×1 10-bit STM×1	×4	MHz	1Mbps	dBm	8	46QFN

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Health Care Flash MCU

R-Type B	lood Pre	essur	e Meter I	Flash MC	U														
Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	IAP	MDU#	Timer	RTC	LCD	A/D	Inter- face	PGA	Const. Current	Audio PWM	Stack	Package
BH66F2232	4MHz 8MHz 12MHz	2.2V~ 5.5V	4MHz 8MHz 12MHz or 32kHz	2K×16	128×8	32×8	4	√	_	10-bit PTM×1	_	_	12-bit ×6	SPI/I ² C×1 UART×1	3	1	_	4	16NSOP 16QFN
BH66F2260	4MHz 8MHz 12MHz	2.2V~ 5.5V	400kHz~ 16MHz or 32kHz	16K×16	512×8	64×8	35	√	16-bit	10-bit PTM×3 16-bit STM×1	√	_	12-bit ×4	SPI/I ² C×1 SPIA×1 UART×1	3	1	_	8	48LQFP
BH67F2260	4MHz 8MHz 12MHz	2.2V~ 5.5V	400kHz~ 16MHz or 32kHz	16K×16	512×8	64×8	32	√	16-bit	10-bit PTM×3 16-bit STM×1	√	32×4 30×6 28×8	12-bit ×4	SPI/I ² C×1 SPIA×1 UART×1	3	1	_	8	64LQFP
BH67F2261	8MHz	2.2V~ 5.5V	8MHz or 32kHz	12K×16	512×8	32×8	32	√	_	10-bit PTM×1 16-bit STM×1	√	31×4 29×6	12-bit ×4	_	3	1	_	8	64LQFP
BH67F2262	8MHz 12MHz 16MHz	2.2V~ 5.5V	400kHz~ 16MHz or 32kHz	16K×16	512×8	64×8	52	√	16-bit	10-bit PTM×3 16-bit STM×1	√	45×4 43×6 41×8	12-bit ×4	SPI/I ² C/ UART×1, SPIA×1	3	1	1	8	64/80LQFF
BH67F2270	4MHz 8MHz 12MHz	2.2V~ 5.5V	400kHz~ 16MHz or 32kHz	32K×16	1024×8	64×8	43	V	16-bit	10-bit PTM×3 16-bit STM×1	√	46×4 44×6 42×8	12-bit ×4	SPI/I ² C×1 SPIA×1 UART×2	3	1	_	8	64/80LQFF

Note: # MDU: Multiplier Divider Unit.

The BH67F2262 device uses the PWM function together with the external SPI flash to implement the voice playing function.

Measurement Flash MCU

Ultrasoni	c Distanc	e Measur	ement Flash N	ICU											
Part No.	VDD	VIN	System Clock	Program Memory	Data Memory	I/O	Timer	A/D	ОРА	SCF	IAP	AEP	Interface	Stack	Package
HT45F39	_	8V~16V	16MHz	2K×16	160×8	11	10-bit CTM×2	8-bit×8	2	1	2/	1	BCU	4	16NSOP
HT45F391	4.5V~5.5V	_	TOWINZ	2K^10	100^6	''	10-bit CTWAZ	0-0110-0		'	`	'	ВСО	4	IONSOF

Note: 1. The HT45F39 device power, VDD, is internally regulated by an integrated shunt regulator.

2. An external resistor should be serially connected between the external power supply VIN and MCU VDD pins.

Proximit	y Sensin	g Fla	sh MC	U													
Part No.	Internal Clock	VCC (HV)		System Clock		Data Memory	Data EEPROM	I/O	Timer	A/D	IR LED Driver	IR Receiver	Battery Voltage Detector	DC Motor Driver	Inter- face	Stack	Package
BS45F3232	8MHz	_	2.2V~ 5.5V	8MHz or 32kHz	2K×14	64×8	32×8	11	10-bit STM×1	12-bit ×8	√	√	_	_	SPI/I ² C/ UART×1	4	8SOP 16NSOP 16QFN
BS45F3235]													√			24SSOP
HT45F3230	8MHz	3V~ 12V	2.2V~ 5.5V	8MHz	2K×16	128×8	64×8	16	10-bit PTM×1	12-bit ×8	√	√	√	√	_	8	16NSOP 24SSOP

R to F MCU

Ultra-Low	Voltage R	to F Flash N	ICU									
Part No.	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	LCD	Timer	R to F	LVD	Stack	Package
BH67F2132	1.1V~2.2V	32kHz 64kHz 128kHz	2K×16	128×8	128×8	24	21×3 22×2	10-bit CTM×1	2CH	1.15V	4	48LQFP

R to F Mask MCU

Part No.	VDD	Clock	Program Memory	Data Memory	I/O	LCD	Timer	R to F	BZ/BZ	Stack	Package
HT47C07L	1.2V~2.2V	32kHz~128kHz	1K×16	48×8	18	20×2, 19×3	16-bit×1	1CH	1	4	48LQFP
HT47C08L	1.2V~2.2V	32kHz~128kHz	2K×16	96×8	21	21×3	16-bit×1	2CH	1	4	48LQFP

Note: R to F: Resistance to Frequency.

These devices are only available in mask versions.

BA45FH0082

2/4MHz



									;	Sec	urity	& S	af	ety	МС	U										
Shock Det	ect	or Fla	sh I	MCU																						
Part No.		ternal lock		VDD		Syste Cloc		Prog Men			Data emory		Data PR(I/O		Tin	er	0	/A	Comp		/Gain	St	tack	Package
HT45F56	8	BMHz	2	2.2V~5.5	5V 8M	/IHz or 3	32kHz	1K>	< 14		32×8	;	32×8	3	6	1	0-bit 0	TM×1	1 6-k	oit×1	1	1~	1000		2	8SOP
PIR & Mici	row	ave F	lash	MCU																						
Part No.	١	/DD		ystem Clock		rograr lemor		Data lemor	у	Da EEPF		I/O		7	Γimer			/D	0	PA	Inte	erface	St	ack	P	ackage
BA45F6622		.2V~ 5.5V		8MHz r 32kHz		1K×14		64×8		32×	14#	6		10-k	oit STM	1×1	10-	bit×2	:	2		_		4	16N	ISOP/QFN
BA45F6630		.2V~ 5.5V		/4/8MHz or 32kHz		2K×16		256×8		32	×8	15		10-k	oit STM	1×2	12-	bit×4	:	2	SPI/I ² C	/UART×		6	248	SOP/QFN
Note: # Emulat	ted E	EPROM	1.																							
Smoke De	tect	or Fla	ash	MCU																						
Part No.	v	DD	Syst Clo		Progra Memo		Data Memor	y E	Data EPRO		I/O	A/D	1	Audio D/A	•	Tim	er	AI	FE D	IR rive	Inte	erface	Sta	ack	Pa	ckage
BA45F5220		2V~ .5V	8M or 32		1K×1	4	64×8		32×14	4#	4	10-bit ×3		_	10	-bit P	TM×1	-	V	2		_		4	8/	10SOP
BA45F5240 BA45F5240-2			2/4/8 or 32		4K×16	6	256×8		64×8	3	13	12-bit ×4		_			TM×1 TM×1		V	2	SPI/I ² 0	C/UART×	1	8		P, 20SSOP
BA45F5250			2/4/8 or 32		8K×16	6	1024×8		128×8	8	22	12-bit ×8		16-bit ×1			TM×1 TM×2		V	2		I/I ² C×1 ART×1		8	16	SNSOP 1/28SSOP
BA45F5260*			2/4/8 or 32		16K×1	16	2048×8		256×8	8	26	12-bit ×12		16-bit ×1			TM×3		V	2		I/I ² C×1 ART×2		8		28SSOP BLQFP
* Under develo				n 2Q, 20	020.																					
Smoke Det				MCU	with P	ower	Line '	Tran	sceiv	ver																
Part No.		ernal	VCC		Syct		Progran	_	Data	_	Data	I/O	A/	/D	Tim		AI	_	IR	Pov	ver Line		erface		24 -	Daaltana
Part No.	CI	ock	(HV) VDL	Člo	ck	Memor	y Me	emory	y EE	PROM	1/0	A	, D	11111	ier	A	_ D	river	Trai	nsceive	r	эпас	9 3	Stack	Package
HT45FH23A		0kHz	7V~ 42V				2K×15	1	128×8	╛,	64×8	13		-bit	8-bi		,		_		√		_		6	20SOP
HT45FH24A	2/4/	8MHz	42 V	5.5\	or 32	2kHz	4K×16	1	192×8				×	3	16-b	IL^ I										
BA45F5542	0/4		5.3V	~ 2.2V	~ 2/4/8	MHz	416.40			1.		9	12- ×		0-bit F	×MT	1	,			,	001/1/2				16NSOP 20SSOP
BA45F5542-2	2/4/	8MHz	42V	5.5\	or 32	2kHz	4K×16	4	256×8	'	64×8	7	12- ×:	-DIL	0-bit S	×MT	1 7		2		1	SPI/I ² 0	/UAK	1×1	8	16NSOP
BA45F5552	2/4/	8MHz	5.3V 42V				8K×16	1	024×8	1	128×8	13	12- ×		0-bit F 0-bit S			1	2		√		I/I ² C×1 RT×1		8	16NSOP 20/24SOP
Sub-1GHz	RF	Trans	ceiv	ver Sn	noke [Detec	tor Fla	ash I	MCU																	
Part No.	/DD	Syste Cloc		Progra Memoi		ata mory	Data EEPRO		O A/	/D	Timer	AI	E	IR Drive	r	Band	d	Data Rate	Uut		Rx Cu Consu	ırrent mption	Sen ivi		Stack	Package
BA45F5640				4K×16	5 25	66×8	64×8	1	3)-bit PTM															
	.2V~ 3.6V	2/4/8M or 32k	—	8K×16	102	24×8	128×8	3 1		-bit 10)-bit STM)-bit PTM)-bit STM	l×1	1	2		/433/4 /915N		2~250 Kbps	13d	lBm	4.2mA@ 5.5mA@	433MHz 868MHz	-1190 @2K		8	46QFN
Fire Prote	ctio	n Flas	sh N	1CU					×	JIL	J-DIL S 1 IV	1^2														
Part No.		Intern	nal	VDI	,	Syster		Progr			Data		Dat		I/O		A/E		7	Γime	r	LVR/LV	'D	Stac	k I	Package
BA45F0082		Cloc 2/4MH		2.2V 5.5\		Clock 2/4MHz or 32kH	z	Memo 2K×1			emory 128×8	E	64×	8 8	14		12-bit		16-b	oit STI	M×1	√		6		16NSOP
Fire Prote	ctio	n Flas	sh N					rans	ceive	er									10-1	nt 311	vi^ I					
Part No.	1	nterna Clock	1 1	VCC (HV)	VDD	Sys	tem ock	Prog Mem	ram	D	ata mory	Da EEPI		,	/O	A /I	D	Т	imer		Power Transc		LDO	St	ack	Package
1		SIUCK		7\/-:		2/41		wen	y	ivie	or y	LEP		**	\rightarrow				it OTM		11 ansc	GIVEI				16NISOD

64×8

13

12-bit×8

16-bit STM×1 10-bit STM×1 16NSOP 20SSOP

2.2V~ 5.5V 2/4MHz or 32kHz

2K×15

128×8



Security & Safety MCU CO/GAS Detector Flash MCU Data EEPROM CO/GAS System Clock Program Memory Data LCD Temp. Sensor Part No. VDD I/O A/D Timer LVD Interface Stack Package Detector AFE Driver Memory 2.2V~ 5.5V 8MHz or 32kHz 10-bit PTM×1 10-bit STM×1 12-bit BA45F0096 1K×14 64×8 32×8 14 2 16NSOP 2.2V~ 8MHz 10-bit BA45F6720* 10-bit PTM×1 4 8/10SOP 1K×14 64×8 32×8 4 5.5V or 32kHz 10SOP 2.2V~ 5.5V 2/4/8MHz or 32kHz 12-bit ×5 16NSOP 20SSOP BA45F6730 10-bit PTM×1 $\sqrt{}$ $\sqrt{}$ 2K×16 128×8 32×8 14 SPI/I²C/UART×1 6 16NSOP 10-bit PTM×1 10-bit STM×1 2/4/8MHz 2.2V~ 12-bit $\sqrt{}$ BA45F6740* 4K×16 256×8 128×8 22 SPI/I²C/UART×1 8 20/24/28 SSOP 5.5V or 32kHz 28SSOP 32QFN 2/4/8MHz 12-bit 10-bit PTM×1 12SEG SPI/I²C/UART×1 BA45F6746* 4K×16 256×8 128×8 31 8 10-bit STM×1 5.5V or 32kHz ×8 ×4COM 48LQFP * Under development, available in 2Q, 2020.

					Security	/ & Safety	IC						
PIR Con	troller												
Part No. VDD Standby Current for Override Auto-change Window Trigger Width Time Drive Drive LED Buzzer LVD Package													
HT7610A	5V~12V	100μΑ	2 Times	Flash	1/16 (V _{DD} -V _{EE})	>24ms	5s	_	√	_	_	_	16DIP
HT7612B	2.7V~5.5V	19µA	2 Times	Flash	Vref×(1/2±1/6)	>24ms	<3s	√	√	√	√	V	16DIP/NSOP
Note: Opera	ating and stan	dby current va	alues are typical v	alues.									



Touch Flash MCU

Touch I/O	Flash M	CU												
Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	Timer	Touch Key	High Current LED Driver	Inter- face	LVR	Stack	Package
BS83A02A-4	8MHz	2.2V~5.5V	8MHz	1K×16	96×8	_	4	8-bit×1	2	_	_	2.10V	4	6DFN SOT23-6, 8SOP
BS83A04A-3	8MHz	2.7V~5.5V	8MHz	1K×16	96×8		8	8-bit×1	4			2.55V	4	8SOP, 10MSOP
BS83A04A-4	OIVITZ	2.2V~5.5V	OIVITIZ	IK*10	90×0	_	0	O-DILX I	4	_	_	2.10V	4	650P, IUMSUP
BS83B04A-4	8MHz	2.2V~5.5V	8MHz	2K×16	128×8	32×8	8	8-bit×1	4	_	I ² C×1	2.10V	4	8SOP 10MSOP/DFN
BS83B08A-3	8MHz 12MHz	2.7V~5.5V	8MHz~	2K×16	160×8	64×8	14	8-bit×1	8		SPI/I ² C×1	2.55V	4	16NSOP/SSOP
BS83B08A-4	16MHz	2.2V~5.5V	16MHz	2K*10	100^6	04^0	14	O-DIL^ I	0	_	SFI/I-C×1	2.10V	4	101030F/330F
BS83B12A-3	8MHz 12MHz	2.7V~5.5V	8MHz~	2K×16	288×8	64×8	18	8-bit×1	12	18	SPI/I ² C×1	2.55V	4	20SOP/SSOP
BS83B12A-4	16MHz	2.2V~5.5V	16MHz	2K×10	200*0	04*0	10	O-DILX I	12	10	3PI/I ⁻ C×1	2.10V	4	2050P/550P
BS83B16A-3	8MHz 12MHz	2.7V~5.5V	8MHz~	2K×16	288×8	64×8	22	8-bit×1	16	22	SPI/I ² C×1	2.55V	4	24SOP/SSOP
BS83B16A-4	16MHz	2.2V~5.5V	16MHz	ZN×10	200*0	04×0	22	O-DILX I	10		SFI/IFCX I	2.10V	4	24307/3307

Note: "-4" V_{DD} : 2.2V~5.5V. Internal clock is 8/12/16MHz. For V_{DD} <3V internal clock is 8/12MHz.

Enhanced	Touch I	/O Flash	мси												
Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	Timer	Touch Key	High Current LED Driver	Inter- face	LVR	RTC	Stack	Package
BS83A01C	8MHz	1.8V~5.5V	8MHz	512×14	32×8	_	4	_	1	_	_	1.7V	_	2	6DFN, 8SOP SOT23-6
BS83A02C	8MHz	2.2V~5.5V	8MHz	1K×16	96×8	_	4	8-bit×1	2	4	_	2.10V 2.55V 3.15V 3.80V	_	4	6DFN, 8SOP SOT23-6
BS83A04C	8MHz	1.8V~5.5V	8MHz	1K×16	128×8	32×16#	8	10-bit CTM×1	4	8	I ² C×1	1.7V	_	4	8SOP, 10DFN 10MSOP
BS83B04C	2MHz 4MHz 8MHz	1.8V~5.5V	2MHz~ 8MHz	2K×16	128×8	32×8	8	10-bit CTM×1	4	8	I ² C×1	1.7V 1.9V 2.55V 3.15V 3.80V	_	4	8SOP 10MSOP/DFN
BS83B08C	8MHz 12MHz 16MHz	2.2V~5.5V	8MHz~ 16MHz	2K×16	288×8	64×8	14	10-bit PTM×1	8	14	SPI/I ² C×1	2.10V 2.55V 3.15V 3.80V	_	6	16NSOP/SSOP 16QFN
BS83B12C	8MHz 12MHz 16MHz	2.2V~5.5V	8MHz~ 16MHz	2K×16	512×8	64×8	18	10-bit PTM×1	12	18	SPI/I ² C×1	2.10V 2.55V 3.15V 3.80V	_	6	20SOP/SSOP 20QFN
BS83B16C	8MHz 12MHz 16MHz	2.2V~5.5V	8MHz~ 16MHz	2K×16	512×8	64×8	22	10-bit PTM×1	16	22	SPI/I ² C×1	2.10V 2.55V 3.15V 3.80V	_	6	24SOP/SSOP 24QFN
BS83B24C	8MHz 12MHz 16MHz	2.2V~5.5V	8MHz~ 16MHz	3K×16	512×8	128×8	26	10-bit PTM×1	24	26	SPI/I ² C×1 UARTx1	2.10V 2.55V 3.15V 3.80V	V	6	28SOP/SSOP
BS83C40C	8MHz 12MHz 16MHz	2.2V~5.5V	8MHz~ 16MHz	4K×16	768×8	128×8	42	10-bit CTM×1 10-bit PTM×1	40	42	SPI/I ² C×1 UARTx1	2.10V 2.55V 3.15V 3.80V	V	6	44LQFP
BS83C40C	12MHz 16MHz			4K×16	768×8	128×8	42		40	42		2.55V 3.15V	√	6	44L

Note: # Emulated EEPROM. V_{DD} : 2.2V~5.5V. Internal clock is 8/12/16MHz. For V_{DD} < 3V internal clock is 8/12MHz.



