



# 海速芯选型手册

2024 年版



## TM87 Series

P/N	ROM		RAM	Max. I/O pins	INT PIN	Wake-up pin	Max LCD (share with I/O or DCO)	RFC	EL	KEY SCAN	LDO&LBD	RTC&Timer	Buz	Peripheral	WDT	Operating Voltage
	Size	Type														
TM8720	1024*16	MASK	64*4	7	--	A PORT	4*12	--	--	--	--	1	V		--	1.5
TM8721	1024*16	MASK	64*4	7	--	A PORT	4*9	1-ch	--	--	--	1	V		--	1.5
TM8761	1024*16	MASK	64*4	7	--	A PORT	4*9	1-ch	--	--	--	1	V		--	1.5
TM8724	1152*16	MASK	80*4	12	V	C PORT	5*24	--	--	--	--	1	V		--	1.5/3.0
TM8723	1536*16	MASK	96*4	12	V	C PORT	5*27	--	V	V	--	1	V		V	1.5/3.0/5.0
TM8763	1536*16	MASK	96*4	12	V	C PORT	5*27	--	V	V	--	1	V		V	1.5/3.0/5.0
TM8722	2048*16	MASK	128*4	12	V	C PORT	5*35	1-ch	V	V	--	2	V		V	1.5/3.0/5.0
TM8762	2048*16	MASK	128*4	12	V	C PORT	5*35	1-ch	V	V	--	1	V		V	1.5/3.0/5.0
TM8725	3072*16	MASK	384*4	16	V	C,D PORT	6*40	1-ch	V	V	--	2	V		V	1.5/3.0/5.0
TM8726	4096*16	MASK	512*4	16	V	C,D PORT	9*41	1-ch	V	V	--	2	V		V	1.5/3.0/5.0
TM8727	12288*16	MASK	1024*4	16	V	C,D PORT	9*41	1-ch	V	V	--	2	V		V	1.5/3.0/5.0
TM8793	16384*16	OTP	4096*4	20	V	A,C,D PORT	12*48	2-ch	V	V	--	2	V		V	1.5/3.0/5.0
TM87ML22H/L	2048*16	MTP	128*4	12	V	C PORT	5*35	1-ch	V	V	V	2	V		V	1.5/3.0
TM87M23	1536*16	MTP	96*4	12	V	C PORT	5*27	1-ch	V	V	--	2	V		V	1.5/3.0
TM87ML25H/L	3072*16	MTP	384*4	16	V	C,D PORT	6*40	1-ch	V	V	V	2	V		V	1.5/3.0
TM87ML26H/L	4096*16	MTP	512*4	18	V	C,D PORT	9*41	1-ch	V	V	V	2	V		V	1.5/3.0
TM87ML28H/L	8192*16	MTP	1024*4	24	V	A,C,D PORT	9*47 or 4*52	2-set	V	V	V	3	V	UART/SPI/IIC	V	1.5/3.0
TM87P32	3.75K*16	OTP	256*4	12	V	A,C PORT	5*35	1-ch	V	V	LBD	2	V		V	1.5/3.0
TM87PL35H/L	3.75K*16	OTP	512*4	16	V	C,D PORT	6*40	1-ch	V	V	V	2	V		V	1.5/3.0
TM87PL36H/L	7.5K*16	OTP	1K*4	20	V	C,D PORT	9*43	1-ch	V	V	V	2	V		V	1.5/3.0
TM87PL37H/L	15.5K*16	OTP	2K*4	28	V	C,D PORT	9*51	1-ch	V	V	V	2	V		V	1.5/3.0

## TM89 Series

P/N	ROM		RAM	Max. I/O pins	INT PIN	Wake-up pin	Max LCD (share with I/O or DCO)	RFC	EL	KEY SCAN	RTC	Timer	Buz	HALT Mode	WDT	Operating Voltage
	Size	Type														
TM8951	8K*16	MASK	960*4	16	V	A,C,D PORT	9*48	1-ch	V	V	V	3	V	V	V	1.5/3.0
TM8952	16K*16	MASK	1.25K*4	16	V	A,C,D PORT	16*52 or 12*56	1-ch	V	V	V	3	V	V	V	1.5/3.0
TM8955	16K*16	MASK	4K*4	20	V	A,C,D PORT	16*60 or 12*64	2-ch	V	V	V	3	V	V	V	1.5/3.0
TM8957	24K*16	MASK	6K*4	20	V	A,C,D PORT	16*64	2-ch	V	V	V	3	V	V	V	1.5/3.0
TM8959	32K*16	MASK	6K*4	20	V	A,C,D PORT	16*64	2-ch	V	V	V	3	V	V	V	1.5/3.0

## I/O Type MCU Series

P/N	ROM		RAM	GPIO	LVR/LVD	Timer	PWM	Stack	FIRC(MHz)	Max. Freq.(Hz)	Operating Voltage	Package
	Size	Type										
TM57ME16 TM57ME18	1K*14	MTP	48	6	LVR 1.2V LVR 1.6V	8-bit*1	8-bit*1	5	4/2/1	13K~4M	1.2~4.2	SOT23-6,SOP-8
TM56M1511	2K*14	MTP	256	6	LVR/LVD 2.05~4.15V	8-bit*2	16-bit*5	8	16/8/4/2	85K~16M	1.9~5.5	SOT23-6,SOP-8