						1	Touc	ch Flas	sh N	/ICU									
Touch A/D	Flash N	/ICU																	
Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	Tim	er	A/D		ouch Key	High Current LED Driver	Inter- face	LVI	R S	Stack	Pa	ckage
BS84B06A-3	8MHz 12MHz 16MHz	2.7V~ 5.5V	8MHz~ 16MHz	3K×16	288×8	64×8	18	8-bit	t×1	12-b ×4	it	6	18	SPI/I ² C×1	2.55	V	6	16NSC	DP, 20SOP
BS84B08A-3	8MHz 12MHz 16MHz	2.7V~ 5.5V	8MHz~ 16MHz	3K×16	288×8	64×8	22	8-bit	t×1	12-b ×8	it	8	22	SPI/I ² C×1	2.55	V	6	20SOP/N	NSOP ISOP/SSOP ISOP
BS84C12A-3	8MHz 12MHz 16MHz	2.7V~ 5.5V	8MHz~ 16MHz	4K×16	384×8	128×8	26	8-bit	t×1	12-b ×8	it	12	26	SPI/I ² C×1	2.55	V	6	20/24/28	SOP/SSOP
Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	Timer	r	RTC	A/D	Tou Ke				LVR/ LVD		Stack	Package
BS66F340	8MHz 12MHz 16MHz	2.2V~ 5.5V	8MHz~ 16MHz	4K×16	512×8	128×8	26	10-bit CTM 16-bit STM 10-bit PTM	۷×1	√	12-b ×8	it 1	2 26	SPI/I UAR		√	√	8	28SSOP
BS66F350	8MHz 12MHz 16MHz	2.2V~ 5.5V	8MHz~ 16MHz	8K×16	768×8	128×8	40	10-bit CTN 16-bit STN 10-bit PTN	Λ×1	V	12-b ×8	it 2	0 40	SPI/I UAR		√	√	8	44/48LQFP
BS66F360	8MHz 12MHz 16MHz	2.2V~ 5.5V	8MHz~ 16MHz	16K×16	1024×8	128×8	46	10-bit CTN 16-bit STN 10-bit PTN	۷×1	√	12-b ×8	it 2	8 46	SPI/I UAR		V	√	12	44/48LQFP
BS66F370	8MHz 12MHz 16MHz	2.2V~ 5.5V	8MHz~ 16MHz	32K×16	1536×8	128×8	60	10-bit CTN 16-bit STN 10-bit PTN	И×1	V	12-b ×8	it 3	6 60	SPI/I UAR		√	√	16	44/48/64 LQFP
Enhanced	Touch A	A/D FI	ash MCL	J															
Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPRON	1/0	Tim	ner	A/E		ouch Key	High Current LED Driver	Inter-	LV	/R	Stack	Pa	ckage
BS84B08C	8MHz 12MHz 16MHz	2.2V~ 5.5V	8MHz~ 16MHz	3K×16	288×8	64×8	22	10-bit P	PTM×1	12-b ×8		8	22	SPI/I ² C×	2.1 1 2.5 3.1 3.8	5V 5V	6	20/249	OP/SSOP SOP/SSOP INSOP
BS84C12C	8MHz 12MHz 16MHz	2.2V~ 5.5V	8MHz~ 16MHz	4K×16	512×8	128×8	26	10-bit C 10-bit P				12	26	SPI/I ² C×	2.1 2.5 3.1 3.8	5V 5V	6	20/24/2	BSOP/SSOP
Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	Timer	R	тс	A/D	Touc Key				LVR/	IAP	Stack	Package
BS66F340C	8MHz 12MHz 16MHz	2.2V~ 5.5V	8MHz~ 16MHz	4K×16	512×8	128×8	26	10-bit CTM 16-bit STM 10-bit PTM	×1	√ 1	2-bit ×8	12	26	SPI/I ² UAR		√	√	8	28SSOP
BS66F350C	8MHz 12MHz 16MHz	2.2V~ 5.5V	8MHz~ 16MHz	8K×16	768×8	128×8	40	10-bit CTM 16-bit STM 10-bit PTM	×1	√ 1	2-bit ×8	20	40	SPI/I² UAR		√	√	8	44/48LQFP
BS66F360C	8MHz 12MHz 16MHz	2.2V~ 5.5V	8MHz~ 16MHz	16K×16	1024×8	128×8	46	10-bit CTM 16-bit STM 10-bit PTM	×1	√ 1	2-bit ×8	28	46	SPI/I ² UAR		√	√	12	44/48LQFP
Touch I/O	Flash M	CU wi	ith LED /	LCD Driv	/er														
Part No.	Internal Clock	VDD	System Clock	Program		Data EEPRON	л I/C	LCD	Ti	mer		ouch Key	High Current LED Driver	Inter- face	LV	'R	RTC	Stack	Package
BS82B12A-3	8MHz 12MHz 16MHz	2.7V~ 5.5V	8MHz~ 16MHz	2K×16	384×8	64×8	22	2 16×4		CTM>		12	22	I ² C×1 UART×1	2.5	5V	-	6	20/24SOP 24QFN
BS82C16A-3	8MHz 12MHz 16MHz	2.7V~ 5.5V	8MHz~ 16MHz	4K×16	512×8	64×8	26	6 20×4		CTM>		16	26	I ² C×1 UART×1	2.5	5V	V	6	24/28SOP 32QFN
BS82D20A-3	8MHz 12MHz 16MHz	2.7V~ 5.5V	8MHz~ 16MHz	8K×16	768×8	64×8	26	6 20×4		CTM>		20	26	I ² C×1 UART×1	2.5	5V	V	8	28SOP 28SSOP



								Touc	h I	Flas	sh M	CU											
Touch A/D	Flash N	/ICU w	vith LED	/ LCD Dri	ver																		
Part No.	Interna Clock	VDD	Syster				Data EEPRO	M I/O	1	LCD	Tim	ier	A/D	Tou Ke		ligh Cur LED Dri		Inte fac		LVR	RTC	Stack	Package
BS86B12A-3	8MHz 12MHz 16MHz	2.7V- 5.5V			384	< 8	64×8	22	1	16×4	10-bit C 10-bit F		12-bit ×8	12	2	22		SPI/I ²		2.55V	_	6	20/24SOP
BS86C16A-3	8MHz 12MHz 16MHz	2.7V 5.5V			512	< 8	64×8	26	2	20×4	10-bit C 10-bit F		12-bit ×8	16	6	26		SPI/I ²		2.55V	V	6	24/28SOP
BS86D20A-3	8MHz 12MHz 16MHz	2.7V- 5.5V			768	< 8	64×8	26	2	20×4	10-bit C 10-bit F		12-bit ×8	20)	26		SPI/I ²		2.55V	1	8	24/28SOP
Enhanced	Touch	A/D FI	ash MC	U with LE	D Drive	er																	
Part No.	Interna Clock	VDE	Syster Clock				Data EEPRO	M I/C	,	Tir	mer	A/D	Touc			Current Driver	Inte		LVR/ LVD	RT	c s	tack	Package
BS86C08C	8MHz 12MHz 16MHz	2.2V- 5.5V			384	×8	32×8	26			CTM×1 PTM×1	12-bit ×8	8		2	26	I ² C UAR		V	_	-	8	24/28SOP 24/28SSOP
BS86D12C	8MHz 12MHz 16MHz	2.2V- 5.5V			512:	×8	64×8	26	- 1		CTM×1 PTM×1	12-bit ×8	12		2	26	I ² C UAR		V	-	-	8	24/28SOP 24/28SSOP
BS86D20C	8MHz 12MHz 16MHz	2.2V- 5.5V			768:	×8	64×8	26			CTM×1 PTM×2	12-bit ×8	20		2	26	I ² C SPI UAR	l×1	√	√	1	8	24/28SOP
BS86E16C	8MHz 12MHz 16MHz	2.2V ² 5.5V			768:	×8	64×8	42			CTM×1 PTM×2	12-bit ×8	16		2	12	I ² C UAR		V	1		8	28SOP 28SSOP 44LQFP
Touch A/D	Flash N	MCU v	vith OPA	\ / Compa	rator																		
Part No.	Internal Clock	VDD	System Clock	Program Memory	Data /lemory	Da EEP		RTC	LC	CD	Time	r #		ouch Key	OP Con ara	np- Hig	h Cur D Dri		Int		LVR	Stack	Package
BS87B12A-3	8MHz 12MHz 16MHz	2.7V~ 5.5V	8MHz~ 16MHz	3K×16	384×8	64	×8 2	2 –	16		0-bit CTI 0-bit PTI		2-bit ×8	12	V	1	22		SPI/I ² UAR		2.55V	6	20NSOP 24SOP
BS87C16A-3	8MHz 12MHz 16MHz	2.7V~ 5.5V	8MHz~ 16MHz	4K×16	512×8	64	×8 3	0 √	20		0-bit CTI 0-bit PTI		2-bit ×8	16	٧	1	30		SPI/I ² UAR		2.55V	6	24/28SOP 44LQFP
BS87D20A-3	8MHz 12MHz 16MHz	2.7V~ 5.5V	8MHz~ 16MHz	8K×16	768×8	64	×8 4	2 1	36		0-bit CTI 0-bit PTI		2-bit ×8	20	٧	1	42		SPI/I ² UAR		2.55V	8	28SOP 44LQFP
Touch A/D	Flash I	MCU v	vith LCD	Driver																			
Part No.	Internal Clock	VDD	Syster Clock				Data EEPRO	M I/O		LCD	, 1	Γimer	RT	с	A/D	Touch Key	IAP	, LV		Inte		Stack	Package
BS67F340	8MHz 12MHz 16MHz	2.2V~ 5.5V			512	×8	128×8	31		24×4	16-k	oit CTM oit STM oit PTM	×1 \	1	12-bit ×8	16	√	٧		SPI/I ² C UART		8	48LQFP
BS67F350	8MHz 12MHz 16MHz	2.2V~ 5.5V			768	×8	128×8	39		32×4	16-b	oit CTM oit STM oit PTM	×1 \	1	12-bit ×8	20	V	٧		SPI/I²C UART		8	48/64LQFP
BS67F360	8MHz 12MHz 16MHz	2.2V~ 5.5V			1024	l×8	128×8	43		40×4	16-b	oit CTM oit STM oit PTM	×1 \	1	12-bit ×8	28	√	V		SPI/I ² C UART		12	48/64LQFP
BS67F370	8MHz 12MHz 16MHz	2.2V~ 5.5V			1536	8×8	128×8	59		48×4	16-b	oit CTM oit STM oit PTM	×1 \	1	12-bit ×8	36	√	٧		SPI/I ² C UART		16	48/64/80 LQFP
Enhanced	Touch	A/D FI	ash MC	U with LC	D Drive	er																	
Part No.	Internal Clock	VDD	Syster Clock				Data EEPRO	M I/O		LCD	1	Γimer	RT	С	A/D	Touch Key	IAP	, LV		Inte		Stack	Package
BS67F350C	8MHz 12MHz 16MHz	2.2V~ 5.5V			768	×8	128×8	43		32×4	16-b	oit CTM oit STM oit PTM	×1 \	1	12-bit ×8	24	√	٧		SPI/I²C UART		8	48/64LQFP



							т	ouc	h Fla	ash	MCU										
Touch Vo	ice A/D	Flash	MCU wit	h Power	Amplifie	r															
Part No.	Internal Clock	VDD	System Clock	Program Memory			Data PROM	I/O	SCO		Timer	RTC	A/D	Audio D/A	Power Amp.	Tou- Ke		Inte fac		Stack	Package
BS66FV340	8MHz 12MHz 16MHz	2.2V~ 5.5V	8MHz~ 16MHz	4K×16	512×8		128×8	39	SCOM SSEG>	×6 /	10-bit CTM×1 16-bit STM×1 10-bit PTM×2	√	12-bit ×8	16-bit ×1	1.5W	20) \	SPI/I ² SPIA UART	×1	8	44/48LQFF
BS66FV350	8MHz 12MHz 16MHz	2.2V~ 5.5V	8MHz~ 16MHz	8K×16	768×8		128×8	39	SCOM SSEG>	χ6 .	10-bit CTM×2 16-bit STM×1 10-bit PTM×2	√	12-bit ×8	16-bit ×1	1.5W	24	. √	SPI/I ² SPIA UAR	×1	8	44/48LQFF
BS66FV360	8MHz 12MHz 16MHz	2.2V~ 5.5V	8MHz~ 16MHz	16K×16	1024×8	2	256×8	39	SCOM SSEG>	×6 .	10-bit CTM×2 16-bit STM×1 10-bit PTM×2	√	12-bit ×8	16-bit ×1	1.5W	28	3 1	SPI/I ² SPIA UAR	×1	12	44/48 LQFP
Wearable	Periphe	eral In	tegrated	l Flash N	ICU with	Tou	ch														
Part No.	Internal Clock	VDD	Program Memory	Data Memory	Data EEPROM	I/O	Tim	er	A/D	Tou Ke	Curr	ent	Inter face	II Dr	Line: Charg	ger (Linear Charge CC		or s	Stack	Package
BS45F5830														3.3\	/ 4.20	V					
BS45F5831	4MHz 8MHz	2.2V~	2K×16	128×8	32×8	16	10-bit C		12-bit	4			I ² C×1	3.3\	/ 4.35	V	40mA~	150r	nΔ	4	24QFN
BS45F5832	12MHz	5.5V	210-10	12000	32.40	10	10-bit S	STM×1	×6	7			10	3.0\	/ 4.20	V	400mA	1301		7	240111
BS45F5833														3.0\	/ 4.35	V					
BS45F5840	8MHz	2.2V~	4K×16	256×8	64×8	18	10-bit C		12-bit	4	4		SPI/I ² C		∠ _		40mA~	150r	nΑ	8	24QFN
BS45F5842	OWITE	5.5V	410-10	200-0	04.0	.0	10-bit S	STM×1	×6	-			UART:	×1 3.0\	/		400mA	1001			2-10(111
Ultrasoni	ic Atomi	ser Fl	ash MCU	with To	uch																
Part No.	Interna Clock	· ·			rogram lemory	_	ata mory		ata ROM	ı	/O A/E	•	Tim	er	Atomi Proces		Tou Ke		Stac	k I	Package
BS45F3832	12MHz			MHz 2kHz	2K×16	6	4×8	32	2×8		8 12-k		10-bit C 10-bit P		√		2		4		8/10SOP
BS45F3833	4MHz 8MHz 12MHz	2.2		2MHz 2kHz	2K×16	12	28×8	32	2×8		12-t ×4	oit	10-bit C 10-bit S 10-bit P	TM×1	V		4		4	1	6/20NSOP

Ultra-Low	Power To	uch I/O Fla	sh MCU									
Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	Timer	Touch Key	Interface	Stack	Package
BS83A02L	8MHz	1.8V~5.5V	8MHz	1K×14	64×8	_	4	8-bit×1	2	_	2	6DFN, 8SOP SOT23-6
BS83B04L	2MHz 4MHz 8MHz	1.8V~5.5V	8MHz	2K×16	128×8	32×8	8	10-bit CTM×1	4	I ² C×1	4	8SOP 10DFN/MSOP
Note: The sta	ndby current is	less than 150n	ıA at 3.0V (1 Kı	ey).								

Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	LCD	RTC	A/D	Touch Key	Timer	Interface	Stack	Package
BS67F2563	4MHz 8MHz 12MHz	1.8V~ 5.5V	400kHz~ 12MHz or 32kHz	16K×16	2304×8	128×8	31	32×4	√	12-bit ×7	20	10-bit CTM×2 16-bit STM×1	SPI×1 SPI/I ² C/UART×1	16	64LQFP
Note: The pow	er consumption	on of the	RTC on stan	dby current is	less than 20	00nA at 3V.									

					Hig	h Supp	ly Volta	ige '	Tou	ch Flash	MCU	ı					
9V Touch	A/D Flash	MCU	with	HVIO													
Part No.	Internal Clock	VCC (HV)	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	RTC	Timer	A/D	Touch Key	нию	Interface	LVR/ LVD	Stack	Package
BS86DH12C	8MHz 12MHz	7V~	5.0V	8MHz~	8K×16	512×8	64×8	22	1	10-bit CTM×2	12-bit	12	6	I ² C×1	1	8	20/28SOP



Touch Key IC

Touch Key							
Part No.	Touch Key	VDD	Standby Cu	ırrent at 3V	Key Output Type	Package	Serial Interface
Part No.	Touch Key	VDD	One-key Wake-up	Any-key Wake-up	Key Output Type	Package	Seriai interiace
BS812A-1	2-Key	2.2V~5.5V	_	2.0µA	Active Low	SOT23-6	_
BS813A-1	3-Key	2.2V~5.5V	_	4.5µA	Active Low	8SOP	_
BS814A-1	4-Key	2.2V~5.5V	_	5.0µA	Active Low	10MSOP	_
BS814A-2	4-Key	2.2V~5.5V	_	5.0µA	_	8SOP	√
BS816A-1	6-Key	2.2V~5.5V	_	12μA/6.0μA*	Active Low/Active High*	16NSOP	_
BS818A-2	8-Key	2.2V~5.5V	_	12μA/6.0μA*	Binary*	16NSOP	√
BS8112A-3	12-Key	2.2V~5.5V	6.0µA/3.0µA**	13μΑ/6.5μΑ**	I ² C	16NSOP	√
BS8116A-3	16-Key	2.2V~5.5V	7.0µA/3.5µA**	17μΑ/9.0μΑ**	I ² C	20SSOP	√

- Note: 1. The BS81x series devices have enhanced noise rejection performance.

 2. * pin selected option.

 3. ** option by I²C communication.

Enhanced To	ıch Key						
Part No.	Touch Kev	VDD	Standby Cu	ırrent at 3V	Key Output Type	Package	Serial Interface
Part No.	Touch Key	VDD	One-key Wake-up	Any-key Wake-up	Key Output Type	Package	Seriai interiace
BS811C-1	1-Key	2.2V~5.5V	_	2.0µA	Active Low	SOT23-6	_
BS812C-1	2-Key	2.2V~5.5V	_	2.0µA	Active Low	SOT23-6	_
BS813C-1*	3-Key	2.2V~5.5V	_	4.5µA	Active Low	8SOP	_
BS814C-1*	4-Key	2.2V~5.5V	_	5.0µA	Active Low	10MSOP	_
BS814C-2*	4-Key	2.2V~5.5V	_	5.0µA	_	8SOP	√
BS816C-1	6-Key	2.2V~5.5V	_	12.0μΑ/6.0μΑ*	Active Low/Active High*	16NSOP	_
BS818C-2	8-Key	2.2V~5.5V	_	12.0μΑ/6.0μΑ*	Binary*	16NSOP	√
BS818C-3	8-Key	2.2V~5.5V	6.0µA/3.0µA**	12.0µA/6.0µA**	I ² C	16NSOP	√
BS8112C-3	12-Key	2.2V~5.5V	6.0µA/3.0µA**	13.0µA/6.5µA**	I ² C	16NSOP, 20SSOP	√
BS8116C-3	16-Key	2.2V~5.5V	7.0µA/3.5µA**	17.0μΑ/9.0μΑ**	I ² C	20/24SSOP	√

- * Under development, available in 2Q, 2020.

 Note: 1. The BS81x series devices have enhanced noise rejection performance.
 2. * pin selected option.
 3. ** option by I²C communication.



Cortex-M0+ 32-Bit Voice / Music MCU

Cortex-M	0+ 32-Bi	it Musi	c Synt	hesize	er MCU													
Part No.	Max. Freq.	VDD	Flash	Ext. Flash	SRAM	PDMA	Audio D/A	ADC	Timers ⁻¹	I ² S	RTC	USB'2	MIDI Engine' ³	Voice	Sound Effect	Interface	I/O	Package
HT32F0006	48MHz	2.0V~ 3.6V	128KB	SPI	16KB	6CH	16-bit ×2	1Msps 12-bit×16	BFTM×2 SCTM×4 GPTM×1	√	V	√	V	SB Coding	Echo	USART×1 UART×1 SPI×1 QSPI×1 I ² C×1 I ² S×1	52	48/64LQFP

- Note: 1. BFTM: Basic Function Timer, SCTM: Single-Channel Timers, GPTM: General-Purpose Timers. 2. USB 2.0 Full Speed device. 3. 32-CH Music Synthesis Engine.

							Voi	ice	& Music	Flas	h N	/ICU	1								
Voice Fla	sh MCU	with	Powe	er Ampli	fier																
Part No.	Interna Clock	ıl vı		Program Memory		ata mory	Data EEPROM	I/O	Timer	RT	: 4	A/D	IAP	LVR/ LVD	Audio D/A	Power Amp.		ter- ice	Stacl	c F	ackage
HT66FV130	8MHz 12MHz 16MHz		2V~ 5V	2K×16	12	28×8	32×8	15	10-bit CTM× 10-bit PTM×			2-bit ×4	V	V	16-bit ×1	1.5W	SPI	IA×1	4	2	20/24SOP
HT66FV140	8MHz 12MHz 16MHz	5	?V~ 5V	4K×16	25	56×8	64×8	19	10-bit CTM× 10-bit PTM×			2-bit ×8	V	V	16-bit ×1	1.5W		I ² C×1 IA×1	8	24	SOP/SSOF 28SOP
HT66FV150	8MHz 12MHz 16MHz	5	2V~ 5V	8K×16	51	12×8	128×8	27	10-bit CTM×			2-bit ×8	√	V	16-bit ×1	1.5W	SP	I ² C×1 IA×1 RT×1	8		28SOP 44LQFP
HT66FV160	8MHz 12MHz 16MHz	=	2V~ 5V	16K×16	10:	24×8	256×8	35	10-bit CTM× 10-bit PTM× 16-bit STM×	:2	- 1	2-bit ×8	√	V	16-bit ×1	1.5W	SP	I ² C×1 IA×1 RT×1	8		44LQFP
Touch Voi	ice A/D F	lash	MCU	with Po	wer	Amplif	ier														
Part No.	Internal Clock	VDD	Syste	em Prog		Data Memory	Data EEPROM	I/O	SCOM/ SSEG	Tim	er	RTC	A/D	Audio D/A	Power Amp.	Touch Key	IAP	Inte fac	. 6	tack	Packag
BS66FV340	8MHz 12MHz 16MHz	2.2V~ 5.5V	8MH: 16MF		16	512×8	128×8	39	SCOM×6 SSEG×33	10-bit C 16-bit S 10-bit P	ΓM×1	V	12-bit ×8	16-bit ×1	1.5W	20	√	SPI/I ² 0 SPIA UART	×1	8	44/48 LQFP
BS66FV350	8MHz 12MHz 16MHz	2.2V~ 5.5V	8MH; 16MF		16	768×8	128×8	39	SCOM×6 SSEG×33	10-bit C 16-bit S 10-bit P	ΓM×1	V	12-bit ×8	16-bit ×1	1.5W	24	V	SPI/I ² (SPIA UART	×1	8	44/48 LQFP
BS66FV360	8MHz 12MHz 16MHz	2.2V~ 5.5V	8MH2 16MH		×16	1024×8	256×8	39	SCOM×6 SSEG×33	10-bit C 16-bit S 10-bit P	ΓM×1	V	12-bit ×8	16-bit ×1	1.5W	28	√	SPI/I ² 0 SPIA UART	×1	12	44/48 LQFP

					Voic	e R	Record / P	Playb	oack	Fla	sh N	ICU						
Voice Red	ord / Pla	aybacl	c Flash M	ICU with	Power An	nplifi	ier											
Part No.	Internal Clock	VDD	Program Memory	Data Memory	Data EEPROM	I/O	Timer	RTC	LVR/ LVD	A/D	IAP	G.711 Voice Codec	16-bit PCM ADC	Audio D/A	Power Amp.	Inter- face	Stack	Package
HT66FV240	16MHz	2.2V~ 5.5V	4K×16	384×8	128×8	28	16-bit CTM×1 16-bit STM×1 16-bit PTM×1	V	√	12-bit ×8	V	√	1	16-bit ×1	1.5W	SPI/I ² C×1	8	48LQFP

				Sound	d Effect F	lash MCU					
Waveform	Generator F	lash MCU									
Part No.	VCC (HV)	VDD	Internal Clock	System Clock	Program Memory	Data Memory	I/O	Waveform Output	Timer	Stack	Package
HT45F2020	8V~16V	5.0V	8MHz	8MHz or 32kHz	1K×14	32×8	4	2	10-bit PTM×1	2	SOT23-6
HT45F2022	_	2.2V~5.5V	OIVIHZ	OIVITIZ OF 32KHZ	IN×14	32×8	4	2	TV-DIL PTMX1	2	8SOP



								BLE										
BLE Trans	parent '	Transmis	sion															
Part No.		VDD	Data	EEPROM	Da	ta Rate	•	Out	put Po	wer	Ser	nsiti	vity	In	terface		Stamp	Holes
BCM-7602-G01		2.2V~3.6V		8K×8	1	Mbps			+3dBm		-9	90dB	m	U	ART/SPI		8×2 (P=	1.27mm)
BLE Beaco	n Tran	smitter																
Part No.		VDD	Fi	equency		on Pac andler		Output	t Powe	r	Crystal		BQB 5	.0	Inte	rface	Pa	ckage
BC7161		2.0V~3.6V	2402/2	2426/2480MI	Hz	V		-10~+	-8dBm		32MHz		√		l ² (C×1		OP-EP SOP-EP
BLE Beaco	n 24-Bi	t A/D Flas	sh MCU															
Part No.	VDD	System Clock	Program Memory	Data Memory	Data y EEPRO	1 1/4	0	Timer		A/D	Frequen	су	Beacon P Handl		Output Power		Stack	Package
BH66F71252	2.2V~ 3.6V	8MHz or 32kHz	8K×16	256×8	32×8	2	5 1 '	10-bit CTM 16-bit PTM		4-bit ×4	2402/2426/2 MHz	2480	√		-10~+8 dBm	32MHz	8	46QFN
BLE Beaco	n Body	Fat Meas	surement	A/D Flas	h MCU													
Part No.	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	т	'imer	A/D	Fr	equency	Ве	acon Pack Handler		tput ower	Crystal	Stack	Package
BH66F71652	2.2V~	8MHz or	8K×16	384×8	32×8		10-bi	it CTM×1	24-bit	240	2/2426/2480		,	-1	0~+8			
BH66F71662	3.6V	32kHz	16K×16	512×8	64×8	17		it CTM×1 it STM×1	×4		MHz		√	1 .	IBm	32MHz	8	46QFN

BH66F71662	2.2V~ 3.6V		Hz or kHz	16K×16	512×	3	64×8	17		t CTM>			102/2426/24 MHz	180	√	-10~+ dBm		8	46QFN
									2.4	4GH	z RF	•							
2.4GHz RI	F Trans	ceive	r A/D I	Flash N	ICU														
Part No.	VDD		ogram emory	Data Memo		ta ROM	I/O	Tir	ner	RT		VR/ .VD	A/D		n 2.4GHz Block	Comp- arator	Interface	Stack	Package
BC66F840	2.2V~3.6	6V 4	K×16	256×8	3 128	3×8	21	16-bit	CTM×1 STM×1 ETM×1	٧	1	√	12-bit×8		√	1	SPI/I ² C×1	8	32QFN
Part No.	VDD	Syste		gram	Data Memory	Da EEPF		I/O	A/D	Ti	mer	Fre	quency	Data Rate	Output Power	Sensitivi	ty Interface	Stack	Package
BC66F5652	2.0V~	2/4/8MI		<×16	512×8	128	3×8	22	12-bit ×12	10-bit	CTM×1 STM×1 PTM×1		12~2480	125/250/	-10~+6	-96dBm	SPI/I ² C×1	8	400511
BC66F5662	3.6V	or 32kl		K×16	2048×8	1024	4×8	24	12-bit ×4	16-bit	PTM×1 STM×1 PTM×1		MHz (500Kbps	dBm	@ 250Kbp	s UART×1	16	46QFN
2.4GHz RI	F Trans	ceive	r																
Part No.	VI	D	Freq	uency	Mod	ulatior	1	Data R	ate	Out	tput Po	wer	Sen	sitivity		Crystal	Interfac	е	Package
BC9824	1.9V~	-3.6V	2400~2	2483MHz	G	FSK	2	250K~2N	/lbps	-4	40~+3dE	Bm	-96dBm	n@250Kb	ps	16MHz	SPI		20QFN
BC5602	1.9V-	-3.6V	2402~2	2480MHz	G	FSK	12	5/250/50	0Kbps	-1	10~+6dE	Bm	-97dBm	n@250Kb	ps	16MHz	SPI		16QFN
2.4GHz RI	F Trans	mitte	r with	Encod	er A/D I	lash	MCU												
Part No.	VDD		ystem Clock	Progra Memo			Data EEPRO	M I/O	A /	D	Timer	Fre	equency	Modul	ation	Data Rate	Output Power	Stack	Package
BC66F5132*	2.0V~3.		32kHz	2K×14	64	4 8	32×14#	12	10-b	it×4	8-bit×1	2402	~2480MHz	GF	sk ¹	25/250/500 Kbps	-10~+6dBm	4	24SSOP-EP
* Under devel Note: # Emula			in 2Q, 2	020.		'		'	'										
2.4GHz RI	F Trans	mitte	r with	Encod	er														
Part No.		VDD		Freque	ncy	Modul	ation	Da	ta Rate	•	Output	t Pow	er Cr	ystal	Key I	Mode	Interface	Pa	ckage
BC5161*		2.0V~3.6	31/	2402~248	OMH-	GFS	SK.	125/2	50/500K	hne	10	-6dBm	22	MHz	,	V	_	8SOP	EP, 16QFN
BC5162*		2.0v~3.0	JV 4	∠+UZ~Z40	OIVITIZ	GF	JIX	123/2	50/500K	Dh2	-10~4	JUDIII	32	IVI⊓Z	-	-	I ² C	85	OP-EP
* Under devel	opment, a	vailable	in 2Q, 2	020.															

http://www.holtek.com 26 June 02, 2020



									S	Sub-	1GHz	RF								
Sub-1GHz	z RF 1	ranso	ceive	r A/D Fla	ash MC	U														
Part No.	VDE		stem lock	Progra Memo		ata mory	Data EEPROM	1/4	0	A/D	Ti	mer	E	Band	Data Rate		Cor	Current sumption	Stack	Package
BC66F3652	1.9V- 3.6V		/8MHz 32kHz		5 51	2×8	128×8	2	2 1	12-bit×1	2 10-bit	CTM×1 STM×1 PTM×1		433/470/ 915MHz		13dRm		nA@433MHz nA@868MHz		46QFN
BC66F3662	1.9V- 3.6V		/8MHz 32kHz		6 20	48×8	1024×8	2	2	12-bit×4	16-bit	PTM×1 STM×1 PTM×1		433/470/ 915MHz				nA@433MHz nA@868MHz		46QFN
Sub-1GHz	z RF 1	ranso	ceive	r																
Part No.		VDD			Band		FSK/G	FSK	C	Low		xternal iductor	D	ata Ra	te Ma	ax. Output Power		Sensitivity	,	Package
BC3601	2	2.0V~3.6	6V	315/433/4	70/868/9	15MHz	√			_		_	2	2~250Kbp	os	17dBm	-1:	21dBm@2kb	pps	24QFN
BC3602	1	.9V~3.6	6V	315/433/4	70/868/9	I5MHz	√			√		√	2	2~250Kbp	os	13dBm	-1:	20dBm@2kb	pps	24QFN
Sub-1GHz	z RF T	ransı	nitte	r Flash	MCU		'													
Part No.	VDD		stem ock	Program Memory			Data EPROM	IAP	I/O	, .	Timer	LVR/ LVD	В	Band	OOK/ FSK	Symbol Rate		Output Power	Stack	Package
BC68F2123	2.2V- 3.6V	~ 81	MHz	1K×14	64>		32×8	_	9		bit STM×1 bit PTM×1	1		5/433/ 915MHz	√	0.5~25Ksp (OOK)		/10/13dBm	2	16NSOP-EP
BC68F2130	2.0V ² 3.6V		MHz	2K×16	256	×8	-	$\sqrt{}$	8		bit CTM×1 bit PTM×1			5/433/ 915MHz	√	0.5~25Ksp (OOK)	s 0/1	10/13dBm	8	16NSOP-EP 16QFN
BC68F2140	2.0V ² 3.6V		MHz	4K×16	256	×8	_	√	14		bit CTM×1 bit PTM×1			5/433/ 915MHz	√	0.5~25Ksp (OOK)	s 0/1	10/13dBm	8	24SSOP-EP 24QFN
Sub-1GHz	z RF T	ransı	nitte	r OTP M	CU															
Part No.	.	VDD		ystem Clock	Progra Memo		Data lemory	1/0	0	Tin Mod		В	and		RF OOK/FSF	Symbo		Output	Stack	Package
BC48R2021	2	2V~3.6	\/	8MHz	1K×14		64×8	8		8-bit Ti	morv1	315/433/8			√ V	0.5~25Ks		Power 5/10/13dBm	2	16NSOP-EP
Sub-1GHz					110.71		04^0		,	O-DIL TII	iller × 1	313/433/0	000/913	JIVII IZ	· ·	0.5*2510	sps 0/	3/10/13dBill	2	10N3OF-EF
	t No.	Tallsi	mille	VDD		R	and			OOK/F	ek.		Symbo	l Rate		Output Po	wer		Packag	10
BC2102	. 140.			2.2V~3.6V	3		868/915MH	lz		√	<u> </u>		0.5~25			0/5/10/13d			8SOP-E	
Sub-1GHz	z RF T	ransı					700/0 101111	_		<u> </u>			0.0 20	or topo		0,0,10,100	J		000. 2	
	t No.			VDD			and		00	K	Symbol	Rate	Out	put Pov	ver	Enco	ding F	ormat	Р	ackage
BC2161				2.2V~3.6V	3	15/433/8	68/915MH:	7	√		1.5~24	Ksps	0/5	i/10/13dE	Bm	1527, 2262	and HT	compatible		SOP-EP
Sub-1GHz	z Supe	er Reg					00/0 /0////		·		1.0 2	Торо	0,0	, 10, 1042		1027, 2202	and m	остірацью	16NS	OP-EP/QFN
Part No.	VDD	Sys	tem ock	Program Memory	Dat	a I	Data PROM	I/O	т	imer	A/D	scor	VI I	Band	Demo	od. Symb		ensitivity	Stack	Package
BC66F2430	4.5V~ 5.5V	161	ИНz	2K×16	128>	8	64×8	17	10-bi	it PTM× it STM× it STM×	1 12-bi	t 4	315	5/433MHz	z OOk	0.5~1 Ksps		-97dBm	6	16NSOP-EP 24SSOP-EP
Sub-1GHz	z OOK	Rx F	lash	MCU																
Part No.	VDD	Syst		Program Memory	Data Memor	Da y EEPI			Time	er	Band	Dei	mod.	Ma Symbo		Current Consumpt		Sensitivity	Stack	Package
BC68F2332	2.5V~	8MI	-lz	2K×14	64×8	32:	×8 8	10	-bit ST	TM×1	315/433	8/				3.2mA@433	MHz	-112dBm	4	16NSOP-EP
BC66F2342	5.5V	or 32		4K×15	128×8	32×	15# 13		-bit ST -bit PT		868/915N		OK	20K		4.0mA@868		@10Ksps	6	24SSOP-EP
Note : # Emul	lated El	EPROM						1.0												
Sub-1GHz	z OOK	CRx H	IVIO .	A/D Flas	h MCU															
Part No.	VCC (HV)	VDD	Syst			Data emory	Data EEPRON	л I/C	D H			Output Itage	Ban	d Syn	Max. nbol Rat		rent mptior	Sensit-	Stack	Package
BC45F7930	7.5\/	4.5\/	2014	2K>	:16	128×8	64×8	9		12-l			315/4	33/		2.2	A 2 2 M I I	= 440dDm	4	460EN
BC45F7940	7.5V~ 12V	4.5V~ 5.5V	32kH 16M		:16 2	256×8	128×8	13	3 10	0 12-l	bit	5.0V	868/9 MH:	15	20Ksps	3.2mA@ 4.0mA@				46QFN 48LQFP-EP
Sub-1GHz	z OOK	(Rx																		
- 431																				
Part No	э.		VDD		Ban	d		оок	<u> </u>	М	lax. Sym	bol Rat	е	Currer	nt Consu	ımption	Se	ensitivity	P	ackage
BC2302A).		VDD V~5.5V	,	Ban 315/433			OOK √		M	20K		е		nt Consu	-		ensitivity		ackage SOP-EP



								NFC											
A/D NFC	ГАG Flas	h MC	:U																
Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	Timer	A/D	scor	Comparator		h Curre ED Drive		FC dards	Inter	face	Stack	Package
HT45F4050	4MHz 8MHz 12MHz	1.8V~ 5.5V			256×8	64×8	41	10-bit PTM×1 16-bit CTM×1 16-bit STM×1	12-bit	4	1		41	ISO1	4443A	SPI/I ² UAR NFC	RT×1	8	48LQFP
NFC Read	ler																		
Part No.	VDD	:	System Clock	RF Frequency	NFC Standa	1 -		4443A/B ata Rate	RF Ou Pow	•	NFC FIFO-buff	er	CRC	Receiver AGC		VDD tion	Inte	rface	Package
BC45B4523	2.7V~5.5	5V 2	7.12MHz	13.56MHz	ISO1444 ISO156		/212/4	124/848Kbps	250r	nA	64×8		√	V	,	V	SP	l×1	24QFN

								FRS								
Two Way	Radio	Flash MC	:U													
Part No.	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	Timer	RTC	A/D	D/A	FRS AFE	Audio Processor	Audio Power Amp.	Interface	Stack	Package
BC98FR066*	3.3V~ 5.5V	32kHz~ 16MHz	8K×16	512×8	128×8	16	8-bit×2 16-bit×1	√	10-bit ×8	8-bit ×3	√	√	1.5W	UART	8	48LQFP-EP
* Under development of the Auditor o	mily Rad	lio Service.		CTCSS, DC	S, DTMF, Pro	e-empha	sis, De-em	phasis, S	Scramble	, Compa	ander and	d VOX function	s.			
							RF	Mod	lule							
BLE Trans	paren	t Transm	ission													
Part No		VDD	Da	ata EEPRO	м	Data R	ate	Ou	tput Po	wer	s	ensitivity	Interf	ace	Stam	p Holes
BCM-7602-G0	01	2.2V~3.6\	/	8K×8		1Mbp	s		+3dBm			-90dBm	UART	/SPI	8×2 (P	=1.27mm)

BLE Transparen	t Transmissio	on										
Part No.	VDD	Data	a EEPROM	Data Rat	e	Output	Power	s	ensitivity	I	nterface	Stamp Holes
BCM-7602-G01	2.2V~3.6V		8K×8	1Mbps		+30	dBm		-90dBm	ι	JART/SPI	8×2 (P=1.27mm)
Sub-1GHz Recei	ver											
Part No.	VDE)	Band	Symbo (Ma	ol Rate ax.)	Co	Current Insumption		Sensitivi	ty	Interface	Dimension
BM2302-33-1			315MHz			3.2	mA@315MHz	z	-112dBm@10	ksps		
BM2302-34-1	0.01/.5	. 5. /	433MHz	001	,	3.2	mA@433MHz	<u>z</u>	-112dBm@10	ksps	120	40.405.50()
BM2302-38-1	3.0V~5	.5V	868MHz	20k	(sps	4.0	mA@868MHz	<u>z</u>	-111dBm@10	ksps	I ² C	43×10.5×5.2 (mm)
BM2302-39-1			915MHz			4.0	mA@915MHz	z	-110dBm@10	ksps		
BM2302-63-1			315MHz			3.2	mA@315MHz	2	-112dBm@10	ksps		
BM2302-64-1	3.0V~5	· 5\ /	433MHz	201	·	3.2	mA@433MHz	<u>z</u>	-112dBm@10	ksps	I ² C	16 41 5 42 6 (1999)
BM2302-68-1	3.00~5	.5V	868MHz		(sps	4.0	mA@868MHz	z	-111dBm@10	ksps		16×15×2.6 (mm)
BM2302-69-1			915MHz			4.0	mA@915MHz	<u>z</u>	-110dBm@10	ksps		
Sub-1GHz Trans	ceiver											
Part No.	VDD		Band	Data Rate	Output (Ma		Rx Cu Consun		Sensiti	vity	Interface	Dimension
BM3601-03-1			315MHz				13.5mA@	315MHz		01/1		
BM3601-04-1	2.0V~3.6	.,	433MHz	0.0501/h	17d	D	13.0mA@	433MHz	-120dBm@ z	2Kbps	- SPI	15×18.5×2.5 (mm)
BM3601-08-1	2.00~3.0	V	868MHz	2~250Kbps	170	DIII	13.5mA@	868MHz		01/1	581	15* 16.5*2.5 (11111)
BM3601-09-1			915MHz				13.5mA@	915MHz	-119dBm@ z	∠Kbps		
BM3602-03-1			315MHz				4.1mA@3	315MHz		Ol/hn a		
BM3602-04-1	2.0V~3.6	.,	433MHz	2 250Khna	13d	Des	4.2mA@4	133MHz	-120dBm@	zkops	SPI	45 v 40 5 v 2 5 (mm)
BM3602-08-1	2.00~3.6	V	868MHz	2~250Kbps	130	DIÍI	5.5mA@8	868MHz	-119dBm@	2Khnc	371	15×18.5×2.5 (mm)
BM3602-09-1			915MHz				6.0mA@9	915MHz		∠∧nhs		
2.4GHz Transce	iver											
Part No.	VDD		Band	Data	Rate	Outpu	ut Power (N	lax.)	Sensitivity	у	Interface	Dimension

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



Interface Bridge

Bridge											
Part No.	Description	VDD	Internal Clock	Interface	USB	Virtual COM	HID	FIFO/Buffer	Interface Data Rate	I/O VDD	Package
HT42B532-1	USB to I ² C Bridge	3.3V~5.5V	12MHz	USB×1 I ² C×1	Full Speed	√	_	TX: 62 bytes RX: 62 bytes	Up to 400kHz	√	8SOP 10MSOP
HT42B533-1	USB to SPI Bridge	3.3V~5.5V	12MHz	USB×1 SPI×1	Full Speed	√	_	TX: 128 bytes RX: 128 bytes	Up to 8MHz	√	10MSOP 16NSOP
HT42B534-2	USB to UART Bridge	3.3V~5.5V	12MHz	USB×1 UART×1	Full Speed	V	_	TX: 128 bytes RX: 128 bytes	Up to 3Mbps Baud	√	8/10SOP 10MSOP 16NSOP
HT42B564-1	USB to UART Bridge	3.3V~5.5V	12MHz	USB×1 UART×1	Full Speed	_	√	TX: 32 bytes RX: 32 bytes	Up to 115.2kbps Baud	√	10SOP

CAN Bus Con	troller							
Part No.	Description	VDD	System Clock	Protocol	Message Objects	Message Memory	Interface	Package
HT45B3305H	CAN Controller	3.0V~5.5V	8MHz~ 24MHz	CAN 2.0A/B ISO11898-1	32	32×139-bit	CAN×1 SPI×1, I ² C×1	16NSOP/QFN

Note: Operating temperture rage -40°C~+125°C.
Based on BOSCH CAN IP module C_CAN.

Telecom IC

		Telecom 10		
Telecom Peripheral				
Part No.	Description	VDD	OSC Frequency	Package
HT9200A	DTMF generator	2.5V~5.5V	3.58MHz	8DIP/SOP
HT9200B	DTMI generator	2.30 - 5.50	3.30WH 12	14SOP
HT9170B	DTMF receiver	2.5V~5.5V	3.58MHz	18DIP
HT9170D	DTIMI Teceivei	2.30 - 5.50	3.30WH 12	18SOP
HT9172	DTMF receiver	2.5V~5.5V	3.58MHz	18DIP/SOP
Note: The HT9172 has enhanced perf	ormance over the HT9170B/HT9170D d	evices.		



Battery Managemen	t
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Power Bank	CFlash N	ICU															
Part No.	Internal Clock	VCC (HV)	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	Timer	A/D	OVP/OCP/ OUVP	LDO	Level Shift	VREF	Q.C 2.0	Stack	Package
HT45F4MA	30MHz	_	2.55V~	470kHz~ 15MHz	2K×16	128×8	64×8	16	10-bit PTM×1	12-bit	1/1/0	_	_			4	16NSOP 20SSOP
HT45FH4MA-1	JOIVII 12	3V~ 28V	5.5V	or 32kHz	21\^10	120^0	04^0	13	16-bit STM×1	×8	1/1/0	5V	2			7	20SSOP
BP45F4MB	30MHz	-	2.5V~ 5.5V	470kHz~ 15MHz or 32kHz	2K×16	128×8	_	18	10-bit PTM×1 16-bit STM×1	12-bit ×7	1/1/0	_	_	2.4V ±1%	_	4	16NSOP 20SSOP
HT45F4N	001411		2.55V~	470kHz~	417. 40	400.0		26	10-bit PTM×3	12-bit	0/0/4	_	_	_	_		200000
HT45FH4N	30MHz	3V~ 28V	5.5V	15MHz or 32kHz	4K×16	192×8	64×8	21	16-bit STM×1	×13	0/2/1	5V	2	_	√	8	28SSOP

Advanced Power Bank Flash MCU

Part No.	Internal Clock	VCC (HV)	VDD	Program Memory	Data Memory	Data EEPROM	I/O	Timer	A/D	Auto-adjust H.R. PWM	OCP/ OUVP	LDO	Level Shift	VREF	Q.C 2.0	Stack	Package
HT45F5N	8MHz	_	2.55V~	4K×16	256×8	64×8	30	10-bit PTM×1	12-bit	2	2/2	_	_	2.4V	_		28SSOP 32QFN
HT45FH5N	OIVITZ	3V~ 28V	5.5V	4N×10	250*0	04*0	28	16-bit STM×1	×14	2	212	5V	2	±1%	√	8	28SSOP 46QFN
BP45FH6N	8/12/16MHz	3V~ 15V	2.55V~ 5.5V	6K×16	256×8	64×8	28	10-bit PTM×1 16-bit STM×1	12-bit ×14	2	2/2	5V	8	2V/3V/4V ±1%	√	8	46QFN

Note: 1. H.R. PWM: High Resolution and Complementary PWM Outputs with dead-time control, the duty cycle resolution is 7.8ns when the HIRC is 8MHz. 2. BP45FH6N has 4 pin level shift output with 12V/90mA and 4 pin High Voltage MOS Gate Driver with 12V/450mA.