## ADC/OPA/CMP Type MCU Series

P/N	ROM		RAM	GPIO	OPA/CMP	ADC 12-bit	Timer	PWM	Stack	FIRC(MHz)	Max. Freq.(Hz)	Operating Voltage	Package
	Size	Type											
TM57MA29NF	2K*14	MTP	96	18	--	11-ch	8-bit*2 15-bit*1	(8+2)bit*2	6	12/6/4/1.5	120K~12M	2.0~5.5	SOP-16/20
TM56M152A	2K*16	MTP	96	14	--	13+2-ch	8-bit*2	16-bit*6	8	16/8/4/2	85K~16M	1.8~5.5	SOP-16/8 MSOP-10,QFN-16
TM56M1522	4K*16	MTP	256	14	CMP/ 7-bit DAC	13+2-ch LDOC 1.2V	8-bit*2 15-bit*1	16-bit*6	8	16/8/4/2	85K~16M	1.8~5.5	SOP-16/8 MSOP-10,QFN-16
TM56E6422	4K*16	MTP+ EEP128	256	18	CMP/ 7-bit DAC	14+2-ch	8-bit*2 15-bit*1	16-bit*6	8	16/8/4/2	85K~16M	2.0~5.5	SOP-20/16/8 MSOP-10,SOT23-6
TM56F1552	4K*16	Flash+ EEP128	336	18	OPA/CMP/ 7-bit DAC	14+3-ch	8-bit*2 15-bit*1	16bit (N/P) 16-bit*5-ch	8	16/8/4/2	85K~20M	1.9~5.5	SOP-16/20 QFN-20
TM56F8225	2K*16	Flash+ EEP128	176	8	OPA*2 10-bit DAC*2	8-ch	8-bit*2 15-bit*1	(8+2)bit*1 16-bit*3	8	8/4/2/1	70K~8M	2.1~5.5	SOP-16
TM56F70C2	4K*16	Flash+ EEP48	256	17	OPA*3 14-bit DAC*2 (BCM)	17-ch	8-bit*2 15-bit*1	16-bit*3	8	9.216	9.216M	2.1~5.5	SOP/TSSOP-20

## LCD Type MCU Series

P/N	ROM		RAM	GPIO	LCD	Timer	PWM	Stack	FIRC (MHz)	Max. Freq.(Hz)	Operating Voltage	Package
	Size	Type										
TM57M5610	1K*14	MTP	96	12	4*11~3*12	8-bit*1/21-bit*1	8-bit*1 (N/P)	5	3.8	32K~3.8M	1.7~3.6	Dice from SOP/SSOP-28
TM57M5615	1K*14	MTP	96	12	4*11~3*12	8-bit*1/21-bit*1	8-bit*1 (N/P)	5	1.3	32K~1.3M	1.2~1.8	Dice from SOP/SSOP-28
TM57M5620	2K*14	MTP	176	16	4*28	8-bit*2/21-bit*1	8-bit*2 (N/P)	6	4	32K~4M	1.9~3.6	Dice from SSOP-48
TM57M5625	2K*14	MTP	176	16	4*26	8-bit*2/21-bit*1	8-bit*2 (N/P)	6	2	32K~2M	1.2~1.8	Dice from SSOP-48
TM57M5640	4K*14	MTP	336	20	4*44	8-bit*2/21-bit*1	8-bit*2 (N/P)	6	4	32K~4M	1.9~3.6	Dice from LQFP-64
TM57M5645	4K*14	MTP	336	20	4*42	8-bit*2/21-bit*1	8-bit*2 (N/P)	6	2	32K~2M	1.2~1.8	Dice from LQFP-64
TM57P8620	2K*14	OTP	176	12	4*12	8-bit*2/21-bit*1	8-bit*1 (N/P)	6	2.8	32K~2.8M	1.6~3.6	Dice from SSOP-28
TM57P8625	2K*14	OTP	176	12	4*10	8-bit*2/21-bit*1	8-bit*1 (N/P)	6	0.9	32K~0.9M	1.1~1.8	Dice from SSOP-28
TM57P8640	4K*14	OTP	336	16	4*28	8-bit*2/21-bit*1	8-bit*1 (N/P) 8-bit*1	6	2.8	32K~2.8M	1.6~3.6	Dice from SSOP-48
TM57P8645	4K*14	OTP	336	16	4*26	8-bit*2/21-bit*1	8-bit*1 (N/P) 8-bit*1	6	0.9	32K~0.9M	1.1~1.8	Dice from SSOP-48

## Touch Key MCU Series

P/N	ROM		RAM	GPIO	Touch Key		ADC 12-bit	Timer	PWM	Stack	FIRC(MHz)	Max. Freq.(Hz)	Operating Voltage	Package
	Size	Type			Type	TK								
TM57MT21A	2K*14	MTP	184	18	CTK	14-ch	--	8-bit*2	(8+2)bit*2	6	12/6/4/1.5	32K~12M	2.0~5.5	SOP - 16/20
TM56M1531	2K*14	MTP	256	6	STK/CTK	4-ch	--	8-bit*2	16-bit*5	8	16/8/4/2	85K~16M	1.9~5.5	SOP-8,SOT23-6
TM56F1552	4K*16	Flash + EEP128	336	18	CTK	15-ch	14+3-ch	8-bit*2 15-bit*1	16bit (N/P) 16-bit*5-ch	8	16/8/4/2	85K~20M	1.9~5.5	SOP-16/20 QFN/TSSOP-20
TM56F1542	4K*16	Flash + EEP128	336	18	STK	13-ch	10+1-ch	8-bit*2 15-bit*1	16bit (N/P) 16-bit*5-ch	8	18/9/4.5/2.25	8K~18M	2.15~5.5	SSOP/SOP- 20/16/8
TM56F1543	8K*16	Flash + EEP128	496	26	STK	24-ch	14+1-ch	8-bit*2 15-bit*1	16bit (N/P) 16-bit*5-ch	8	18/9/4.5/2.25	8K~18M	2.15~5.5	SSOP/SOP- 28/20/16

## High Efficiency Type F51 Series

P/N	CPU CORE	ROM		RAM bytes	EEPROM bytes	GPIO	Touch Key		LCD max.	LED	ADC 12-bit	OPA CMP/DAC	PWM	Interface	Timer/ RTC	Voltage Range	Package
		Size	Type				Type	TK									
TM52ME1323	F51	8K	MTP	256+256	EEP/256	14	--	--	1/2 bias	--	13-ch	--	16bit PWM0 (N/P) 16bit PWM1~3	UART	16-bit*2 15-bit/T3	1.8~5.5	SOP/QFN-16
TM52M5473	F51	8K	MTP	256+256	--	26	CTK	8-ch	1/2 bias	8*8 DMX	13-ch	CMP DAC	16bit PWM0/1 (N/P) PWM0A/0B/1A/1B	--	16-bit*3 18-bit/T3	1.8~5.5	SSOP/QFN-24
TM52F1363	F51	8K	Flash	256+256	EEP/128	26	--	--	4 com 1/2 bias	--	23-ch (19+4)	--	16-bit*7 PWM0~6	UART	16-bit*3 15-bit/T3	2.1~5.5	SOP/QFN-28
TM52F8658	F51	8K	Flash	256+256	EEP/128	17	--	--	--	--	15-ch (12+3)	--	16-bit*2	UART/I2C	16-bit*3 15-bit/T3	2.7~5.5	SOP-20/16
TM52F5024	F51	16K	Flash	256+256	EEP/256	22	--	--	4 com 1/2 bias	high sink	21-ch	--	16bit PWM0/1 (N/P) 16bit PWM2~5	UART*2 I2C(M)	16-bit*3 18-bit/T3	1.8~5.5	SSOP/QFN-24
TM52F1376	F51	16K	Flash	256+256	EEP/128	30	--	--	1/2 bias	4*6 BiD 8*8 DMX	24-ch (22+2)	--	16-bit*3	UART*2 I2C(M/S)	16-bit*4	1.7~5.5	LQFP-32,SSOP-24,SOP-16 SOP/SSOP/QFN-28 SOP/TSSOP/QFN-20
TM52FN8276	F51	16K	Flash	256+768	EEP/128	26	FTK	19-ch	1/2 bias	4*6 BiD	16-ch (14+2)	--	(8+2)bit *3	UART*2 SPI	16-bit*3 15-bit/T3	2.2~5.5	SOP-28/20/16 SSOP-24/28
TM52F1364	F51	16K	Flash	256+768	EEP/128	26	STK	8-ch	4 com 1/2 bias	--	22-ch (19+3)	OPA CMP DAC	16-bit*7	UART SPI / I2C	16-bit*3 15-bit/T3	2.2~5.5	SOP/SSOP/QFN-28
TM52F4974	F51	16K	Flash	256+1280	EEP/128	26	AFTK	23-ch	1/2 bias	8*8 MX 7*8 DMX	26-ch	--	16bit PWM0 (N/P) 16bit PWM1~6	UART*2 SPI/IIC	16-bit*3 24-bit/T3	2.05~5.5	SOP/SSOP-28
TM52F1384	F51	16K	Flash	256+1024	EEP/128	30	AFTK	26-ch	8*16 dots 1/3 bias	8*16 MX 8*7 DMX	23-ch (20+3)	OPA	16-bit*7	UART*2 SPI / I2C	16-bit*3 24-bit/T3	2.2~5.5	SOP-28/32,LQFP-32
TM52F5288	F51	16K	Flash	256 + 256	IAP/256	42	CTK	12-ch	8*20 dots	8*20 dots	10-ch	--	2-ch	UART,SPI	16-bit*3 15-bit/T3	1.9~5.5	LQFP-44/48
TM52eF1374	F51	16K	Flash	256+1024	IAP/1K	26	FTK	20-ch	8 com 1/2 bias	4*6 BiD 8*8 DMX	15-ch (13+2)	--	16-bit*3	UART*2 SPI / I2C	16-bit*3 15-bit/T3	2.3~5.5	SOP-28/20/16 QFN-28/20
TM52eF1375	F51	32K	Flash	256+1024	IAP/1K	26	FTK	20-ch	8 com 1/2 bias	4*6 BiD 8*8 DMX	15-ch (13+2)	--	16-bit*3	UART*2 SPI / I2C	16-bit*3 15-bit/T3	2.3~5.5	SOP-28/20/16 QFN-28/20
TM52eF1375A	F51	32K	Flash	256+1024	IAP/1K	26	FTK	20-ch	8 com 1/2 bias	4*6 MX 8*8 DMX	15-ch (13+2)	--	16-bit*3	UART*2 SPI / I2C	16-bit*3 15-bit/T3	2.5~5.5	SOP-28/20
TM52eF1732	F51	32K	Flash	256+1024	IAP/1K	30	CTK	20-ch	8 com 1/2 bias	4*6 BiD	15-ch (13+2)	--	16-bit*3 8-bit*3	UART*2 SPI / I2C	16-bit*3 15-bit/T3	2.5~5.5	SOP-28,QFN-32
TM52eF1385	F51	32K	Flash	256+4096	IAP/1K	42	FTK	42-ch	8*16 com 1/3 bias	8*8 MX 7*8 DMX	44-ch (42+2)	--	16-bit*9	UART*3 SPI / I2C	16-bit*3 15-bit/T3	2.3~5.5	LQFP-48/44/32 SOP-28
TM52eF1386	F51	64K	Flash	256+4096	IAP/1K	42	FTK	42-ch	8*16 com 1/3 bias	8*8 MX 7*8 DMX	44-ch (42+2)	--	16-bit*9	UART*3 SPI / I2C	16-bit*3 15-bit/T3	2.3~5.5	LQFP-48/44/32 SOP-28