Battery Charger Flash MCU

Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	Inter- face	Timer	A/D	D/A	ОРА	CRC	LVR	Stack	Package
HT45F5Q-1	8MHz	2.2V~ 5.5V	8MHz	1K×14	32×8	32×14#	9	-	-	10-bit ×5	8-bit×1 12-bit×1	2	-	2.1V	4	16NSOP
HT45F5Q-2	8MHz 32kHz	2.2V~ 5.5V	125kHz~8MHz or 32kHz	2K×16	128×8	32×8	15	UART×1	10-bit CTM×1	12-bit ×7	8-bit×1 12-bit×1	3	_	2.1V	6	20NSOP
HT45F5Q-3	8MHz 32kHz	2.2V~ 5.5V	125kHz~8MHz or 32kHz	4K×15	256×8	32×15#	23	SPI/I ² C/ UART×1	10-bit CTM×1 10-bit STM×1	12-bit ×11	14-bit×1 12-bit×1	3	V	2.1V	6	24/28SSOP

Note: # Emulated EEPROM.

MI	ss Chai		
wirele	ee unai	roer is	WILE

Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	Timer	A/D	ОСР	Demo- dulation	PLL	Inter- face	Clock Gen.	FSK	Stack	Package
HT66FW2230	20MHz	4.0V~ 5.5V	312kHz~ 20MHz	4K×16	128×8	64×8	21	10-bit CTM×1 10-bit STM×1	12-bit ×8	1	1	0	I ² C×1	1	1	8	28SSOP 28QFN
HT66FW2350	8MHz	4.0V~ 5.5V	125kHz~ 20MHz	8K×16	256×8	64×8	27	10-bit CTM×1 10-bit STM×1 16-bit PTM×1	12-bit ×7	1	2	32MHz	I ² C×1	1	V	8	32QFN

Wireless Charger Tx Power Stage IC

Part No.	VIN	VDD	OCP	ОТР	R _{DS(ON)}	Package
HT45B0016	4.5V~25V	4.5V~5.5V	√	√	12mΩ/30mΩ	23QFN

Wireless Charger Rx IC

Part No.	VIN	VDD	SFBR	R _{DS(ON)}	OVP	ОТР	LDO	LDO Enable Pin	Linear Charge	V _{BAT} Detect	Modulation	Rec Power	Package	
BP45B0085*	0V~7V	0V~7V	√	0.3Ω	7.5V	150°C	30mA@5V	√	40~400mA	√	√	3W	24QFN	

^{*} Under development, available in 2Q, 2020. Note: SFBR:Synchronous Full Bridge Rectifier.

Handheld Product Flash MCU

Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Emulated EEPROM	I/O	Time	r I	PWM	A/D	High Current LED Driver	Linear Charge		H-Bridge Current		Package
BP45F1130	8MHz	1.8V~ 5.5V	8MHz or 32kHz	2K×14	64×8	32×14	19	8-bit×1		8-bit ×1	10-bit ×4	19	40~400m	A _	_	4	16/20NSOP 24SSOP
BP45F0102	8MHz	1.8V~	8MHz	2K×14	64×8	32×14	13	8-bit×1	.	8-bit	10-bit	13	_	-1	2.1A	4	20SSOP
BP45F1330	OIVITZ	5.5V	or 32kHz	2N×14	04×0	32×14	14	0-011×1	'	×1	×4	14	40~400m	A	2.1A	4	24SSOP
BP45F0106	8MHz	1.8V~ 5.5V	8MHz or 32kHz	4K×15	128×8	32×15	16	10-bit PTN 10-bit STN		_	10-bit ×8	16	_	√	2.1A	6	24SSOP
Part No.	Inter	nal	VDD	System	Program	Data		I/O T	imer	Р	wM	High Curre	nt D	emo-	HV-	Stack	Package

Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	I/O	Timer	PWM	High Current LED Driver	Demo- dulation	HV- MOSFET	Stack	Package
BP45F0044	16MHz	3.3V~ 5.5V	16MHz or 32kHz	512×13	32×8	4	8-bit×1	8-bit×1	4	1	1	2	8SOP



						Li Ba	ttery &	Power	Manag	jem	ent						
Li Battery	Protect	ion Fl	ash N	ICU													
Part No.	Internal Clock	VIN	VDD	V _{MON} Accuracy	LDO	System Clock	Program Memory	Data memory	Data EEPROM	I/O	Timer	A/D	Interface	CRC	IAP	Stack	Package
HT45F8550	8MHz	7.5V~	1.8V~	1/n±0.5%	5V±1%	400kHz~	8K×16	512×8	128×8	16	10-bit PTM×1 16-bit CTM×1 16-bit STM×1	12-bit ×5	UART×1 SPI/I ² C×1	_	.1	8	28SSOP
HT45F8560	12MHz 16MHz	36V	5.5V	(Ratio)	30mA	16MHz or 32kHz	16K×16	2048×8	1024×8	33	10-bit PTM×2 16-bit PTM×2 16-bit STM×3	12-bit ×8	UART×2 SPI/I ² C×1 SPIA×1	√		16	48LQFP
Li Battery	Protect	ion A	nalog	Front End													
Part N	ю.	C	ell#	Input	Voltage	Cont	rol I/F		/oltage or Type		V _{MON} Accurac	,	L	.DO		Pac	kage
HT7Q1520		3	3~8	7.5\	/~36V	I	0	Accur	nulative		1/n±0.5% (Ra	itio)	5V±19	%, 30m	Ą	161	NSOP

					AC Pow	er Mana	agem	ent Flash	MCU	,					
AVR Flash	n MCU														
Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	Timer	A/D	D/A	LVD/ LVR	ОРА	Comp- arator	Stack	Package
HT45F6530	8MHz	2.2V~ 5.5V	8MHz or 32kHz	2K×15	128×8	32×8	22	10-bit CTM×2	12-bit ×6	12-bit ×2	V	2	2	4	20NSOP 24SOP/SSOP
Note: AVR: Au	utomatic Volta	ge Regulat	or.												

	Inverter Flash MCU																
Portable	ortable Device Flash MCU																
Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	Timer	A/D	SPWM	ОСР	OVP	AC Detector	LVD/ LVR	Inter- face	Stack	Package
HT45F5V	16MHz	4.0V~ 5.5V	250kHz~ 20MHz or 32kHz	4K×16	256×8	64×8	24	10-bit CTM×2 16-bit STM×1	12-bit ×10	12-bit ×1	2	1	√	√	UART×1	6	20/24/28 SOP/SSOP

http://www.holtek.com 31 June 02, 2020



LDO & Detector

TinyPov	ver™ LDO							
Part No.	Maximum Input Voltage	Output Voltage, V _{оит}	Max. Output Current (mA)	Typical Current Consumption (μΑ)	Chip Enable Function	Tolerance	Protections	Package
HT1015-1	12V	1.5V	18	2.2	_	±3%	_	SOT23-5, SOT89
HT71xx-1	30V	2.1V/2.3V/2.5V/2.7V/3.0V/ 3.3V/3.6V/4.4V/5.0V	30	2.5	_	±3%	Soft-Start	TO92, SOT23-5 SOT89
HT71xx-2	30V	2.1V/2.3V/2.5V/2.7V/3.0V/ 3.3V/3.6V/4.4V/5.0V	30	2.5	_	±1%	Soft-Start	SOT23-5, SOT89
HT71xx-3	30V	2.1V/2.3V/2.5V/2.7V/3.0V/ 3.3V/3.6V/4.4V/5.0V	30	1.0	_	±2%	Soft-Start	SOT23-5, SOT89
HT75xx-1	30V	2.1V/2.3V/2.5V/2.7V/3.0V/3.3V/3.6V/4.0V/4.4V	100	2.5		±3%	Soft-Start	TO92, SOT23-5
H173XX-1	300	5.0V/6.0V/7.0V/8.0V/9.0V/10.0V/12.0V	150	2.5	_	±370	3011-3tart	SOT89
HT75xx-2	30V	2.1V/2.3V/2.5V/2.7V/3.0V/3.3V/3.6V/4.0V/4.4V	100	2.5		±1%	Soft-Start	TO92, SOT23-5
H173XX-2	300	5.0V/6.0V/7.0V/8.0V/9.0V/10.0V/12.0V	150	2.5	_	±170	3011-3tart	SOT89
HT75xx-3	30V	2.1V/2.3V/2.5V/2.7V/3.0V/3.3V/3.6V/4.0V/4.4V	100	1.0		±2%	Soft-Start	SOT23-5, SOT89
H1/3XX-3	300	5.0V/6.0V/7.0V/8.0V/9.0V/10.0V/12.0V	150	1.0	_	±270	Soit-Start	50123-5, 50169
LIT75 7	30V	2.1V/2.3V/2.5V/2.7V/3.0V/3.3V/3.6V/4.0V/4.4V	100	2.5	√	±2%	0-# 0t-# 00D 0TD	00700 5 00700
HT75xx-7	300	5.0V/6.0V/7.0V/8.0V/9.0V/10.0V/12.0V	150	2.5	V	±270	Soft-Start, OCP, OTP	SOT23-5, SOT89
		1.8V	150					
HT73xx	12V	2.5V	180	3.5		±3%		SOT89
птохх	120	2.7V	200	3.5	_	±3%	_	50169
		3.0V/3.3V/3.5V/4.15V/5.0V	250					
HT73xx-1	30V	2.1V/2.3V/2.5V/2.7V/3.0V/ 3.3V/3.6V/4.0V/4.4V/5.0V	250	2.5	_	±3%	Soft-Start	SOT89, 8SOP-EP
HT73xx-2	30V	2.1V/2.3V/2.5V/2.7V/3.0V/ 3.3V/3.6V/4.0V/4.4V/5.0V	250	2.5	_	±1%	Soft-Start	SOT89, 8SOP-EP
HT73xx-3	30V	2.1V/2.3V/2.5V/2.7V/3.0V/ 3.3V/3.6V/4.0V/4.4V/5.0V	250	1.0	_	±2%	Soft-Start	SOT89, 8SOP-EP
HT73xx-7	30V	2.1V/2.3V/2.5V/2.7V/3.0V/ 3.3V/3.6V/4.0V/4.4V/5.0V	250	2.5	√	±2%	Soft-Start, OCP, OTP	SOT89, 8SOP-EP
HT72xx	8V	1.8V/2.5V/2.7V/3.0V/3.3V/4.5V/5.0V	300	4.0	V	±2%	OCP, OTP	SOT23, SOT23-5 SOT89
HT78xx	8V	1.8V/2.5V/2.7V/3.0V/3.3V/5.0V	500	4.0	√	±2%	OCP, OTP	SOT23-5, SOT89
HT73Lxx	6V	0.9V/1.05V/1.2V/1.5V/1.8V/ 2.5V/2.7V/3.0V/3.3V/3.6V	250	1.0	√	±2%	Soft-Start, OCP, OTP	4DFN, SOT89, SOT23-5
HT75Hxx	40V	2.1V/2.3V/2.5V/2.7V/3.0V/ 3.3V/3.6V/4.0V/4.4V/5.0V	150	2.5	V	±1.5%	Soft-Start, OCP, OTP	SOT89, SOT23-5 8SOP-EP
HT73Hxx*	40V	2.1V/2.3V/2.5V/2.7V/3.0V/ 3.3V/3.6V/4.0V/4.4V/5.0V	250	2.5	√	±1.5%	Soft-Start, OCP, OTP	SOT89, SOT23-5 8SOP-EP

* Under development, available in 2Q, 2020. Note: The xx in the part number is the LDO output voltage.

TinyPower™ Vo	oltage Detector					
Part No.	Maximum Input Voltage	Detector Voltage, VDET	Hysteresis Width (V)	Typical Current Consumption (μΑ)	Tolerance	Package
HT70xxA-1	30V	2.2V/2.4V/2.7V/3.3V/3.9V/4.4V/5.0V/8.2V	0.05 × V _{DET}	3.0	±3%	TO92, SOT23, SOT23-5, SOT89
HT70xxA-2	30V	2.2V/2.4V/2.7V/3.3V/3.9V/4.4V/5.0V/8.2V	0.05 × V _{DET}	3.0	±1%	SOT23-5, SOT89
HT70xxA-3	30V	2.2V/2.4V/2.7V/3.3V/3.9V/4.4V/5.0V/8.2V	0.05 × V _{DET}	1.0	±2%	SOT23-5, SOT89

Note: The xx in the part number is the detect voltage.



	DC to DC Converter														
Asynchro	Asynchronous Step-Down DC to DC Converter														
Part No.	Max. Input Voltage	Output Voltage	Output Current (A)	Switching Frequency (kHz)	Current Limit (A)	Accuracy	Shutdown Current, I _{OFF} (µA)	Operation Current, Iq (mA)	Efficiency	Mode	Package				
HT7463A	52V 1.00V~36V 0.6 1.0 0.8V±2.0% 1.0 0.7 95% PWM SOT23-6														
HT7463B	T7463B 52V 1.00V~36V 0.6 550 1.0 0.8V±2.0% 1.0 0.7 95% PVW SO123-6														
Synchronous Step-Down DC to DC Converter															
Part No.	Max Input Output Switching Current Shutdown Operation														
HT74153A*			1.8	1200	3.2										
HT74153B*	6V	0.6V~5V	1.0	400	3.2	0.6V±1.5%	0.5	0.05	95%	PWM/	8SOP-EP				
HT74173A*	OV	0.60~50	2.0	1200	F 0	0.0V±1.5%	0.5	0.05	9570	PFM	SOT23-5				
HT74173B*															
* Under deve	lopment, availa	ble in 2Q, 2020.													

Asynchro	Asynchronous Step-Up DC to DC Converter													
Part No.	Input Voltage	Output Voltage, V _{OUT}	Output Current (A)	Switching Frequency (kHz)	Current Limit (A)	Accuracy	Shutdown Current, I _{OFF} (µA)	Operation Current, I _Q (μA)	Efficiency	Mode	Package			
HT77xxB	0.7V~6.0V	1.8V/2.2V	0.1	115		Vоит±2.5%	1.0	4	80%	PFM	SOT23, SOT23-5			
ПІТТХХВ	0.7 V~0.0 V	2.7V/3.0V/3.3V/3.7V/5.0V	0.1	115		VOUTIZ.370	1.0	4	85%	FFIVI	SOT89			
HT77xxBA	0.7V~6.0V	2.7V/3.0V/3.3V/3.7V/5.0V	0.2	200	0.8	V _{OUT} ±2.5%	1.0	5	85%	PFM	SOT23, SOT23-5 SOT89			
HT77vvC	0.7\/6.0\/	1.8V/2.2V	_	115		Vоит±2.5%	1.0	4	80%	PFM	SOT23-5, SOT89			
HI77XXC	1T77xxC 0.7V~6.0V	2.7V/3.0V/3.3V/3.7V/5.0V (External	OV (External) 115		_	Vour±2.5%	1.0	4	85%	PFIVI	50123-5, 50169			
HT7991	2.6V~5.5V	3.0V~12.0V	1.0	1000	2.5	0.6V±2.0%	1.0	210	85%	PWM	SOT23-6			

Note: The xx in the part number is the output voltage.

Synchronous	Cton I	I DC	La DC	Camprante

J	loud otop .	op Do to Do contoit	•								
Part No.	Input Voltage	Output Voltage, V _{OUT}	Output Current (A)	Switching Frequency (kHz)	Current Limit (A)	Accuracy	Shutdown Current, I _{OFF} (µA)	Operation Current, I _Q (μA)	Efficiency	Mode	Package
HT77xxS	0.7V~6.0V	1.8V/2.2V	0.1	500	_	Vонт±2.5%	1.0	4	80%	PFM	SOT23, SOT23-5,
ПППХХО	0.7 V~0.0 V	2.7V/3.0V/3.3V/3.7V/5.0V	0.1	500	_	VOUTEZ.576	1.0	4	85%	FFIVI	SOT89
HT77xxSA	0.7V~6.0V	2.7V/3.0V/3.3V/3.7V/5.0V	0.2	500	0.8	V _{OUT} ±2.5%	1.0	4	90%	PFM	SOT23, SOT23-5, SOT89
HT79171	2.2V~5.0V	2.6V~5.2V	2.0	500	5.0	0.6V±1.5%	1.0	65	95%	PWM/ PSM	8SOP-EP, 10QFN
HT79181	2.2V~5.0V	2.6V~5.2V	3.0	500	6.0	0.6V±1.5%	1.0	65	95%	PWM/ PSM	10QFN

Note: The xx in the part number is the output voltage.

Charge P	Charge Pump DC to DC Converter													
Part No.	Input Voltage	Output Voltage, Vout	Output Current (mA)	Switching Frequency (kHz)	Current Limit (A)	Accuracy	Shutdown Current, I _{OFF} (µA)	Operation Current, I _Q (mA)	Efficiency	Package				
HT7660	3V~12V	-V _{DD} ~V _{DD}	20	10	_	V _{OUT} ±4.0%	_	0.08	98%	8DIP/SOP				

	AC to DC Converter														
AC to DC	AC to DC Converter														
Part No.	Part No. Topology PF Power MOS (BV) Voltage Ros(ON) Operation Current Capability Frequency Protections Package														
HT7A6312	Flyback (SSR), Buck,		700)/	0)/ 00)/	19Ω	0.74	8W/13W#	00141-	LIVE O OTD OVE COR	0DID/00D					
HT7A6322	Buck-Boost	_	730V	9V~38V	12Ω	0.7mA	12W/20W#	60kHz	UVLO, OTP, OVP, OCP	8DIP/SOP					
HT7L5820	Flat and (DEO cOD DIAMA)	. 0.07	Ext.	0)/ 00)/		0 4	000144		Brown In/Out, UVLO, OCP, open/short, OVP (Auto Recovery), OTP (Auto Recovery)	40N00D					
HT7L5821	Flyback (PFC+QR PWM)	> 0.97	EXt.	9V~28V	_	3mA	200W	_	Brown In/Out, UVLO, OCP, open/short, OVP (Latched), OTP (Latched)	16NSOP					
	Note: All of ICs operate from 85V _{AC} to 265V _{AC} . # Max. output power from 85V _{AC} to 265V _{AC} /176V _{AC} to 265V _{AC} .														