## Low Power Type L51 Series

P/N	CPU CORE	ROM		RAM bytes	EEPROM bytes	GPIO	ADC	Touch Key		LCD max.	LED	LDO	Interface	RFC	Timer/RTC	Voltage Range	Package
		Size	Type					Type	TK								
TM52F2280	L51	8K	Flash	256 + 256	IAP/256	32	6-bit* 7-ch	ATK*4	15-ch	8*23 dots	4*10 dots	(0.5~0.66) VBAT Adj.	SPI,UART	3-ch	23-bit/T3 ppm Adj.	2.0~5.5	LQFP - 48
TM52F2384	L51	16K	Flash	256 + 1024	EEP/128	40	12-bit* 13-ch	CTK	10-ch	8*40 dots 1/2, 1/3 bias	8*36 MX 7*8 DMX	(0.37~0.72) VBAT Adj.	SPI,UART I2C	3-ch	23-bit/T3 ppm Adj.	1.7~5.5	LQFP - 48/64



## Security Chip

P/N	CPU CORE	ROM		RAM bytes	PWM	GPIO	高压电源接口电压	IO电压	FIRC (MHz)	ADC 12-bit	OPA CMP/DAC	24V总线驱动	红外LED驱动	Timer	Package
		Size	Type												
TM52F0132	F51	32K	Flash	256 + 512	2-ch	4	24V	3.3V	4	4-ch	1 (2级)	1-ch	2-ch	6-ch	TSSOP-20

## 快速选型

## 32位MCU选型

## 入门通用 (TM32G074系列)

P/N	CPU CORE	ROM		RAM bytes	GPIO	12-bit ADC	COMP	Comm. Interfaces				Timer						RTC	Voltage Range	Package
		Size	Type					SPI	UART	LPUART	I <sup>2</sup> C	Advanced (16-bit)	General (16-bit)	Basic (16-bit)	Low-power (16-bit)	Tick	Wtd			
TM32G074D4	Cortex M0+	16K	eflash	2K	17	9ext. + 3int	2	1	2	2	1	1	3	3	1	1	1	Y	2.1~5.5V	SOP-20
TM32G074D5	Cortex M0+	32K	eflash	4K	17	9ext. + 3int	2	1	2	2	1	1	3	3	1	1	1	Y	2.1~5.5V	SOP-20
TM32G074D6	Cortex M0+	64K	eflash	8K	17	9ext. + 3int	2	1	2	2	1	1	3	3	1	1	1	Y	2.1~5.5V	SOP-20
TM32G074F4	Cortex M0+	16K	eflash	2K	17	9ext. + 3int	2	1	2	2	1	1	3	3	1	1	1	Y	2.1~5.5V	QFN-24
TM32G074F5	Cortex M0+	32K	eflash	4K	17	9ext. + 3int	2	1	2	2	1	1	3	3	1	1	1	Y	2.1~5.5V	QFN-24
TM32G074F6	Cortex M0+	64K	eflash	8K	17	9ext. + 3int	2	1	2	2	1	1	3	3	1	1	1	Y	2.1~5.5V	QFN-24

## 光模块 (TM32G075系列)

P/N	CPU CORE	ROM		RAM bytes	GPIO	12-bit ADC	12-bit DAC	COMP	Comm. Interfaces				Timer						RTC	PLA	Voltage Range	Package
		Size	Type						SPI	UART	LPUART	I <sup>2</sup> C	Advanced (16-bit)	General (16-bit)	Basic (16-bit)	Low-power (16-bit)	Tick	Wtd				
TM32G075F4	Cortex M0+	16K	eflash	4K	20	21ext. + 3int	4	4	2	3	1	2	1	3	3	1	1	1	Y	4	2.1~5.5V	QFN-24
TM32G075F5	Cortex M0+	32K	eflash	4K	20	21ext. + 3int	4	4	2	3	1	2	1	3	3	1	1	1	Y	4	2.1~5.5V	QFN-24
TM32G075F6	Cortex M0+	64K	eflash	8K	20	21ext. + 3int	4	4	2	3	1	2	1	3	3	1	1	1	Y	4	2.1~5.5V	QFN-24
TM32G075H4	Cortex M0+	16K	eflash	4K	28	28ext. + 3int	4	4	2	3	1	2	1	3	3	1	1	1	Y	4	2.1~5.5V	QFN-32
TM32G075H5	Cortex M0+	32K	eflash	4K	28	28ext. + 3int	4	4	2	3	1	2	1	3	3	1	1	1	Y	4	2.1~5.5V	QFN-32
TM32G075H6	Cortex M0+	64K	eflash	8K	28	28ext. + 3int	4	4	2	3	1	2	1	3	3	1	1	1	Y	4	2.1~5.5V	QFN-32
TM32G075H7	Cortex M0+	128K	eflash	16K	28	28ext. + 3int	4	4	2	3	1	2	1	3	3	1	1	1	Y	4	2.1~5.5V	QFN-32

## 电机及电池管理 (TM32G076系列)

P/N	CPU CORE	ROM		RAM bytes	GPIO	12-bit ADC	12-bit DAC	COMP	OPA	Comm. Interfaces				Timer						RTC	PLA	Voltage Range	Package
		Size	Type							SPI	UART	LPUART	I <sup>2</sup> C	Advanced (16-bit)	General (16-bit)	Basic (16-bit)	Low-power (16-bit)	Tick	Wtd				
TM32G076H5	Cortex M0+	32K	eflash	4K	28	28ext. + 3int	4	4	4	2	3	1	2	1	3	3	1	1	1	Y	4	2.1~5.5V	LQFP-32
TM32G076H6	Cortex M0+	64K	eflash	8K	28	28ext. + 3int	4	4	4	2	3	1	2	1	3	3	1	1	1	Y	4	2.1~5.5V	LQFP-32
TM32G076H7	Cortex M0+	128K	eflash	16K	28	28ext. + 3int	4	4	4	2	3	1	2	1	3	3	1	1	1	Y	4	2.1~5.5V	LQFP-32
TM32G076H8	Cortex M0+	256K	eflash	32K	28	28ext. + 3int	4	4	4	2	3	1	2	1	3	3	1	1	1	Y	4	2.1~5.5V	LQFP-32
TM32G076K6	Cortex M0+	64K	eflash	8K	44	40ext. + 3int	4	4	4	2	3	1	2	1	3	3	1	1	1	Y	4	2.1~5.5V	LQFP-48
TM32G076K7	Cortex M0+	128K	eflash	16K	44	40ext. + 3int	4	4	4	2	3	1	2	1	3	3	1	1	1	Y	4	2.1~5.5V	LQFP-48
TM32G076K8	Cortex M0+	256K	eflash	32K	44	40ext. + 3int	4	4	4	2	3	1	2	1	3	3	1	1	1	Y	4	2.1~5.5V	LQFP-48
TM32G076M7	Cortex M0+	128K	eflash	16K	60	55ext. + 3int	4	4	4	2	3	1	2	1	3	3	1	1	1	Y	4	2.1~5.5V	LQFP-64
TM32G076M8	Cortex M0+	256K	eflash	32K	60	55ext. + 3int	4	4	4	2	3	1	2	1	3	3	1	1	1	Y	4	2.1~5.5V	LQFP-64