HT16H25

2.4V~5.5V



Part No.	VDD	Max. Resolution Segment × Common	LCD Voltage	Bi	ias	Gray S	cale	Serial	Data	Built-ii OSC.		Ext. Crystal	Pac	kage
HT1620	2.4V~3.3V	32×4, 32×3, 32×2	3/2V _{DD}	1/2,	, 1/3	_		1		_		√	64	LQFP
HT1621	2.4V~5.2V												441.050.4	00000# 050
HT1621S	2.4V~5.5V	00:14 00:10 00:10	-11	4/0	4/0					√		√	44LQFP, 4	8SSOP/LQFP
HT1621G	2.4V~5.2V	32×4, 32×3, 32×2	≤ V _{DD}	1/2,	, 1/3	_		1		V		٧	0-1	I D
HT1621SG	2.4V~5.5V												Gold	l Bump
HT1622	0.71/ 5.01/	200	-11		14			,		-1			44/52	64LQFP
HT1622G	2.7V~5.2V	32×8	≤ V _{DD}	1 1	/4	_		1		√		_	Gold	d Bump
HT16220	2.7V~5.2V	32×8	≤ V _{DD}	1.	/4	_		1		_		√	64	LQFP
HT1623	2.7V~5.2V	48×8	≤ V _{DD}	1.	/4	_		1		√		√	100	LQFP
HT1625	2.7V~5.2V	64×8	≤ V _{DD}	1.	/4	_		1		√		√	100	LQFP
HT1626	2.7V~5.2V	48×16	≤ V _{DD}	1.	/5	_		1		√		√	100	LQFP
HT1629G	2.4V~5.5V	240×2, 240×1	2.4V~5.5V	1/1,	, 1/2	_		1		√		√	Gold	l Bump
HT1647	2.7V~5.2V	64×16	≤ V _{DD}	1/4,	, 1/5	4		4		√		√	100	LQFP
High Noise	Immunity L	CD Controller & Driv	er											
Part No.	VDD	Max. Resolution Segment × Common	LCD Voltage	Bi	ias	Pow Saving		Interi	ace	ı	Keysca	n	Pac	ckage
HT16C21	2.4V~5.5V	20×4, 16×8	≤ V _{DD}	1/3,	, 1/4	_	-	I ² C			_			NSOP I/28SOP
HT16C22													48/5	2LQFP
HT16C22G	2.4V~5.5V	44×4	≤ V _{DD}	1/2,	, 1/3			l²C	;		_		Gold	d Bump
HT16C23	0.04.5.514	50 4 50 0	0.414.5.514	1/0	414			120					48/6	4LQFP
HT16C23G	2.4V~5.5V	56×4, 52×8	2.4V~5.5V	1/3,	, 1/4		•	l ² C	,		_		Gold	d Bump
HT16C24	0.4)/ 5.5)/	704 000 0040	0.4)/ 5.5)/	4/0.4	14 415			I ² C	,				64/8	0LQFP
HT16C24G	- 2.4V~5.5V	72×4, 68×8, 60×16	2.4V~5.5V	1/3, 1/	/4, 1/5			1-0	,		_		Gold	d Bump
11710100	0.07.557	20×4		1.	/3			120			20×1		0.0	
HT16K23	2.4V~5.5V	16×8	= V _{DD}	1.	/4	_	-	l ² C	j		16×1		28	SOP
HT9B92	2.4V~5.5V	36×4	≤ V _{DD}	1/2,	, 1/3	√		I ² C	;		_		48LQF	P/TSSOP
HT9B95A		35×8		1.	/4								48TSSC	P, 52LQFP
LITODOFD	2.4V~5.5V	43×4	2.4V~5.5V	1.	/3	√		I ² C			_			. 055
HT9B95B		39×8		1.	/4								52	LQFP
Low Voltag	e LCD Cont	roller & Driver												
Part No.	VDD	Max. Resolution Segment × Commo	LCD n Voltag		Bia	as		wer j Mode	Inte	erface	L	.ED	Keyscan	Package
HT16L21	1.8V~5.5V	32×4	2.4V~6.		1/2,	1/3	_	_	I ² C, SI	PI 3-Wire		8	_	44LQFP
HT16L23	1.8V~5.5V	52×4, 48×8	2.4V~6.	0V	1/3,		_	_		PI 3-Wire		8	_	64LQFP
High Opera	ting V <u>oltage</u>	LCD Controller & D	river											

LCD Controller & Driver

Static, 1/2~1/16

2.5~12V

1/1~1/5

I²C, SPI 3-Wire

×2, ×3, ×4, ×5

80/100LQFP



	LED Controller & Driver																
RAM Map	ping l	.ED	Contr	oller & Dri	ver												
ROW*Common Current (Min.) Current (Min.) Current (Min.) face Gray Scale scan															Package		
HT1632C	4.5\	/~	32×	8, 24×16		50mA	12mA			45mA	250m	. ^	4-Wire	16Leve	1		52LQFP
H1 1032C	5.5	v [24×8		DUINA	IZIIIA			AIIICA	25011	IA	4-vvire	for Globa	al		48LQFP
HT1635A	4.5\	/~		44×8		50mA	10mA			45mA	250m	. ^	4-Wire	16Leve	1		64LQFP
HT1635B	5B 5.5V 44^6 50111A		DUINA	TUMA			AJIIIA	25011	IA	I ² C	for Globa	al	_	04LQFP			
	16×8 4.5V~															13×3	28SOP
HT16K33	4.5\			12×8		20mA±5%	6mA			20mA	160m	ıΑ	I ² C	16Leve		10×3	24SOP
8×8											12.012		8×3	20SOP			
Advanced LED Controller & Driver																	
Part No.	VDD	LEC	D_VDD	Max. Resolu Row×Comn		Com Source Current (Min.)	Com Sink Current (Min.)	Inte fac		PWM Gray Scale	Constant Current	Fade	Auto Scrolling	Over Temp. Detection		en/Short etection	Package
HT16D31A	2.7V~	1 5	V~5.5V	8×9		270mA		3-Wire	e SPI	256Level	33mA±3%	V	2/	√		√	16NSOP-EP
HT16D31B	5.5V	4.5	v-5.5v	0 4 9		ZIOIIA		I ² C	0	for each dot	Max. 48mA	٧	v	V		v	16QFN
HT16D33A	2.7V~	4.5		9×10 + 9×1	10	0454		3-Wire	e SPI	256Level	33mA±3%	V	.,	.,		. 1	24SSOP-EP
HT16D33B	5.5V	4.5	V~5.5V	12×12 16×16		315mA	_	I ² C	5	for each dot	Max. 48mA	V	\ \ \	√		V	28SSOP 32QFN
HT16D35A	2.7V~	4.5		000		050 A	454	3-Wire	sPI	64Level	30mA±3%	V	.1	.1			401 OFD FD
HT16D35B	5.5V	4.5	V~5.5V	28×8		250mA	45mA	I ² C	0	for each dot	Max. 45mA	V	√	√		_	48LQFP-EP

	White LED Backlight Driver															
White LEI	hite LED Backlight Driver															
Part No. Input Voltage Current (mA) Switching Frequency (kHz) Efficiency Typical OVP (V) Accuracy Max. LED# Power Frequency Frequency Power Element Type Protections Package																
HT7938A-3	2.6V~5.5V	200	1200	90%	39	300mV±5%	10	100Hz~200kHz	Internal	Parallel/Series	UVLO, OVP, OCP, OTP	SOT23-6				
HT7939A	2.6V~5.5V	260	1200	90%	17.6/32.0	200mV±5%	39	100Hz~200kHz	Internal	Parallel/Series	UVLO, OVP, OCP, OTP	SOT23-6				
HT7963	9.0V~30V	1200	200	7963 9.0V~30V 1200 200 90% Adjustable 300mV±3% — 100Hz~1kHz External Parallel/Series UVLO, OVP, OCP, OTP, Soft-Start, LED open, LED short, OSP												

	AC / DC LED Lighting briver											
AC / DC LED Lighting												
Part No.	Topology	PF	Power MOS	HV Start-up	Maximum Output Power	Current Accuracy	Protections	Package				
HT7L5600	Flyback (PSR)	>0.9	Ext.	_	60W	±3%	UVLO, OVP, OTP, OCP, LED open/short	SOT23-6				
HT7L5820	51.1 . 1 (D50.00 D144)	>0.97	Ext. 650V	0501	50V 200W	±2%	Brown In/Out, UVLO, OCP, open/short, OVP (Auto Recovery), OTP (Auto Recovery)	16NCOD				
HT7L5821	Flyback (PFC+QR PWM)			6500			Brown In/Out, UVLO, OCP, open/short, OVP (Latched), OTP (Latched)	- 16NSOP				
	Note: All of LED Lighting Drivers operate from 85V _{AC} to 265V _{AC} . Max. output power from 85V _{AC} to 265V _{AC} /176V _{AC} to 265V _{AC} .											

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VFD Controller & Driver

VFD Controller & Driver									
Part No.	VDD	Segment	Digit	Output Voltage	Key Matrix	General Input	LED Output	Dimming Step	Package
HT16511	3.0V~5.5V	12~20	16~8	V _{DD} -35V	12×4	4	5	8	52LQFP
HT16512	3.0V~5.5V	11~16	11~6	V _{DD} -35V	6×4	4	4	8	44LQFP
HT16515	3.0V~5.5V	16~24	12~4	V _{DD} -35V	16×2	_	4	8	44LQFP

DOT CHARACTER VED CONTROller & Driver										
Part No.	VDD	Segment	Digit	Output Voltage	Display RAM	CGROM	CGRAM	Package		
HT16528-001 HT16528-002 HT16528-003	2.7V~5.5V	80	24	80V	80×8 bits	240×5×8 bits	8×5×8 bits	144LQFP		

Note: 1. The AD suffix in the Segment column represents additional data segment outputs.
2. The 001, 002 and 003 part number suffix represents different language and symbol character ROM code types.

Segment VFD D	river					
Part No.	VDD	Output Voltage	Output Driver	Output Current	Cascade	Package
HT16506	3.0V~5.5V	20V~80V	64	20mA	√	80LQFP

	EPD Controller & Driver										
Segment EPD Controller & Driver											
Part No.	VDD	Segment	Driving High Voltage (VDH)		Data	Cascade	Charge	Temperature	Dookono		
Part No.	VDD		Black/White	Red	Comparison	Cascade	Pump	Sensor	Package		
HT16E07	2.4V~3.6V	120 bit	12V	4~8V	√	V	√	√	Gold Bump		
Note: EPD: E-Pape	lote: EPD: E-Paper Display.										



Bank & Commercial MCU

Smart Ca	rd Reade	er Flas	sh MCU															
Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	A/D	RTC	Timer	Comp- arator	USB	LDO	EMV ISO 7816-3	IAP/ ISP	Inter- face	Stack	Package
HT66F4360	12MHz	2.2V~ 5.5V	400kHz~ 16MHz or 32kHz	16K×16	3072×8	_	36	12-bit ×8	√	10-bit CTM×2 10-bit PTM×1 16-bit STM×1	2	√	1.8V 3.0V 5.0V	Class A/B/C	V	UART×2 SPI×2 I ² C×1	12	48/64 LQFP
HT66F4370	12MHz	2.2V~ 5.5V	400kHz~ 16MHz or 32kHz	32K×16	3072×8	_	36	12-bit ×8	√	10-bit CTM×2 10-bit PTM×1 16-bit STM×1	2	√	1.8V 3.0V 5.0V	Class A/B/C	√	UART×2 SPI×2 I ² C×1	12	48/64 LQFP
HT66F4390	12MHz	2.2V~ 5.5V	400kHz~ 16MHz or 32kHz	64K×16	3072×8	256×8	36	12-bit ×8	√	10-bit CTM×2 10-bit PTM×1 16-bit STM×1	2	√	1.8V 3.0V 5.0V	Class A/B/C	V	UART×2 SPI×2 I ² C×1	16	48/64 LQFP

Ultra-Low	Power Flash	h MCU	with LCI	Driver											
Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	MDU#	I/O	LCD	RTC	A/D	Timer	Interface	Stack	Package
HT66F2560	1/2/4/8/12MHz	1.8V~ 5.5V	400kHz~ 16MHz or 32kHz	16K×16	2048×8	256×8	16-bit	42	SCOM ×4	V	12-bit ×8	16-bit PTM×2 16-bit STM×3	SPI/I ² C×1 SPIA×1 UART×2	16	48LQFP
HT69F2562	4/8/12MHz	1.8V~ 5.5V	400kHz~ 12MHz or 32kHz	16K×16	2304×8	128×8	_	19	32×4	1	-	10-bit CTM×2 16-bit STM×1	SPI×1 SPI/I ² C/UART×1	16	64LQFP

Note: # MDU: Multiplier Divider Unit.
The power consumption of the RTC on standby current is less than 200nA at 3V.

Ultra-Low	Power Fl	ash M	CU with	LCD Drive	r & Touc	h Key									
Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	LCD	RTC	A/D	Touch Key	Timer	Interface	Stack	Package
BS67F2563	4/8/12MHz	1.8V~ 5.5V	400kHz~ 12MHz or 32kHz	16K×16	2304×8	128×8	31	32×4	√	12-bit ×7	20	10-bit CTM×2 16-bit STM×1	SPI×1 SPI/I ² C/UART×1	16	64LQFP

Note: The power consumption of the RTC on standby current is less than 200nA at 3V.

Ultra-Low	Power Flasi	MCU	with EPD	Driver										
Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	EPD#	RTC	A/D	Timer	Interface	Stack	Package
HT67F2567	4/8/12MHz	1.8V~	400kHz~ 12MHz	16K×16	2304×8	128×8	19	SEG×64 COM×1	2/	12-bit	10-bit CTM×2	SPI×1	16	100LQFP
HT67F2567G	4/0/12IVITIZ	5.5V	or 32kHz	1010.410	2004^0	120^6	19	BG×1	V	×8	16-bit STM×1	SPI/I ² C/UART×1	10	Gold Bump

Note: # EPD: Electronic Paper Displays.
The power consumption of the RTC on standby current is less than 200nA at 3V.



						Spe	cial I	Purpo	se l	MCU	J								
Waveform	Generat	or Fla	ash MCU																
Part No.	VCC (HV)		VDD	Internal Clock	Sys ^e		Progra Memor		Data Vlemoi		I/C)		veform utput	1	Γimer	Sta	ack	Package
HT45F2020	8V~16	SV	5.0V	- 8MHz	8M		1K×14		32×8		4			2	10 h	oit PTM×1		2	SOT23-6
HT45F2022	_		2.2V~5.5V	OIVITIZ	or 32	2kHz	IK^14		32^0		4			2	10-1	JIL F I IVIA		2	8SOP
Induction	Cooker I	Flash	MCU																
Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPRON	1/0	Time	er A	/D	PWM	Р		Comp- arator	OVP	ОРА	Inter- face	Stack	Package
HT45F0004	8MHz	2.2V~ 5.5V	400kHz~ 8MHz	4K×16	208×8	32×8	17	8-bit		-bit 12	8-bit ×1	1 -	9-bit ×1	4	_	1	I ² C×1	8	16DIP/NSOP 20DIP/SOP
HT45F0057	8MHz	2.2V~ 5.5V	8MHz	4K×16	208×8	_	13	8-bit ×3		-bit	_	1 .)-bit ×1	4	_	1	_	6	16DIP/NSOP
HT45F0058	16MHz	3.3V~ 5.5V	32kHz~ 16MHz	4K×16	256×8	32×8	13	8-bit ×3		-bit 10	_)-bit ×1	4	1	1	_	8	16NSOP
Half-bridg	e Induct	ion Co	ooker Flas	h MCU															
Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPRO	л I/O	Tim	er	A/D	P	wm	ОРА	OVP	CRC	MDU#	Inter- face	Stack	Package
HT45F0074	16MHz	4.5V~ 5.5V	32kHz~ 16MHz	8K×16	512×8	128×8	20	10-bit C 10-bit P		12-b ×8		2-bit ×1	1	7	√	16-bit	SPI/I ² C/ UART×1	8	20NSOP 24SOP
Note: # MDU:	Multiplier Di	vider Ur	nit.																

				Lo	w Power	Flash M	CU					
Ultra-Low	Voltage Fla	sh MCU w	ith LCD Driver									
Part No.	Internal Clock	VDD	System Clock	Program Memory	Data Memory	Data EEPROM	I/O	LCD	Timer	Power Switch	Stack	Package
HT69F3742L	2/4/8MHz	1.2V~5.5V	400kHz~8MHz or 32kHz	4K×16	128×8	128×8	9	23×4 24×3	10-bit STM×1	√	4	46QFN

						CA	N	Bus Flasi	h MC	U						
CAN Bus A	/D Flash	мси														
Part No.	Internal Clock	VDD	System Clock	Program Memory		Data EEPROM	I/O	Timer	A/D	SCOM	CAN Protocol	Message Objects	Message Memory	Inter- face	Stack	Package
HT66F3370H	8MHz 12MHz 16MHz	2.2V~ 5.5V	400kHz~ 16MHz or 32kHz	32K×16	3K×8	1K×8	58	10-bit PTM×2 16-bit PTM×2 16-bit STM×3	12-bit ×16	4	CAN 2.0A/B ISO11898-1	32	32×139-bit	CAN×1 SPI/I ² C×1 SPIA×1 UART×3	16	48/64LQFP
Note: Operating Based or			10°C~+125° odule C_CA													



					RI	F Modul	le					
BLE Transpar	ent Transmissi	on										
Part No.	VDD	Dat	a EEPROM	Data	Rate	Outpu	t Power	Se	ensitivity	In	terface	Stamp Holes
BCM-7602-G01	2.2V~3.6V		8K×8	1Mb	ps	+3	dBm		-90dBm	U	ART/SPI	8×2 (P=1.27mm)
Sub-1GHz Rec	eiver											
Part No.	VDI	•	Band		nbol Rate (Max.)		Current onsumption		Sensitivi	ty	Interface	Dimension
BM2302-33-1			315MHz			3.2	2mA@315MH	z	-112dBm@10	ksps		
BM2302-34-1	2.01/.5	5) /	433MHz		001/	3.2	2mA@433MH	z	-112dBm@10	ksps	l ² C	40.40 5.5 0 ()
BM2302-38-1	3.0V~5	.5V	868MHz		20Ksps	4.0	0mA@868MH	z	-111dBm@10	ksps	- FC	43×10.5×5.2 (mm)
BM2302-39-1			915MHz			4.0	0mA@915MH	z	-110dBm@10	ksps]	
BM2302-63-1			315MHz			3.2	2mA@315MH:	z	-112dBm@10	ksps		
BM2302-64-1	3.0V~5	5 \/	433MHz		201/	3.2	2mA@433MH:	z	-112dBm@10	ksps	l ² C	46v45v26 (mama)
BM2302-68-1	3.00~5	.5V	868MHz		20Ksps	4.0	0mA@868MH	z	-111dBm@10	ksps	150	16×15×2.6 (mm)
BM2302-69-1			915MHz			4.0	0mA@915MH	z	-110dBm@10	ksps]	
Sub-1GHz Tra	nsceiver											
Part No.	VDD		Band	Data Rat		put Power (Max.)	Rx Cu Consun		Sensiti	vity	Interface	Dimension
BM3601-03-1			315MHz				13.5mA@	315MHz		201/10-0		
BM3601-04-1	2.0V~3.6	, [433MHz	2~250Kbp		17dBm	13.0mA@	433MHz	-120dBm@	ZKUPS	- SPI	15×18.5×2.5 (mm)
BM3601-08-1	2.00	· _	868MHz	2°-230Nbp	`	17dbiii	13.5mA@	868MHz		2Khna	J SFI	13~10.3~2.3 (11111)
BM3601-09-1			915MHz				13.5mA@	915MHz	-119dBm@	zkups		
BM3602-03-1			315MHz				4.1mA@3	315MHz	120dPm@	2Khna		
BM3602-04-1	2.0V~3.6	, [433MHz	2 250//hm		13dBm	4.2mA@4	433MHz	-120dBm@	izkups	SPI	45 v 40 5 v 0 5 (mama)
BM3602-08-1	2.00~3.6	v [868MHz	2~250Kbp		IJUDIII	5.5mA@8	868MHz	-119dBm@	2Khne	371	15×18.5×2.5 (mm)
BM3602-09-1			915MHz				6.0mA@9	915MHz	-11908111@	zivnha		
2.4GHz Trans	ceiver											
Part No.	VDD		Band	Da	ata Rate	Outp	ut Power (N	/lax.)	Sensitivit	у	Interface	Dimension
BM5602-60-1	1.9V~3.6	V	2402~2480MH	z 125/2	250/500Kbp	os	7dBm		-98dBm@125k	(bps	SPI	17×16×2 (mm)



					Dig	jital Se	ensor &	Mod	ule						
PIR Module															
Part No			VDD	Detection	Range (Typ.)	Meter	FOV H	ı, v	Le	ns Co	olor	Interface		Power C	onsumption
HT7M2126					3.5~6		121°, 7	77°		Nature	e				
HT7M2127					2.8~5		121°, 7	77°		Black					
HT7M2136		2.	7V~5.5V		5.5~8		91°, 1	0°		Nature	9	I ² C or I/O		<	: 50μA
HT7M2156					8~12		20°, 1	0°		Nature	e				
HT7M2176					5~7.5		86°, 7	5°		Nature	•				
PIR Sensor															
Part No.	Supp Volta		Respo	sibility	Nois	ie	Operat Current (Seria Interfa		Pins	Window Size		g Angle /V	Package
BM22S4021-1	2.7V~5	5.5V		:V/W 1Hz, @25°C)	33µVp (0.3~3Hz, (2.5mA/2.	0mA	I ² C/UA	RT	4	5×5mm	136°	7/123°	TO-5
Air Pressur	e Senso	r													
Part No.	Supp Volta		Operating Current (5				Bridge npedance	Line	earity		nermal Error	Response		ver ssure	Operating Temperature
BM62S2201-1	2.7V~5	5.5V	3.5mA	1.0%F	S 1p	si	5.5kΩ	0.3	%FS	0.01	5%FS/°C	1ms	3>	×FS	0~50°C
Temperatu	re and H	lumid	lity Sensor												
Part No.	Supply Voltage		Power nsumption(5	Relativ Humid Resolut	ity Humi	dity H	elative umidity ecision	Relat Humi Dri	idity		erature olution	Temperature Range		erature ision	Temperature Drift
BM25S2021-1	2.7V~5.5\	/	1.5mA	0.1%R	H 10~9		±3%RH 25°C	±1.5%l	RH/yr	0.	.1°C	-20~+85 °C	±0.	5°C	0.3°C/yr
Smoke Det	ector Se	nsor	,												
Part No.	Su	pply V	/oltage [etection Co	nsumption	Power (Consumpti	on	Detection	on Se	nsitivity	Interfa	ice	D	imension
BM22S2021-1		3V~	5V	<10µ	A		< 2mA		0.05dl	B/m-0.	4dB/m	AX/TX/	'IO	36>	36×27 (mm)
GAS Detect	or Sens	or													
Part	No.		Supply \	/oltage	Power Co	nsumption	n D	etectio	n Range			nterface		Dim	ension
BM22S3021-1			5\	,	<25	50mA	3	00ppm~1	0000ppm			AX/TX/IO		24×20	×22 (mm)
Proximity S	ensing l	Modu	ıle												
Part No.	Sı	apply	Voltage	Detection Co (3.3V/			er Consum _i (3.3V/Typ.)				on Range C/A4 Pape		face	D	imension
BM32S2021-1		3.3\	V/5V	1.5r	mA		10µA			1~1	00cm	UART	or IO	17	×10×7 (mm)



3-Wire EEPROM Part No. Capacity VDD Clock Rate (MHz) Write Speed @2.4V (ms) Operating Current @5V (mA) Standby Current @5V (μA) Package HT93LC46 64×16/128×8 1.8V~5.5V 2 5 5 2 8DIP/SOP Note: Operating temperature range ~40°C ~ +85°C.