## 家电主控 (TM32G077系列)

P/N	CPU CORE	ROM		RAM bytes	GPIO	12-bit ADC	Comm. Interfaces				Timer						RTC	LCD	LED	Touch Key	Voltage Range	Package
		Size	Type				SPI	UART	LPUART	I <sup>2</sup> C	Advanced (16-bit)	General (16-bit)	Basic (16-bit)	Low-power (16-bit)	Tick	Wtd						
TM32G077D7	Cortex M0+	128K	eflash	16K	18	18ext.+3int	--	3	--	1	1	3	3	1	1	1	Y	6COM*8SEG	点阵:7*8	18	2.1~5.5V	SOP-20 TSSOP-20
TM32G077D8	Cortex M0+	256K	eflash	32K	18	18ext.+3int	--	3	--	1	1	3	3	1	1	1	Y	6COM*8SEG	点阵:7*8	18	2.1~5.5V	SOP-20 TSSOP-20
TM32G077F7	Cortex M0+	128K	eflash	16K	22	22ext.+3int	--	3	--	1	1	3	3	1	1	1	Y	8COM*8SEG	点阵:7*8	22	2.1~5.5V	SOP-24
TM32G077F8	Cortex M0+	256K	eflash	32K	22	22ext.+3int	--	3	--	1	1	3	3	1	1	1	Y	8COM*8SEG	点阵:7*8	22	2.1~5.5V	SOP-24
TM32G077G7	Cortex M0+	128K	eflash	16K	26	26ext.+3int	--	3	--	1	1	3	3	1	1	1	Y	8COM*10SEG	点阵:7*8	26	2.1~5.5V	SOP-28 TSSOP-28
TM32G077G8	Cortex M0+	256K	eflash	32K	26	26ext.+3int	--	3	--	1	1	3	3	1	1	1	Y	8COM*10SEG	点阵:7*8	26	2.1~5.5V	SOP-28 TSSOP-28
TM32G077H7	Cortex M0+	128K	eflash	16K	30	30ext.+3int	--	3	1	2	1	3	3	1	1	1	Y	8COM*16SEG	点阵:7*8 行列:8*8	30	2.1~5.5V	LQFP-32
TM32G077H8	Cortex M0+	256K	eflash	32K	30	30ext.+3int	--	3	1	2	1	3	3	1	1	1	Y	8COM*16SEG	点阵:7*8 行列:8*8	30	2.1~5.5V	LQFP-32
TM32G077J7	Cortex M0+	128K	eflash	16K	42	42ext.+3int	1	3	1	2	1	3	3	1	1	1	Y	8COM*24SEG	点阵:7*8 行列:8*8	42	2.1~5.5V	LQFP-44
TM32G077J8	Cortex M0+	256K	eflash	32K	42	42ext.+3int	1	3	1	2	1	3	3	1	1	1	Y	8COM*24SEG	点阵:7*8 行列:8*8	42	2.1~5.5V	LQFP-44
TM32G077K7	Cortex M0+	128K	eflash	16K	46	46ext.+3int	1	3	1	2	1	3	3	1	1	1	Y	8COM*24SEG	点阵:7*8 行列:8*8	42	2.1~5.5V	LQFP-48
TM32G077K8	Cortex M0+	256K	eflash	32K	46	46ext.+3int	1	3	1	2	1	3	3	1	1	1	Y	8COM*24SEG	点阵:7*8 行列:8*8	42	2.1~5.5V	LQFP-48
TM32G077M7	Cortex M0+	128K	eflash	16K	60	60ext.+3int	1	3	1	2	1	3	3	1	1	1	Y	8COM*24SEG	点阵:7*8 行列:8*8	42	2.1~5.5V	LQFP-64
TM32G077M8	Cortex M0+	256K	eflash	32K	60	60ext.+3int	1	3	1	2	1	3	3	1	1	1	Y	8COM*24SEG	点阵:7*8 行列:8*8	42	2.1~5.5V	LQFP-64

## 多应用复合 (TM32G078系列)

P/N	CPU CORE	ROM		RAM bytes	GPIO	12-bit ADC	12-bit DAC	COMP	OPA	Comm. Interfaces				Timer						RTC	PLA	LCD	LED	Touch Key	Voltage Range	Package
		Size	Type							SPI	UART	LPUART	I <sup>2</sup> C	Advanced (16-bit)	General (16-bit)	Basic (16-bit)	Low-power (16-bit)	Tick	Wtd							
TM32G078H6	Cortex M0+	64K	eflash	8K	28	28ext.+3int	4	4	4	2	3	1	2	1	3	3	1	1	1	Y	4	8COM*16SEG	点阵:7*8 行列:8*8	25	2.1~5.5V	LQFP-32
TM32G078H7	Cortex M0+	128K	eflash	16K	28	28ext.+3int	4	4	4	2	3	1	2	1	3	3	1	1	1	Y	4	8COM*16SEG	点阵:7*8 行列:8*8	25	2.1~5.5V	LQFP-32
TM32G078H8	Cortex M0+	256K	eflash	32K	28	28ext.+3int	4	4	4	2	3	1	2	1	3	3	1	1	1	Y	4	8COM*16SEG	点阵:7*8 行列:8*8	25	2.1~5.5V	LQFP-32
TM32G078K6	Cortex M0+	64K	eflash	8K	28	40ext.+3int	4	4	4	2	3	1	2	1	3	3	1	1	1	Y	4	8COM*24SEG	点阵:7*8 行列:8*8	31	2.1~5.5V	LQFP-48
TM32G078K7	Cortex M0+	128K	eflash	16K	44	40ext.+3int	4	4	4	2	3	1	2	1	3	3	1	1	1	Y	4	8COM*24SEG	点阵:7*8 行列:8*8	31	2.1~5.5V	LQFP-48
TM32G078K8	Cortex M0+	256K	eflash	32K	44	40ext.+3int	4	4	4	2	3	1	2	1	3	3	1	1	1	Y	4	8COM*24SEG	点阵:7*8 行列:8*8	31	2.1~5.5V	LQFP-48
TM32G078M7	Cortex M0+	128K	eflash	16K	60	55ext.+3int	4	4	4	2	3	1	2	1	3	3	1	1	1	Y	4	8COM*24SEG	点阵:7*8 行列:8*8	41	2.1~5.5V	LQFP-64
TM32G078M8	Cortex M0+	256K	eflash	32K	60	55ext.+3int	4	4	4	2	3	1	2	1	3	3	1	1	1	Y	4	8COM*24SEG	点阵:7*8 行列:8*8	41	2.1~5.5V	LQFP-64