				I ² C EEPR	ЮМ		
I ² C EEPROM							
Part No.	Capacity	VDD	Clock Rate (kHz)	Write Speed @2.4V (ms)	Operating Current @5V (mA)	Standby Current @5V (μA)	Package
HT24LC02	256×8	1.8V~5.5V	400	5	5	3	8DIP/SOP
HT24LC02A	256×8	1.8V~5.5V	400	5	5	2	8SOP, SOT23-5
HT24LC04	512×8	1.8V~5.5V	400	5	5	3	8DIP/SOP
HT24LC08	1024×8	1.8V~5.5V	400	5	5	3	8DIP/SOP
HT24LC16	2048×8	1.8V~5.5V	400	5	5	3	8DIP/SOP
HT24LC32	4096×8	1.8V~5.5V	400	5	5	3	8DIP/SOP
HT24LC64	8192×8	1.8V~5.5V	400	5	5	3	8DIP/SOP
Note: Operating to	emperature ranç	ge -40°C ~ +8	5°C.				



		Seneral OP A	mplifier			
General Purpo	se OP Amplifier					
Part No.	Description	OP No.	VDD	BW(Hz)	Current(µA)/OP	Package
HT9231	220μA, 2.3MHz Single OP amplifier	1	2.0V~5.5V	2.3M	220	SOT23-5
HT9232	220μA, 2.3MHz Dual OP amplifier	2	2.0V~5.5V	2.3M	220	8DIP/SOP
HT9234	220μA, 2.3MHz Quad OP amplifier	4	2.0V~5.5V	2.3M	220	14DIP/SOP
HT9251	50μA, 550kHz Single OP amplifier	1	1.8V~5.5V	550K	50	SOT23-5
HT9252	50μA, 550kHz Dual OP amplifier	2	1.8V~5.5V	550K	50	8DIP/SOP
HT9254	50μA, 550kHz Quad OP amplifier	4	1.8V~5.5V	550K	50	14DIP/SOP
HT9274	Quad micropower OP amplifier	4	1.6V~5.5V	100K	3	14SOP
HT9291	TinyPower™ Single OP amplifier	1	1.4V~5.5V	11K	0.6	SOT23-5
HT9292	TinyPower™ Dual OP amplifier	2	1.4V~5.5V	11K	0.6	8SOP
HT9294	TinyPower™ Quad OP amplifier	4	1.4V~5.5V	11K	0.6	14SOP
HT92232	16μA, 300kHz, Rail to Rail, Dual OP amplifier	2	2.1V~5.5V	300K	16	8SOP/MSOP
HT92252	40μA, 1MHz, Rail to Rail, Dual OP amplifier	2	2.1V~5.5V	1M	40	8SOP/MSOP
Precision OP	Amplifier					
Part No.	Description	OP No.	VDD	BW(Hz)	Current(µA)/OP	Package
HT92632	30μA, 300kHz, Rail to Rail, Dual OP amplifier	2	2.0V~5.5V	300K	30	8SOP/MSOP
HT92652	500μA, 1.5MHz, Rail to Rail, Dual OP amplifier	2	2.0V~5.5V	1.5M	500	8SOP/MSOP
Low Power OP	Amplifier					
Part No.	Description	OP No.	VDD	BW(Hz)	Current(µA)/OP	Package
HT92112	0.6μA, 14kHz, Rail to Rail, Dual OP amplifier	2	1.4V~5.5V	14K	0.6	8SOP/MSOP
HT92122	0.6μA, 100kHz, Rail to Rail, Dual OP amplifier	2	1.4V~5.5V	100K	0.6	8SOP/MSOP

		Audio Am	olifier		
Class AB Aud	io Amplifier				
Part No.	Description	VDD	Output Power	Mute/Shutdown Function	Package
HT82V733	Mono audio power amplifier	2.4V~5.5V	400mW into 8Ω	√	8SOP
HT82V735	Stereo audio power amplifier with shutdown	2.4V~6.0V	330mW into 32Ω	√	8SOP
HT82V739	1200mW mono audio power amplifier with shutdown	2.2V~5.5V	1200mW into 8Ω	√	8SOP
HT82V73A	1500mW mono audio power amplifier with shutdown	2.2V~5.5V	1500mW into 8Ω	√	8SOP-EP
Audio PWM D	river				
Part No.	Description	VDD	Output Power	Mute/Shutdown Function	Package
HT82V742	Audio PWM driver	2.0V~5.5V	1.5W into 5V, 8Ω	_	8SOP
Class D Audio	Amplifier				
Part No.	Description	VDD	Output Power	Mute/Shutdown Function	Package
HT82V7524	3W mono filter-free class-D audio power amplifier	1.8V~6.0V	3W into 5V, 4Ω	_	8SOP-EP
HT82V7534	3W Stereo Filter-free Class-D Audio Power Amplifier	1.8V~6.0V	3W into 5V, 4Ω	√	20TSSOP-EP

	24-Bit A/D Peripheral									
Enhanced 24-E	Bit A/D Periphera	al								
Part No.	Part No. Internal Clock VDD A/D ENOB Data Rate PGA Interface Package									
BH45B1225	4.91MHz	2.4V~5.5V	24-bit×4	19.4@5V	5Hz~1.6kHz	1~128	I ² C×1	8SOP/16NSOP		



CCD / CIS Analog Signal Processor

CCD / CIS	CCD / CIS Analog Signal Processor										
Part No.	AVDD/VDD	A/D (Bit)	Input CH.	MSPS	Clamp Bias	PGA	Prog. Offset	Full Scale	Power Consumption	Package	
HT82V36	3.0V~3.6V	16	1	10 (CCD:6)	2.5V/2.0V	1~5.85V/V (6-bit)	±100mV (9-bit)	1.4V	56mW/1µA	28SSOP	
HT82V38	3.15V~3.45V	16	3/2/1	30/30/20	0.45V~2.7V (4-bit)	1~6.25V/V (6-bit)	±250mV (9-bit)	1.6V/2V	300mW/10μA	28SSOP	
HT82V42	3.0V~3.6V	16	1	15	0.4V~3.0V (4-bit)	0.7~7.84V/V (8-bit)	±315mV (8-bit)	2V	188mW/300µA	20SSOP	
HT82V48	3.0V~3.6V	16×2	3×2	60×2	0.4V~3.0V (4-bit)	0.65~6.0V/V (9-bit)	±290mV (8-bit)	1.2V/2V	925mW/400µA	48LQFP-EP	

Image	Signal	Processor	

Image/N	nage/Neural-network Processor																	
Part No.	Max.	VDD		DS	SP.		L2	DDR	DMA	e-Fuse	ADC	СМР	Timers'2	Interface'3	Others'4		Power	Package
Part No.	Freq.	(I/O)	Core	Cache	L1 RAM	FPU	RAM	I/F	DIVIA	e-ruse	ADC	CIVIP	limers	interiace	Others	1/0	Power	Package
HT82V82	250MHz	3.0V~ 3.6V	2	I: 32KB D: 32KB ×2	I: 16KB D: 32KB ×2	1 ×2	256KB		EDMA: 2CH PDMA: 8CH	128-bit	1Msps 12-bit ×16	1	RTC×1 WDT×1 BFTM×2 GPTM×4	UART×4 SPI×3, I²C×2 CLSIF×2 CASIF×2 HSSPI SDIO EPI 8080 LCD I/F	AES-128 SHA-256 TG, LINFO SHDC JPG ENC HWE	40	750mW	256TFBGA

- Note: 1. VDD Core: 0.9V~1.1V; VDD DDR: 1.425V~1.575V.

 2. BFTM: Basic Function Timer, GPTM: General-Purpose Timers.

 3. CLSIF: CMOS Line Sensor Interface; CASIF: CMOS Area Sensor Interface; HSSPI: 40MHz High Speed SPI; EPI: External Parallel Interface.

 4. AES-128: Advanced Encryption Standard; SHA-256: Secure Hash Algorithm; TG: Sensor, LED & AFE Timing Generator; LINFO: Scan Line Information; SHDC: Shading Correction; JPG ENC: JPEG Encoder; HWE: Hardware Matrix & Neural Calculation Engine.

Currency Recognition Processor

١,٠	olo Anaic	og Front Ena P	rocessor								
	Part No.	AVDD/VDD	A/D (Bit)	Input Channel	MSPS	Clamp Bias	PGA	Prog. Offset	Full Scale	Power Consumption	Package
Н	IT82V48	3.0V~3.6V	16×2	3×2	60×2	0.4~3.0V (4-bit)	0.65~6.0V/V (9-bit)	±290mV (8-bit)	1.2V/2V	925mW/400μA	48LQFP-EP

CIS Digital Front End Processor

Part No.	AVDD/VDD		CIS M	oudule		Shading Correction		Line	Others	Output	Power	Package
Part No.	AVDD/VDD	Channel	MSPS	Element	LED	Gain	Offset	Information	Others	Output	Consumption	rackage
HT82V70	3.0V~3.6V	3~6 ×2	120 ×2	1,584	6×2	0x~8x (10-bit)	0~-255 (8-bit)	Index, Left/Right Boundary, Max, Min, Sum, Histogram	COMP, TG I ² C, SPI	VPFE, EMIFA	400mW/3mW	100LQFP

CIS Front End Processor

Part No.	AVDD/	A/D	Input	MSPS	PGA	Prog. Offset	Full	CIS Mou	dule		iding ection	Line	Others	Output	Power	Package
	VDD	(Bit)	Ch.		(V/V)	(mV)	Scale	Element	LED	Gain	Offset	Information		Сигриг		luciugo
HT82V72	3.0V~3.6V	16×2	3×2	60×2	0.65~6.0 (9-bit)	±290 (8-bit)	1.2V/2V	1,584	6×2	0x~8x (10-bit)	0~-255 (8-bit)	Index, Left/Right Boundary, Max, Min, Sum, Histogram	COMP, TG, I ² C, SPI	VPFE, EMIFA	1100mW/ 10µW	64TQFP-EP

Image/Neural-network Processor

Part No.	Max.	VDD		DS	P		L2	DDR	DMA	e-Fuse	ADC	СМР	Timers'2	Interface'3	Others'4	I/O	Power	Package
Part No.	Freq.	(I/O)	Core	Cache	L1 RAM	FPU	RAM	I/F	DIVIA	e-ruse	ADC	CIVIP	I illiers -	interiace	Others	1/0	Power	rackage
HT82V82	250MHz	3.0V~ 3.6V	2	I: 32KB D: 32KB ×2	I: 16KB D: 32KB ×2	1 ×2	256KB	DDR2 DDR3	EDMA: 2CH PDMA: 8CH	128-bit	1Msps 12-bit ×16	1	RTC×1 WDT×1 BFTM×2 GPTM×4	UART×4 SPI×3, I ² C×2 CLSIF×2 CASIF×2 HSSPI SDIO EPI 8080 LCD I/F	AES-128 SHA-256 TG, LINFO SHDC JPG ENC HWE	40	750mW	256TFBGA

- Note: 1. VDD Core: 0.9V~1.1V; VDD DDR: 1.425V~1.575V.

 2. BFTM: Basic Function Timer, GPTM: General-Purpose Timers.

 3. CLSIF: CMOS Line Sensor Interface; CASIF: CMOS Area Sensor Interface; HSSPI: 40MHz High Speed SPI; EPI: External Parallel Interface.

 4. AES-128: Advanced Encryption Standard; SHA-256: Secure Hash Algorithm; TG: Sensor, LED & AFE Timing Generator; LINFO: Scan Line Information; SHDC: Shading Correction; JPG ENC: JPEG Encoder; HWE: Hardware Matrix & Neural Calculation Engine.



				Mi	scellane	ous					
IGBT Driver											
Part No.		Description		VIN	LDO)	Level S	hifter	Voltage Detect Protection		Package
HT45B1S	IGBT Driver	with LDO and Volt	age Detector	6.0V~24V	5.0V		√			√	8SOP
Timepiece											
Part No.	VDD	V BAT	I _{DD} (μA)	Іват (µА)	І _{ЅТВ} (µА)		ternal al Osc.		in Memory Bytes)	Oscillator Compensati	Package
HT1380A	2.0V~5.5V		1.0 at 5V		0.1	22	768kHz				8DIP
HT1381A	2.UV~5.5V	_	1.0 at 5V	_	0.1	32.	/ DOKITZ		_	_	8SOP
HT1382	2.7V~5.5V	2.0V~5.5V	15 at 3V	1.2 at 3V	0.1	32.	32.768kHz		4 √		8SOP, 10MSOP

					Infrared / I	Encoder /	Deco	der				
2 ¹² Encod	er / Decoder											
Part No.	Encoder/Dec	oder	VDD	Addr. No.	Addr./Data No.	Data No.	Data Ty	уре 1	Γrig.	Check Times	Package	Pair
HT12E	Encoder		2.4V~12V	8	4	0	_		TE	_	18DIP, 20SOP	HT12D/12F
HT12D	Decoder		2.4V~12V	8	0	4	Latch	ı	-	3	18DIP, 20SOP	HT12E
HT12F	Decoder		2.4V~12V	12	0	0	_		-	3	18DIP, 20SOP	HT12E
3º Encode	3º Encoder											
Part No.	Encoder/Dec	oder	V	DD	Addr. No.	Addr./E	ata No.		т	rig.	Package	
HT6026	Encoder		4V~	-18V	0		9		ΤĒ		16DIP/NS	SOP
Learning	Encoder											
Pa	rt No.		VDD		Addr. No.		Data No).		Trig.	Pack	cage
HT6P20B			2V~12V		22		2			Data Low	8DIP/	/SOP
HT6P20D			ZV-1ZV		20		4			Data LOW	16DIP/	NSOP
IR Remote	e Controller											
Part No.	VDD		Addı	. No.	Data No.	Key No).	Signal Ga	p Time	38kHz Carrie	er Pac	kage
HT62104	2.0V~5.	0V	2	2	7	8		4T		√	16DIP	/NSOP
HT6220A	2.0V~3.	61/	1	6	8	6				V	88	OP
1110220A	2.00~3.	O V	'			30				V	16N	SOP
HT6221A	2.0V~3.	6\/	1	6	8	32				V	200	SOP
HT6221B	2.00~3.	O V		0	0	48				٧	203	301
HT6222A	2.0V~3.	6V	1	6	8	64		_		√	24SOP, C	hip, Wafer



32-Bit MCU Programming Tools

Holtek is fully aware that the success of their microcontroller device range also depends upon the availability of high quality development tools. As a result, Holtek has developed a full suite of professional hardware and software tools to provide designers with an excellent set of development resources to ensure their application are designed and debugged as efficiently as possible.

In this section can be found details regarding which set of tools should be used for the HT32 series microcontrollers.

	HT32 Series MCU										
Device Part No.	Debug Adapter	Development Kit	Writer	e-Socket32							
HT32F0006	e-Link32 Pro	N/A	e-Writer32	ESKT3248LQFPB, ESKT3264LQFP7B, ESKT32ICPB							
HT32F0008	e-Link32 Pro	ESK32-30508, ESK32-20001, ESK32-21001	e-Writer32	ESKT3224QFN3B, ESKT3233QFN4B, ESKT3246QFNB, ESKT3248LQFPB, ESKT32ICPB							
HT32F12345	e-Link32 Pro	ESK32-30106, ESK32-20001, ESK32-21001	e-Writer32	ESKT3246QFNB, ESKT3248LQFPB, ESKT3264LQFP7B, ESKT32ICPB							
HT32F12364	e-Link32 Pro	ESK32-30107, ESK32-20001, ESK32-21001	e-Writer32	ESKT3240QFNB, ESKT3248LQFPB, ESKT3264LQFP7B, ESKT32ICPB							
HT32F12365, HT32F12366	e-Link32 Pro	ESK32-30105, ESK32-20001, ESK32-21001	e-Writer32	ESKT3246QFNB, ESKT3248LQFPB, ESKT3264LQFP7B, ESKT32100LQFPB, ESKT32ICPB							
HT32F1653, HT32F1654	e-Link32 Pro	ESK32-360, ESK32-370, ESK32-360SK	e-Writer32	ESKT3264LQFP7B, ESKT3248LQFPB, ESKT32ICPB							
HT32F22366	e-Link32 Pro	N/A	e-Writer32	ESKT3246QFNB, ESKT3248LQFPB, ESKT3264LQFP7B, ESKT32100LQFPB, ESKT32ICPB							
HT32F50220, HT32F50230	e-Link32 Pro	ESK32-30506, ESK32-20001, ESK32-21001	e-Writer32	ESKT3228SOPB, ESKT3228SOPC, ESKT3224QFN3B, ESKT3233QFN4B, ESKT3244LQFPB, ESKT3248LQFPB, ESKT32ICPB							
HT32F50231, HT32F50241	e-Link32 Pro	ESK32-30507, ESK32-20001, ESK32-21001	e-Writer32	ESKT3228SOPB, ESKT3228SOPC, ESKT3224QFN3B, ESKT3233QFN4B, ESKT3244LQFPB, ESKT3248LQFPB, ESKT32ICPB							
HT32F50343	e-Link32 Pro	ESK32-30515, ESK32-20001, ESK32-21001	e-Writer32	ESKT3233QFN4B, ESKT3246QFNB, ESKT3248LQFPB, ESKT3264LQFP7B, ESKT32ICPB							
HT32F52220, HT32F52230	e-Link32 Pro	ESK32-30504, ESK32-20001, ESK32-21001	e-Writer32	ESKT3228SSOPB, ESKT3233QFN4B, ESKT32ICPB							
HT32F52231, HT32F52241	e-Link32 Pro	ESK32-30503, ESK32-20001, ESK32-21001	e-Writer32	ESKT3228SSOPB, ESKT3233QFN4B, ESKT3248LQFPB, ESKT32ICPB							
HT32F52243, HT32F52253	e-Link32 Pro	ESK32-30505, ESK32-20001, ESK32-21001	e-Writer32	ESKT3233QFN4B, ESKT3246QFNB, ESKT3248LQFPB, ESKT3264LQFP7B, ESKT32ICPB							
HT32F52331, HT32F52341	e-Link32 Pro	ESK32-30502, ESK32-20001, ESK32-21001	e-Writer32	ESKT3233QFN4B, ESKT3248LQFPB, ESKT32ICPB							
HT32F52342, HT32F52352	e-Link32 Pro	ESK32-30501, ESK32-20001, ESK32-21001	e-Writer32	ESKT3233QFN4B, ESKT3248LQFPB, ESKT3264LQFP7B, ESKT32ICPB							
HT32F52344, HT32F52354	e-Link32 Pro	ESK32-30509, ESK32-20001, ESK32-21001	e-Writer32	ESKT3233QFN4B, ESKT3246QFNB, ESKT3248LQFPB, ESKT3264LQFP7B, ESKT32ICPB							
HT32F52357, HT32F52367	e-Link32 Pro	ESK32-30510, ESK32-20001, ESK32-21001	e-Writer32	ESKT3246QFNB, ESKT3248LQFPB, ESKT3264LQFP7B, ESKT3280LQFPB, ESKT32ICPB							
HT32F57331, HT32F57341	e-Link32 Pro	ESK32-30512, ESK32-20001, ESK32-21001	e-Writer32	ESKT3246QFNB, ESKT3248LQFPB, ESKT3264LQFP7B, ESKT32ICPB							
HT32F57342, HT32F57352	e-Link32 Pro	ESK32-30511, ESK32-20001, ESK32-21001	e-Writer32	ESKT3246QFNB, ESKT3248LQFPB, ESKT3264LQFP7B, ESKT3280LQFPB, ESKT32ICPB							
HT32F59041	e-Link32 Pro	N/A	e-Writer32	ESKT3248LQFPB, ESKT32ICPB							
HT32F59741	e-Link32 Pro	N/A	e-Writer32	ESKT3264LQFPB, ESKT32ICPB							
HT32F65230, HT32F65240	e-Link32 Pro	N/A	e-Writer32	ESKT3248LQFPB, ESKT32ICPB							

	Hardware									
ICE										
Model	Function	Support Software								
e-Link32 Pro	On Chip Debug Support (OCDS) new debug adapter for HT32 series	Keil µVision, IAR EWARM								
Programm	er									
Model	Function	Support Software								
e-Writer32	HT32 series MCU Dedicated Writer	HOPE3000 For HT32 series MCU								
e-Socket32	Adaptors used together with e-Writer32	HOPE3000 For HT32 series MCU								
Developme	Development Kit									
Model	Function	Note								
ESK32-360	HT32F1653/1654 Development Board	HT32F1654 DVB + mini USB cable + 2.8 inches TFT-LCD Module * This board can be used with the e-Link32 Pro providing a complete development kit								
ESK32-370	HT32F1653/1654 Development Board	HT32F1654 DVB + mini USB cable * This board can be used with the e-Link32 Pro providing a complete development kit								
ESK32-300SK	32-bit Arm® Cortex®-M3 HT32F1656 Starter Kit	This board has a built-in e-Link32 USB debug adapter								
ESK32-360SK	32-bit Arm® Cortex®-M3 HT32F1654 Starter Kit	This board has a built-in e-Link32 USB debug adapter								
ESK32-30105	32-bit Arm® Cortex®-M3 HT32F12366 Starter Kit	This board has a built-in e-Link32 Pro USB debug adapter								
ESK32-30106	32-bit Arm® Cortex®-M3 HT32F12345 Starter Kit	This board has a built-in e-Link32 Pro USB debug adapter								
ESK32-30107	32-bit Arm® Cortex®-M3 HT32F12364 Starter Kit	This board has a built-in e-Link32Pro USB debug adapter								
ESK32-30501	32-bit Arm® Cortex®-M0+ HT32F52352 Starter Kit	This board has a built-in e-Link32Pro USB debug adapter								
ESK32-30502	32-bit Arm® Cortex®-M0+ HT32F52341 Starter Kit	This board has a built-in e-Link32Pro USB debug adapter								
ESK32-30503	32-bit Arm® Cortex®-M0+ HT32F52241 Starter Kit	This board has a built-in e-Link32Pro USB debug adapter								
ESK32-30504	32-bit Arm® Cortex®-M0+ HT32F52230 Starter Kit	This board has a built-in e-Link32Pro USB debug adapter								



	Hardware						
Developme	Development Kit						
ESK32-30505	32-bit Arm® Cortex®-M0+ HT32F52253 Starter Kit	This board has a built-in e-Link32Pro USB debug adapter					
ESK32-30506	32-bit Arm® Cortex®-M0+ HT32F50230 Starter Kit	This board has a built-in e-Link32Pro USB debug adapter					
ESK32-30507	32-bit Arm® Cortex®-M0+ HT32F50241 Starter Kit	This board has a built-in e-Link32Pro USB debug adapter					
ESK32-30508	32-bit Arm® Cortex®-M0+ HT32F0008 Starter Kit	This board has a built-in e-Link32Pro USB debug adapter					
ESK32-30509	32-bit Arm® Cortex®-M0+ HT32F52354 Starter Kit	This board has a built-in e-Link32Pro USB debug adapter					
ESK32-30510	32-bit Arm® Cortex®-M0+ HT32F52367 Starter Kit	This board has a built-in e-Link32Pro USB debug adapter					
ESK32-30511	32-bit Arm® Cortex®-M0+ HT32F57352Starter Kit	This board has a built-in e-Link32Pro USB debug adapter					
ESK32-30512	32-bit Arm® Cortex®-M0+ HT32F57341 Starter Kit	This board has a built-in e-Link32Pro USB debug adapter					
ESK32-30515	32-bit Arm® Cortex®-M0+ HT32F50343 Starter Kit	This board has a built-in e-Link32Pro USB debug adapter					
ESK32-20001	HT32 Series Expansion Board Basic	Expansion Board for ESK32-30xxx					
ESK32-21001	HT32 Series Expansion Board Plus	Expansion Board for ESK32-30xxx					
ESK32-A2A31	2.8 inches TFT-LCD Module	2.8 inches SPI / EBI LCD Module * This module can be used with the ESK32-20001 / ESK32-21001 providing a complete development kit.					