## 电机专用芯片 (TM32G051系列)

P/N	CPU CORE	ROM		RAM bytes	GPIO	12-bit ADC	12-bit DAC	COMP	OPA	Comm. Interfaces				Timer						RTC	Voltage Range	Package	
		Size	Type							SPI	UART	LPUART	I <sup>2</sup> C	Advanced (16-bit)	General (32-bit)	General (16-bit)	Basic (16-bit)	Low-power (16-bit)	Tick				Wtd
TM32G051D5	Cortex M0+	64	eflash	8	18	16ext. + 7int	2	3	4	1	1	1	1	1	1	5	2	1	1	2	Y	2.1~5.5V	TSSOP-20L
TM32G051D6	Cortex M0+	32	eflash	4	18	16ext. + 7int	2	3	4	1	1	1	1	1	1	5	2	1	1	2	Y	2.1~5.5V	TSSOP-20L
TM32G051H5	Cortex M0+	64	eflash	8	29	16ext. + 7int	2	3	4	1	1	1	1	1	1	5	2	1	1	2	Y	2.1~5.5V	LQFP-32
TM32G051H6	Cortex M0+	32	eflash	4	29	16ext. + 7int	2	3	4	1	1	1	1	1	1	5	2	1	1	2	Y	2.1~5.5V	LQFP-32
TM32G051K5	Cortex M0+	64	eflash	8	45	16ext. + 7int	2	3	4	1	1	1	1	1	1	5	2	1	1	2	Y	2.1~5.5V	LQFP-48
TM32G051K6	Cortex M0+	32	eflash	4	45	16ext. + 7int	2	3	4	1	1	1	1	1	1	5	2	1	1	2	Y	2.1~5.5V	LQFP-48

## F系列M0

P/N	CPU CORE	PLL	ROM		RAM bytes	GPIO	12-bit ADC	Comm. Interfaces				Timer				RTC	DMA	Voltage Range	Package
			Size	Type				SPI	UART	I <sup>2</sup> C	Advanced (16-bit)	General (16-bit)	Basic (16-bit)	Tick	Wtd				
TM32F030Fxp	Cortex M0	48M	16/32K	eflash	4K	15	9-ch	1	1	1	1	4	--	1	2	Y	5-ch	2.4~3.6V	TSSOP-20
TM32F030KxT	Cortex M0	48M	16/32K	eflash	4K	26	10-ch	1	1	1	1	4	--	1	2	Y	5-ch	2.4~3.6V	LQFP-32
TM32F030CxT	Cortex M0	48M	16/32K	eflash	4K	39	10-ch	1	1	1	1	4	--	1	2	Y	5-ch	2.4~3.6V	LQFP-48

## F系列M3

P/N	CPU CORE	PLL	ROM		RAM bytes	GPIO	12-bit ADC	Comm. Interfaces				Timer				RTC	DMA	Voltage Range	Package		
			Size	Type				SPI	UART	CAN	USB	I <sup>2</sup> C	Advanced (16-bit)	General (16-bit)	Basic (16-bit)					Tick	Wtd
TM32F103CxT	Cortex M3	72M	64/128K	eflash	20K	37	10-ch	2	3	2.0B	2.0	2	1	3	--	1	2	Y	7-ch	2.0~3.6V	LQFP-48
TM32F103RxT	Cortex M3	72M	64/128K	eflash	20K	51	16-ch	2	3	2.0B	2.0	2	1	3	--	1	2	Y	7-ch	2.0~3.6V	LQFP-64
TM32F103VxT	Cortex M3	72M	64/128K	eflash	20K	80	16-ch	2	3	2.0B	2.0	2	1	3	--	1	2	Y	7-ch	2.0~3.6V	LQFP-100