	Software							
Software	oftware							
Model	Function	Support Hardware						
HOPE3000 or 32Bits	e-Writer32 programmer software for HT32 series MCUs	e-Writer32						
HT32 Flash Programmer	In-System / In-Application programmer software for HT32 series MCUs	All series of HT32 Development Board or Starter Kit. ESK32-xxx, ESK32-xxxSK, ESK32-30xxx						
HT32 Keil Support Package	Integrated Keil development environment software for HT32 series MCUs							
HT32 IAR Support Package	Integrated IAR development environment software for HT32 series MCUs							
HT32 Virtual COM Driver	HT32 USB Virtual COM Driver setup program	e-Link32 Pro. All series of HT32 Development Board or Starter Kit with USB Virtual COM example.						

e-Link32 Pro Debug Adapter

The e-Link32 Pro is a new generation debug adapter for Holtek's 32-bit microcontrollers allowing users to program and debug their programs on their target boards. By using the e-Link32 Pro together with the Keil µVision IDE or IAR EWARM IDE, users are provided with a suite of development tools for rapid MCU product development.

The e-Link32 Pro package includes the e-Link32 Pro debug adapter, flat cable and USB cable.

8-Bit MCU Programming Tools

Holtek is fully aware that success of their microcontroller device range also depends upon the availability of high quality development tools. As a result Holtek has developed a full suite of professional hardware and software tools to provide designers with an excellent set of development resources to ensure their applications are designed and debugged as efficiently as possible. In this section can be found details regarding which set of tools should be used for each microcontroller device.

	Hardware						
ICE							
Model	Function	Support Software					
HT-ICE	LPT Type in-circuit emulator	HT-IDE3000					
e-ICE	USB Type in-circuit emulator	HT-IDE3000					
e-Link	On Chip Debug Support(OCDS) Type MCU debug adapter	HT-IDE3000					
E-LIIK	On Chip Debug Support (OCDS) debug adapter for HT85 series	Keil C51 Development Tools					
e-FPCB (e-Link selected item)	OCDS EV Flex Cable Converter	_					
Programmer							
Model	Function	Support Software					
e-WriterPro	Universal Writer for OTP/Flash MCU	HOPE3000					
e-Socket	Adaptors used together with e-WriterPro	HOPE3000					
EIC-300	Slimmed-down ICP programmer for Flash MCU	HOPE3000					
Development Kit							
Model	Function	Note					
ESK-66F-A01	HT66F50 Development Board (Starter Kit for HT66F50)	(ESK-200 + ESK-201 + e-Link + M1001D + D1003C + mini USB cable + e-cable1225A)					



Development Platform		
Model	Function	Note
Holtek USB Workshop	Development Platform for USB MCU	This board can be used with the ESK66FB-200 + e-Link.

Software ⁻					
Software					
Model	Function	Support Hardware			
HT-IDE3000	Integrated development Environment software for all series of Holtek MCU	HT-ICE, e-ICE, e-Link			
HOPE3000	Integrated software for Holtek e-Writer series Programmers.	e-WriterPro, e-Writer plus			
HOPE3000 for e-Link	Engineering programmer for HT8 Flash MCU	e-Link			
Holtek USB Workshop	Holtek USB MCU Library Generator	ESK66FB-200 + e-Link			
Holtek Touch Key Workshop	Touch Key development platform	e-Link, e-Isolator			
13000	HT8 Flash MCU with Bootloader ISP Programming Tool (Program MCU by Bootloader)				

Note: It is strongly recommended to download the latest version

HT-IDE3000 Development Environment

The HT-IDE3000 is a fully integrated development system for the Holtek range of microcontrollers. Working in conjunction with the Holtek ICE hardware emulator, the HT-IDE3000 system provides a user friendly workbench to ensure the process of application program development and debug is as efficient and trouble free as possible. By combining all software tools, such as editor, cross assembler, linker, library manager, symbolic debuggers as well as hardware tools, application designers have all the tools required at their disposal to ensure rapid development and debug of their new designs. An HT-IDE3000 User's Guide is available for download from the Holtek website, which provides much more detailed information on the HT-IDE3000 development system.

The HT-IDE3000 development system software is available for free download from the Holtek website. To ensure that users are provided with the latest modifications and enhancements to the system and to support new device releases, Service Packs are regularly provided.

HT-ICE - Holtek In-Circuit Emulator

The HT-ICEs are multi-featured hardware emulators to assist designers with the rapid development of their Holtek MCU applications. Their expansive integrated hardware and software features, provide designers with a full suite of tools for rapid and easy product development. At the heart of the system is the hardware emulator, which can fully emulate Holtek 8-bit MCU devices in real time as well as providing full debug and trace integrated functions. The HT-ICE package includes the hardware mainboard platform, CD, flat cables, power adapter, power cord and printer cable.

HT-ICE USB cable allowing customers to connect the HT-ICE LPT connector to the computer USB port. The part number of this USB cable is CUSBICECABLE4A. Please contact us for purchasing details.

e-ICE

The e-ICE is Holtek's new generation of MCU in-circuit emulators that uses a real chip EV for device emulation. In this way a more accurate emulation of device function and characteristics can be implemented. Together with the HT-IDE3000 software development system the user is provided with a suite of development tools for rapid MCU product development.

Holtek New Universal Writer - e-WriterPro

The e-WriterPro can be used not only as a programming tool for all of Holtek's OTP and Flash devices during the development stage but can also be used for small to medium volume production purposes.

The e-WriterPro must be used together with a corresponding e-Socket according to the package type of the MCU that is to be programmed. Devices with the same package type require only a single e-Socket, thus reducing the problem of changing different adaptors for different IC part numbers.

For all available Holtek devices, the following e-Socket table shows which one should be used with which device package type.

	e-Socket					
No.	Product Name Supported Package Suggested Programming Time					
1	ESKT10MSOPA	8MSOP, 10MSOP	10,000			
2	ESKT16NSOPC	8SOP, 14SOP, 16NSOP (Applicable beside the HT48RA0-6 series MCU)	10,000			
3	ESKT16NSOPHIRCA	16NSOP (for HT48RA0-6 only)	10,000			



	e-Socket					
No.	Product Name	Supported Package	Suggested Programming Tir			
4	ESKT16QFNA	16QFN	5,000			
5	ESKT20QFN4A	20QFN (4mm × 4mm)	5,000			
6	ESKT20QFN5A	20QFN (5mm × 5mm)	5,000			
7	ESKT20TSSOPA	16TSSOP, 20TSSOP	10,000			
8	ESKT28SSOPC	16SSOP(150mil), 20SSOP(150mil), 24SSOP(150mil), 28SSOP(150mil) (Applicable beside the HT48RA0-6 series MCU)	10,000			
9	ESKT28SSOPHIRCA	20SSOP (for HT48Ra0-6 only)	10,000			
10	ESKT28SOPC	16SOP, 18SOP, 20SOP, 24SOP, 28SOP	10,000			
11	ESKT28SSOPHIRCA	20SSOP (for HT48RA0-6 only)	10,000			
12	ESKT30SSOPA	20SSOP(209mil), 24SSOP(209mil), 28SSOP(209mil)	10,000			
13	ESKT32LQFPA	32LQFP	10,000			
14	ESKT32QFNA	32QFN	5,000			
15	ESKT32TSOPA	32TSOP	5,000			
16	ESKT40DIPC	8DIP, 16DIP, 18DIP, 20DIP, 40DIP, 22SKDIP, 24SKDIP, 28SKDIP	25,000			
17	ESKT40QFN5A	40QFN (5mm × 5mm)	5,000			
18	ESKT40QFN6A	40QFN (6mm × 6mm)	5,000			
19	ESKT44QFPA	44QFP, 44LQFP (FP 3.2mm)	10,000			
20	ESKT44LQFPC	44LQFP (FP 2.0mm)	10,000			
21	ESKT46QFNA	46QFN (6.5mm × 4.5mm)	5,000			
22	ESKT48QFNA	48QFN	5,000			
23	ESKT48LQFPA	48LQFP (Applicable beside the HT49RA0-6 & HT32Fxx series MCU)	10,000			
24	ESKT48LQFPHIRCA	48LQFP(for HT49RA0-6 only)	10,000			
25	ESKT52QFPA	52QFP	10,000			
26	ESKT52LQFPA	52LQFP	5,000			
27	ESKT56SSOPA	48SSOP, 56SSOP	10,000			
28	ESKT64LQFP7A	64LQFP (7mm × 7mm) (Applicable beside the HT32Fxx series MCU)	5,000			
29	ESKT64LQFP10A	64LQFP (10mm × 10mm) (Applicable beside the HT32Fxx series MCU)	10,000			
30	ESKT80LQFPA	80LQFP	10,000			
31	ESKT100QFPA	100QFP	5,000			
32	ESKT100LQFPA	100LQFP (Applicable beside the HT32Fxx series MCU)	5,000			
33	ESKT128QFPA	128QFP	10,000			
34	ESKT144LQFPA	144LQFP	5,000			

Note: 1. Data in parentheses next to each package type shows the actual width of the IC package.

8-Bit MCU Tools Indexing Table

The following table allows the correct tools to be quickly located against a device part number. In instances where tools are not listed for specific devices, this may infer that such tools are not required. Note that the "HT-ICE(S)" ICE type stands for the HT-ICE set and the corresponding I/O card.

8-Bit MCU Tools					
Device Part No.	ICE Type	Tool Part No.	Programming Timing	ICP Type / ICPDA / ICPCK	OCDSDA / OCDSCK
BA45F0082	e-Link	e-Link + BA45V0082	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BA45FH0082	e-LIIK	e-Link + BA45VH0082	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BA45F5220		e-Link + BA45V5220 + (e-FADP08N3 or e-FADP10N3)	Flash Type-23	ICP-2C / PA0 / PA2	OCDSDA / OCDSCK
BA45F5240	e-Link	e-Link + BA45V5240	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BA45F5240-2	e-Link	e-Link + BA45V5240-2	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BA45F5250		e-Link + BA45V5250	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BA45F0096	Demo Board	e-Link + DM20180501-BA45F0096	Flash Type-9	ICP-2C / PA0 / PA2	_
BA45F5542	e-Link	e-Link + BA45V5542	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BA45F5542-2	e-Link	e-Link + BA45V5542-2	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BA45F5640	e-Link	e-Link + BA45V5640	Flash Type-9	ICP-2C / PA0 / PA2	PA0/PA2
BA45F5650	e-Link	e-Link + BA45V5650	Flash Type-9B	ICP-2C / PA0 / PA2	PA0/PA2
BA45F6630	e-Link	e-Link + BA45V6630	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BA45F6622	e-Link	e-Link + BA45V6622	Flash Type-23	ICP-2C / PA0 / PA2	PA0 / PA2
BA45F6730	e-Link	e-Link + BA45V6730	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BC48R2021	e-ICE	M1001D + D5003A	OTP Type-2B	ICP-1B	
BC66F2342	e-Link	e-Link + BC66V2342	Flash Type-24	ICP-2C / PA0 / PA2	PA0 / PA2

^{2.} ESKxxxxxC is completely compatible with ESKxxxxxxA.



8-Bit MCU Tools					
Device Part No.	ICE Type	Tool Part No.	Programming Timing	ICP Type / ICPDA / ICPCK	OCDSDA / OCDSCK
BC45F7930		e-Link + BC45V7930	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BC45F7940	e-Link	e-Link + BC45V7940	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BC66F3652		e-Link + BC66V3652	Flash Type-31	ICP-2C / PA0 / PA2	PA0/PA2
BC66F3662	e-Link	e-Link + BC66F3662	Flash Type-31	ICP-2C / PA0 / PA2	PA0/PA2
BC66F5652		e-Link + BC66V5652	Flash Type-31	ICP-2C / PA0 / PA2	PA0 / PA2
BC66F5662	e-Link	e-Link + BC66F5662	Flash Type-31	ICP-2C / PA0 / PA2	PA0 / PA2
BC66F840	e-Link	e-Link + BC66V840	Flash Type-9	ICP-2C / PB4 / PB2	PB4 / PB2
BC68F2123		e-Link + BC68V2123	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BC68F2130	e-Link	e-Link + BC68F2130	Flash Type-16	ICP-2C / PA0 / PA2	PA0 / PA2
BC68F2140		e-Link + BC68F2140	Flash Type-16	ICP-2C / PA0 / PA2	PA0 / PA2
BC66F2430	e-Link	e-Link + BC66V2430	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BC68F2332	e-Link	e-Link + DEV-BC68F2332	Flash Type-9	ICP-2C / PA0 / PA7	OCDSDA / OCDSCK
BH45F68	e-Link	e-Link + BH45V68	Flash Type-9C	ICP-2C / PA0 / RESB	PA0 / RESB
BH66F2232		e-Link + BH66V2232	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BH66F2260		e-Link + BH66V2260	Flash Type-9C	ICP-2C / PA0 / PA2	PA0 / PA2
BH67F2260		e-Link + BH67V2260	Flash Type-9C	ICP-2C / PA0 / PA2	PA0 / PA2
BH67F2261	e-Link	e-Link + BH67V2261	Flash Type-9C	ICP-2C / PA0 / PA2	PA0 / PA2
BH67F2262		e-Link + BH67V2262	Flash Type-9C	ICP-2C / PA0 / PA2	PA0 / PA2
BH67F2270		e-Link + BH67V2270	Flash Type-9C	ICP-2C / PA0 / PA2	PA0 / PA2
BH66F2470		e-Link + BH66V2470	Flash Type-9C	ICP-2C / PA0 / PA2	PA0 / PA2
BH67F2470	e-Link	e-Link + BH67V2470	Flash Type-9C	ICP-2C / PA0 / PA2	PA0 / PA2
BH67F2480		e-Link + BH67V2480	Flash Type-9D	ICP-2C / PA0 / PA2	PA0 / PA2
BH66F2632		e-Link + BH66V2632	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BH66F2650		e-Link + BH66V2650	Flash Type-9B	ICP-2C / PA0 / PA2	PA0 / PA2
BH66F2652, BH66F2652-2		e-Link + BH66V2652	Flash Type-9B	ICP-2C / PA0 / PA2	PA0 / PA2
BH66F2662, BH66F2662-2	e-Link	e-Link + BH66V2662	Flash Type-9C	ICP-2C / PA0 / PA2	PA0 / PA2
BH66F2660		e-Link + BH66V2660	Flash Type-9C	ICP-2C / PA0 / PA2	PA0 / PA2
BH67F2662		e-Link + BH67V2662	Flash Type-9C	ICP-2C / PA0 / PA2	PA0 / PA2
BH66F5232		e-Link + BH66V5232-10 + e-FADP10N3	Flash Type-9	ICP-2C / PA0 / PA2	OCDSDA / OCDSCK
		e-Link + BH66V5233	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BH66F5233		e-Link + BH66V5233-10 + e-FADP10N3	Flash Type-9	ICP-2C / PA0 / PA2	OCDSDA / OCDSCK
BH66F5242		e-Link + BH66V5242	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BH67F5235		e-Link + BH67V5235	Flash Type-24	ICP-2C / PA0 / PA2	PA0 / PA2
BH67F5245	e-Link	e-Link + BH67V5245	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BH66F5252		e-Link + BH66V5252	Flash Type-9B	ICP-2C / PA0 / PA2	PA0 / PA2
BH66F5250		e-Link + BH66V5250	Flash Type-9B	ICP-2C / PA0 / PA2	PA0 / PA2
BH67F5250		e-Link + BH67V5250	Flash Type-9B	ICP-2C / PA0 / PA2	PA0 / PA2
BH67F5260		e-Link + BH67V5260	Flash Type-9C	ICP-2C / PA0 / PA2	PA0 / PA2
BH67F5270		e-Link + BH67V5270	Flash Type-9C	ICP-2C / PA0 / PA2	PA0 / PA2
BH66F5362	e-Link	e-Link + BH66F5362	Flash Type-31	ICP-2C / PA0 / PA2	PA0 / PA2
BH66F71252	e-Link	e-Link + BH66V71252	Flash Type-9B	ICP-2C / PA0 / PA2	PA0 / PA2
BH66F71652	a Link	e-Link + BH66V71652	Flash Type-9B	ICP-2C / PA0 / PA2	PA0 / PA2
BH66F71662	e-Link	e-Link + BH66V71662	Flash Type-9C	ICP-2C / PA0 / PA2	PA0 / PA2
BH67F2132	e-Link	e-Link + BH67V2132	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BH67F2485	e-Link	e-Link + BH67V2485	Flash Type-9D	ICP-2C / PA0 / PA2	PA0 / PA2
BH67F2742		e-Link + BH67V2742	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BH67F2752	e-Link	e-Link + BH67V2752	Flash Type-9B	ICP-2C / PA0 / PA2	PA0 / PA2
BH67F2762		e-Link + BH67V2762	Flash Type-9C	ICP-2C / PA0 / PA2	PA0 / PA2
BH67F5362	e-Link	e-Link + BH67F5362	Flash Type-31	ICP-2C / PA0 / PA2	PA0 / PA2
BP45F0044	e-Link	e-Link + BP45V0044	Flash Type-21	ICP-2C / PA0 / PA2	PA0 / PA2
BP45F0102		e-Link + BP45V0102	Flash Type-24	ICP-2C / PA0 / PA2	PA0 / PA2
BP45F0106	a 1 to 1.	e-Link + BP45V0106	Flash Type-24	ICP-2C / PA0 / PA2	PA0 / PA2
BP45F1130	e-Link	e-Link + BP45V1130	Flash Type-24	ICP-2C / PA0 / PA2	PA0 / PA2
BP45F1330		e-Link + BP45V1330	Flash Type-24	ICP-2C / PA0 / PA2	PA0 / PA2
BP45F4MB	e-Link	e-Link + BP45V4MB	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BP45FH6N	e-Link	e-Link + BP45VH6N	Flash Type-9B	ICP-2C / PA0 / PA7	PA0 / PA7
BS45F3232		e-Link + BS45V3232	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
	e-Link	e-Link + BS45V3235	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2



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Device Part No.	ICE Type	Tool Part No.	Programming Timing	ICP Type / ICPDA / ICPCK	OCDSDA / OCDSCK
BS45F3832	e-Link	e-Link + BS45V3832-10 + (e-FADP08N3 or e-FADP10N3)	Flash Type-9	ICP-2C / PA0 / PA2	OCDSDA / OCDSCK
BS45F3833		e-Link + BS45V3833	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BS45F5830		e-Link + BS45V5830	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BS45F5831	- 15-1-	e-Link + BS45V5831	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BS45F5832	e-Link	e-Link + BS45V5832	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BS45F5833		e-Link + BS45V5833	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BS66F340		e-Link + BS66V340	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BS66F350	e-Link	e-Link + BS66V350	Flash Type-9B	ICP-2C / PA0 / PA2	PA0 / PA2
BS66F360	C-LIIIK	e-Link + BS66V360	Flash Type-9C	ICP-2C / PA0 / PA2	PA0 / PA2
BS66F370		e-Link + BS66V370	Flash Type-9C	ICP-2C / PA0 / PA2	PA0 / PA2
BS66F340C		e-Link + BS66V340C	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BS66F350C	e-Link	e-Link + BS66V350C	Flash Type-9B	ICP-2C / PA0 / PA2	PA0 / PA2
BS66F360C		e-Link + BS66V360C	Flash Type-9C	ICP-2C / PA0 / PA2	PA0 / PA2
BS66FV340		e-Link + BS66VV340	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BS66FV350	e-Link	e-Link + BS66VV350	Flash Type-9B	ICP-2C / PA0 / PA2	PA0 / PA2
BS66FV360		e-Link + BS66VV360	Flash Type-9C	ICP-2C / PA0 / PA2	PA0 / PA2
BS67F2563	e-Link	e-Link + BS67V2563	Flash Type-10C	ICP-2C / PA0 / PA2	PA0 / PA2
BS67F340		e-Link + BS67V340	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BS67F350	e-Link	e-Link + BS67V350	Flash Type-9B	ICP-2C / PA0 / PA2	PA0 / PA2
BS67F360		e-Link + BS67V360	Flash Type-9C	ICP-2C / PA0 / PA2	PA0 / PA2
BS67F370		e-Link + BS67V370	Flash Type-9C	ICP-2C / PA0 / PA2	PA0 / PA2
BS67F350C	e-Link	e-Link + BS67V350C	Flash Type-9B	ICP-2C / PA0 / PA2	PA0 / PA2
BS82B12A-3		e-Link + BS82BV12A-3	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BS82C16A-3	e-Link	e-Link + BS82CV16A-3	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BS82D20A-3		e-Link + BS82DV20A-3	Flash Type-9B	ICP-2C / PA0 / PA2	PA0 / PA2
BS83A02A-4		e-Link + BS83AV02A + (Optional e-FADP06T)	Flash Type-9	ICP-2C / PA0 / PA2	OCDSDA / OCDSCK
BS83A04A-3, BS83A04A-4		e-Link + BS83V04A + (Optional e-FADP08N-BS or e-FADP10M-BS)	Flash Type-9	ICP-2C / PA0 / PA2	OCDSDA / OCDSCK
BS83B04A-4	e-Link	e-Link + BS83BV04A + (Optional e-FADP08N-BS or e-FADP10M-BS)	Flash Type-9	ICP-2C / PA0 / PA2	OCDSDA / OCDSCK
BS83B08A-3, BS83B08A-4		e-Link + 83V08AV15	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BS83B12A-3, BS83B12A-4		e-Link + BS83V12A	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BS83B16A-3, BS83B16A-4		e-Link + BS83V16A	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BS83A01C		e-Link + BS83AV01C	Flash Type-23	ICP-2C / PA0 / PA2	OCDSDA / OCDSCK
BS83A02C		e-Link + BS83AV02C	Flash Type-9	ICP-2C / PA0 / PA2	OCDSDA / OCDSCK
BS83A04C		e-Link + BS83AV04C	Flash Type-24	ICP-2C / PA0 / PA2	OCDSDA / OCDSCK
BS83B04C	e-Link	e-Link + BS83BV04C + (Optional e-FADP08N-BS or e-FADP10M-BS)	Flash Type-9	ICP-2C / PA0 / PA2	OCDSDA / OCDSCK
BS83B08C	e-Lilik	e-Link + BS83BV08C	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BS83B12C		e-Link + BS83BV12C	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BS83B16C		e-Link + BS83BV16C	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BS83B24C		e-Link + BS83BV24C	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BS83C40C		e-Link + BS83CV40C	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BS83A02L	e-Link	e-Link + BS83AV02L e-Link + BS83BV04L	Flash Type-23	ICP-2C / PA0 / PA2	OCDSDA / OCDSCK
BS83B04L		+ (Optional e-FADP08N-BS or e-FADP10M-BS)	Flash Type-9	ICP-2C / PA0 / PA2	OCDSDA / OCDSCK
BS84B06A-3		e-Link + BS84BV06A-3	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BS84B08A-3	e-Link	e-Link + BS84V08A	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BS84C12A-3		e-Link + BS84V12A	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BS84B08C	e-Link	e-Link + BS84BV08C	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BS84C12C		e-Link + BS84CV12C	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BS86B12A-3	a Liet	e-Link + BS86BV12A	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BS86C16A-3	e-Link	e-Link + BS86CV16A-3	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BS86D20A-3		e-Link + BS86DV20A-3	Flash Type-9B	ICP-2C / PA0 / PA2	PA0 / PA2
BS86C08C	<u> </u>	e-Link + BS86CV08C	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BS86D12C	e-Link	e-Link + BS86DV12C	Flash Type-9B	ICP-2C / PA0 / PA2	PA0 / PA2
BS86D20C	- -	e-Link + BS86DV20C	Flash Type-9B	ICP-2C / PA0 / PA2	PA0 / PA2
BS86E16C		e-Link + BS86EV16C	Flash Type-9C	ICP-2C / PA0 / PA2	PA0 / PA2
BS86DH12C	e-Link	e-Link + BS86DHV12C	Flash Type-9B	ICP-2C / PA0 / PA2	PA0 / PA2



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Device Part No.	ICE Type	Tool Part No.	Programming Timing	ICP Type / ICPDA / ICPCK	OCDSDA / OCDSCK
BS87B12A-3		e-Link + BS87BV12A	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BS87C16A-3	e-Link	e-Link + BS87CV16A	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
BS87D20A-3		e-Link + BS87DV20A	Flash Type-9B	ICP-2C / PA0 / PA2	PA0 / PA2
HT37A30, HT37A40, HT37A50, HT37A60			_	_	
HT37B90	Demo Board	HT-VMS-MB	_	_	
HT45F0004		e-Link + HT45V0004	Flash Type-9B	ICP-2C / PB0 / PB3	PB0 / PB3
HT45F0057	e-Link	e-Link + HT45V0057	Flash Type-9	ICP-2C / PB0 / PB3	PB0 / PB3
HT45F0058		e-Link + HT45V0058	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
HT45F0060		e-Link + HT45V0060 + (optional e-FADP08N3 or e-FADP10N3)	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
HT45F0062	e-Link	e-Link + HT45V0062	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
HT45F0063		e-Link + HT45V0063	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
HT45F0074	e-Link	e-Link + HT45V0074	Flash Type-9B	ICP-2C / PA0 / PA2	PA0 / PA2
HT45F23A		M1001D + D1088A	Flash Type-6	ICP-2B	
HT45F24A	e-ICE	M1001D + D1095A	Flash Type-6	ICP-2B	
HT45F3230	e-Link	e-Link + HT45V3230	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
HT45F3630	e-Link	e-Link + HT45V3630	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
HT45F39, HT45F391	e-Link	e-Link + HT45V39	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
HT45F4050	e-Link	e-Link + HT45V4050	Flash Type-10B	ICP-2C / PA0 / PA2	PA0 / PA2
HT45F4630	e-Link	e-Link + HT45V4630	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
HT45F4830		e-Link + HT45V4830	Flash Type-9	ICP-2C / PA0 / PA2	OCDSDA / OCDSCK
HT45F4840	e-Link	e-Link + HT45V4840	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
HT45F4842		e-Link + HT45V4842	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
HT45F4MA		e-Link + HT45V4MA	Flash Type-9	ICP-2C / PA6 / PA7	PA6 / PA7
HT45FH4MA		e-Link + HT45VH4MA	Flash Type-9	ICP-2C / PA6 / PA7	PA6 / PA7
HT45FH4MA-1		e-Link + HT45VH4MA-1	Flash Type-9	ICP-2C / PA6 / PA7	PA6 / PA7
HT45F4N	e-Link	e-Link + HT45V4N	Flash Type-9	ICP-2C / PA6 / PA7	PA6 / PA7
HT45FH4N		e-Link + HT45VH4N	Flash Type-9	ICP-2C / PA6 / PA7	PA6 / PA7
HT45F5N		e-Link + HT45V5N	Flash Type-9	ICP-2C / PA6 / PA7	PA6 / PA7
HT45FH5N		e-Link + HT45VH5N	Flash Type-9	ICP-2C / PA6 / PA7	PA6 / PA7
HT45F56	e-Link	e-Link+HT45V56 + (Optional FPCB)	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
HT45F5Q-1		e-Link + HT45V5Q-1	Flash Type-23	ICP-2C / PA0 / PA2	PA0 / PA2
HT45F5Q-2	e-Link	e-Link + HT45V5Q-2	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
HT45F5Q-3		e-Link + HT45V5Q-3	Flash Type-24	ICP-2C / PA0 / PA2	PA0 / PA2
HT45F5V	e-Link	e-Link + HT45V5V	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
HT45F6530	e-Link	e-Link + HT45V6530	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
HT45F67	e-Link	e-Link + HT45V67	Flash Type-9C	ICP-2C / PA0 / RES	PA0 / RES
HT45F8550	- Unit	e-Link + HT45V8550	Flash Type-31	ICP-2C / PA0 / PA2	PA0 / PA2
HT45F8560	e-Link	e-Link + HT45F8560	Flash Type-31	ICP-2C / PA0 / PA2	PA0 / PA2
HT45FH23A	- 105	M1001D + D1088A + ESK-B0023-100	Flash Type-6	ICP-2B	
HT45FH24A	e-ICE	M1001D + D1095A + ESK-B0023-100	Flash Type-6	ICP-2B	
HT66F002		e-Link + HT66V002 + (Optional e-FADP08N or e-FADP10M2)	Flash Type-9	ICP-2C / PA0 / PA7	OCDSDA / OCDSCK
HT66F0021		e-Link + HT66V0021 + e-FADP08N	Flash Type-23	ICP-2C / PA0 / PA2	OCDSDA / OCDSCK
HT66F0025	e-Link	e-Link + HT66V0025 + (Optional e-FADP08N or e-FADP10N2)	Flash Type-9	ICP-2C / PA0 / PA7	OCDSDA / OCDSCK
HT66F007		e-Link + HT66V007 + (Optional e-FADP08D or e-FADP08N or e-FADP10M)	Flash Type-9	ICP-2C / PA0 / PA1	OCDSDA / OCDSCK
HT66F008		e-Link + HT66V008 + (Optional e-FADP08D or e-FADP08N or e-FADP10M)	Flash Type-9	ICP-2C / PA0 / PA1	OCDSDA / OCDSCK
HT66F003		e-Link + HT66V003	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
HT66F0031	a Lieb	e-Link + HT66V0031	Flash Type-23	ICP-2C / PA0 / PA2	PA0 / PA2
HT66F004	e-Link	e-Link + HT66V004	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
HT66F0041		e-Link + HT66V0041	Flash Type-24	ICP-2C / PA0 / PA2	PA0 / PA2
HT66F0042	- 15.1	e-Link + HT66V0042	Floris Tr. O	ICP-2C / PA0 / PA2	PA0 / PA2
HT66F0082	e-Link	e-Link + HT66V0082	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
HT66F017	e-ICE	M1001D + D1070A	Flash Type-6A	ICP-2B	



8-Bit MCU Tools						
Device Part No.	ICE Type	Tool Part No.	Programming	ICP Type / ICPDA	OCDSDA /	
HT66F0172, HT66F0174		e-Link + HT66V0174	Timing Flash Type-9	/ ICPCK ICP-2C / PA0 / PA2	OCDSCK PA0 / PA2	
HT66F0175	-	e-Link + HT66V0175	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2	
HT66F0176		e-Link + HT66V0176	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2	
HT66F018		e-Link + HT66V018	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2	
HT66F0181		e-Link + HT66V0181	Flash Type-24	ICP-2C / PA0 / PA2	PA0 / PA2	
HT66F0184		e-Link + HT66V0184	Flash Type-24	ICP-2C / PA0 / PA2	PA0 / PA2	
HT66F0185	e-Link	e-Link + HT66V0185	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2	
HT66F0186		e-Link + HT66V0186	Flash Type-14	ICP-2C / PA0 / PA2	PA0 / PA2	
HT66F019		e-Link + HT66V019	Flash Type-9B	ICP-2C / PA0 / PA2	OCDSDA / OCDSCK	
HT66F0195		e-Link + HT66V0195	Flash Type-9B	ICP-2C / PA0 / PA2	OCDSDA / OCDSCK	
HT66F3185		e-Link + HT66V3185	Flash Type-31	ICP-2C / PA0 / PA2	PA0 / PA2	
HT66F3195		e-Link + HT66V3195	Flash Type-31	ICP-2C / PA0 / PA2	PA0 / PA2	
HT66F2350		e-Link + HT66V2350	Flash Type-10B	ICP-2C / PA0 / PA2	PA0 / PA2	
HT66F2360		e-Link + HT66V2360	Flash Type-10C	ICP-2C / PA0 / PA2	PA0 / PA2	
HT66F2362	e-Link	e-Link + HT66F2362	Flash Type-31	ICP-2C / PA0 / PA2	PA0 / PA2	
HT66F2370	- CENIK	e-Link + HT66V2370	Flash Type-10C	ICP-2C / PA0 / PA2	PA0 / PA2	
HT66F2390		e-Link + HT66V2390	Flash Type-10D	ICP-2C / PA0 / PA2	PA0 / PA2	
HT66F2630	e-Link	e-Link + HT66V2630	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2	
HT66F2730	C-LIIIK	e-Link + HT66V2730	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2	
HT66F2740	e-Link	e-Link + HT66V2740	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2	
HT66F302		e-Link + HT66V302	Flash Type-9	ICP-2C / PA0 / PA2	OCDSDA / OCDSCK	
	e-Link	+ (Optional e-FADP08N or e-FADP10N2)	*			
HT66F303		e-Link + HT66V303	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2	
HT66F317		e-Link + HT66V317	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2	
HT66F318	e-Link	e-Link + HT66V318	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2	
HT66F319		e-Link + HT66V319	Flash Type-9B	ICP-2C / PA0 / PA2	PA0 / PA2	
HT66F3370H	e-Link	e-Link + HT66V3370H	Flash Type-10C	ICP-2C / PA0 / PA2	PA0 / PA2	
HT66F4360		e-Link + HT66V4360	Flash Type-7C	ICP-2C / PA0 / PA2	PA0 / PA2	
HT66F4370	e-Link	e-Link + HT66V4370	Flash Type-7C	ICP-2C / PA0 / PA2	PA0 / PA2	
HT66F4390		e-Link + HT66V4390	Flash Type-15J	ICP-2C / PA0 / PA2	PA0 / PA2	
HT66F4530		e-Link + HT66V4530	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2	
HT66F4540	e-Link	e-Link + HT66V4540	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2	
HT66F4550		e-Link + HT66V4550	Flash Type-9B	ICP-2C / PA0 / PA2	PA0 / PA2	
HT66F489	e-Link	e-Link + HT66V489	Flash Type-9B	ICP-2C	<u> </u>	
HT66FB540		e-Link + HT66VB540	Flash Type-7A	ICP-2C / UDN / RES	PA0 / RES	
HT66FB542		e-Link + HT66VB542	Flash Type-7A	ICP-2C / UDN / RES	PA0 / RES	
HT66FB550	e-Link	e-Link + HT66VB550	Flash Type-7A	ICP-2C / UDN / RES	PA0 / RES	
HT66FB560		e-Link + HT66VB560	Flash Type-7B	ICP-2C / UDN / RES	PA0 / RES	
HT66FB570		e-Link + HT66VB570	Flash Type-7E	ICP-2C / UDN / RES	PA0 / RES	
HT66FB582		e-Link + HT66VB582	Flash Type-15N	ICP-2C / UDN / RES	PA0 / RES	
HT66FB572		e-Link + HT66VB572	Flash Type-15A	ICP-2C / UDN / RES	PA0 / RES	
HT66FB574		e-Link + HT66VB574	Flash Type-15E	ICP-2C / UDN / RES	PA0 / RES	
HT66FB576	e-Link	e-Link + HT66VB576	Flash Type-15E	ICP-2C / UDN / RES	PA0 / RES	
HT68FB541		e-Link + HT68VB541	Flash Type-22A	ICP-2C / PA0 / PA2	PA0 / PA2	
HT68FB571		e-Link + HT68VB571	Flash Type-22A	ICP-2C / PA0 / PA2	PA0 / PA2	
HT66FM5230		e-Link + HT66VM5230	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2	
HT66FM5240	e-Link	e-Link + HT66VM5240	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2	
HT66FM5440		e-Link + HT66VM5440	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2	
HT66FM5340	e-Link	e-Link + HT66VM5340	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2	
HT66FV130		e-Link + HT66VV130	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2	
HT66FV140		e-Link + HT66VV140	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2	
HT66FV150	e-Link	e-Link + HT66VV150	Flash Type-9B	ICP-2C / PA0 / PA2	PA0 / PA2	
HT66FV160		e-Link + HT66VV160	Flash Type-9C	ICP-2C / PA0 / PA2	PA0 / PA2	
HT66FV240	e-Link	e-Link + HT66VV240	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2	
HT66FW2230		e-Link + HT66VW2230	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2	
HT66FW2350	e-Link	e-Link + HT66VW2350	Flash Type-9B	ICP-2C / PA0 / PA2	PA0 / PA2	



8-Bit MCU Tools					
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HT67F2350		e-Link + HT67V2350	Flash Type-10B	ICP-2C / PA0 / PA2	PA0 / PA2
HT67F2360		e-Link + HT67V2360	Flash Type-10C	ICP-2C / PA0 / PA2	PA0 / PA2
HT67F2362	e-Link	e-Link + HT67F2362	Flash Type-31	ICP-2C / PA0 / PA2	PA0 / PA2
HT67F2370		e-Link + HT67V2370	Flash Type-10C	ICP-2C / PA0 / PA2	PA0 / PA2
HT67F2390		e-Link + HT67V2390	Flash Type-10D	ICP-2C / PA0 / PA2	PA0 / PA2
HT67F2432	e-Link	e-Link + HT67V2432	Flash Type-24	ICP-2C / PA0 / PA2	PA0 / PA2
HT67F2567	e-Link	e-Link + HT67V2567	Flash Type-10C	ICP-2C / PA0 / PA2	PA0 / PA2
HT67F30, HT67F40		M1001D + D2004C	Flash Type-6	ICP-2B	
HT67F50, HT67F60	e-ICE	M1001D + D2004D	Flash Type-6	ICP-2B	
HT67F5652	e-Link	e-Link + HT67V5652	Flash Type-9B	ICP-2C / PA0 / PA2	PA0 / PA2
HT67F60A		e-Link + HT67V60A	Flash Type-9C	ICP-2C / PA0 / PA2	PA0 / PA2
HT67F70A	e-Link	e-Link + HT67V70A	Flash Type-9C	ICP-2C / PA0 / PA2	PA0 / PA2
HT67F86A		e-Link + HT67V86A	Flash Type-9D	ICP-2C / PA0 / PA2	PA0 / PA2
HT67F489		e-Link + HT67V489	Flash Type-9B	ICP-2C / PA0 / PA2	PA0 / PA2
HT67F4892	e-Link	e-Link + HT67V4892	Flash Type-9B	ICP-2C / PA0 / PA2	PA0 / PA2
HT68F0017		e-Link + HT68V0017 (Optional e-FADP08N3 or e-FADP10N3)	Flash Type-20	ICP-2C / PA0 / PA2	OCDSDA / OCDSC
HT68F002		e-Link + HT68V002 + (Optional e-FADP08N or e-FADP10M2)	Flash Type-9	ICP-2C / PA0 / PA7	OCDSDA / OCDSC
HT68F0025	e-Link	e-Link + HT68V0025 + (Optional e-FADP08N or e-FADP10N2)	Flash Type-9	ICP-2C / PA0 / PA7	OCDSDA / OCDSC
HT68F003		e-Link + HT68V003	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
HT68F0036		e-Link + HT68V0036	Flash Type-23	ICP-2C / PA0 / PA2	PA0 / PA2
HT68FB240	e-Link	e-Link + HT68VB240	Flash Type-7A	ICP-2C / UDN / RES	PA0 / RES
HT68FB550		e-Link + HT68VB550	Flash Type-7A	ICP-2C / UDN / RES	PA0 / RES
HT68FB560	e-Link	e-Link + HT68VB560	Flash Type-7B	ICP-2C / UDN / RES	PA0 / RES
HT67F370		e-Link + HT67V370	Flash Type-9C	ICP-2C / PA0 / PA2	PA0 / PA2
HT69F340	- 1 :1-	e-Link + HT69V340	Flash Type-9	ICP-2C / PA0 / PA2	PA0 / PA2
HT69F350	e-Link	e-Link + HT69V350	Flash Type-9B	ICP-2C / PA0 / PA2	PA0 / PA2
HT69F360		e-Link + HT69V360	Flash Type-9C	ICP-2C / PA0 / PA2	PA0 / PA2
HT66F2560		e-Link + HT66V2560	Flash Type-10C	ICP-2C / PA0 / PA2	PA0 / PA2
HT69F2562	e-Link	e-Link + HT69V2562	Flash Type-10C	ICP-2C / PA0 / PA2	PA0 / PA2
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