## F系列M4

P/N	CPU CORE	PLL	ROM		RAM bytes	GPIO	12-bit ADC	12-bit DAC	Comm. Interfaces					Timer				RTC	DMA	Voltage Range	Package			
			Size	Type					SPI	UART	CAN	USB	I <sup>2</sup> C	ETH	SDIO	Advanced (16-bit)	General (16-bit)					General (16-bit)	Basic (16-bit)	Tick
TM32F407RGT	Cortex M4	168M	1024K	eflash	192K	51	16-ch	2-ch	3	6	2.0B	PHY OTG	3	Y	Y	2	10	2	1	2	Y	2*8-ch	2.0~3.6V	LQFP-64
TM32F407VGT	Cortex M4	168M	1024K	eflash	192K	82	16-ch	2-ch	3	6	2.0B	PHY OTG	3	Y	Y	2	10	2	1	2	Y	2*8-ch	2.0~3.6V	LQFP-100
TM32F407ZGT	Cortex M4	168M	1024K	eflash	192K	114	24-ch	2-ch	3	6	2.0B	PHY OTG	3	Y	Y	2	10	2	1	2	Y	2*8-ch	2.0~3.6V	LQFP-144
TM32F407IGx	Cortex M4	168M	1024K	eflash	192K	140	24-ch	2-ch	3	6	2.0B	PHY OTG	3	Y	Y	2	10	2	1	2	Y	2*8-ch	2.0~3.6V	LQFP-176 BGA-176

## F系列电机专用

P/N	CPU CORE	PLL	ROM		RAM bytes	GPIO	12-bit ADC	DAC	OPA	ACMP	Comm. Interfaces			Timer				RTC	DMA	Voltage Range	Package	
			Size	Type							SPI	UART	I <sup>2</sup> C	Advanced (16-bit)	General (16-bit)	General (16-bit)	Basic (16-bit)					Tick
TM32F037F5	Cortex M0	64M	32K	eflash	4K	22	12-ch	2*10bit	3	3	2	2	1	1	0	5	1	2	Y	4-ch	1.8~5.5V	SSOP-24
TM32F037H5	Cortex M0	64M	32K	eflash	4K	30	18-ch	2*10bit	3	3	2	2	1	1	0	5	1	2	Y	4-ch	1.8~5.5V	LQFP/QFN-32
TM32F038F6	Cortex M0	64M	64K	eflash	4K	22	12-ch	12bit/5*8bit	3	3	1	3	1	1	0	5	1	2	--	6-ch	1.8~5.5V	SSOP-24
TM32F038H6	Cortex M0	64M	64K	eflash	4K	30	18-ch	12bit/5*8bit	3	3	1	3	1	1	0	5	1	2	--	6-ch	1.8~5.5V	LQFP/QFN-32
TM32F039M6	Cortex M0	96M	64K	eflash	8K	45	18-ch	1*10bit	4	3	2	3	1	1	1	5	1	2	Y	4-ch	1.8~5.5V	LQFP-48
TM32F067F6	Cortex M0	96M	64K	eflash	10K	22	18-ch	1*10bit	3	2	1	2	1	1	0	4	1	1	--	2-ch	2.0~5.5V	SSOP-24
TM32F067G6	Cortex M0	96M	64K	eflash	10K	25	18-ch	1*10bit	3	2	1	2	1	1	0	4	1	1	--	2-ch	2.0~5.5V	SSOP/QFN-28



## 快速选型

## 电源选型

## LDO

P/N	Vin	Output Voltages	Output Current	Quiescent Current	PSRR	Package
HTB6223	1.7~5.5V	0.8~5V	300mA	40uA	90dB	SOT23-5,DFN1X1-4L
HTB6233	1.7~5.5V	1.2~3.6V	200mA	0.1uA	75dB	SOT23-5,DFN1X1-4L
HTB6236	2~7V	1.2~5V	500mA	0.4uA	45dB	SOT23-5,DFN1X1-4L
HTB75XX	36V	2.5~5V	100mA	2uA	60dB	SOT23-3,SOT-89
HTB73XX	48V	1.8~5V	300mA	3uA	60dB	SOT23-3,SOT-89
HTB78LXX	30V	3.3~18V	100mA	1.5mA	49dB	TO-92,SOT-89-3L
HTB78RXX	30V	3.3~15V	200mA	2mA	40dB	SOT-89
HTB78MXX	35V	5~24V	500mA	6mA	62dB	TO-252-2L
HTB78XX	35V	5~24V	1.5A	8mA	73dB	TO-220,TO-252-2L
HTB1117B	15V	1.2~5V	1A	10mA	75dB	SOT-223-3L,SOT89-3 TO-252-2L

## AC-DC

P/N	Output Voltages	Output Current	MOSFET (BV)	Topology	Fsw Max	Package
HT7236AC	5V	300mA	500V	BUCK	30K	ASOP-7
HTB7203	5V	200mA	650V	Buck,Buck-Boost	45K	SOP-7
HTB7205	5V	150mA/300mA	650V	Buck,Buck-Boost	40K	SOP-8
HTB7212	12V	400mA/550mA	650V	Buck,Buck-Boost	70K	DIP-7
HTB7215	15V	450mA	650V	Buck,Buck-Boost	70K	DIP-7
HTB7218	18V	350mA/500mA	650V	Buck,Buck-Boost	70K	DIP-7
HTB7225	12V/15V	300mA/450mA	650V	Buck,Buck-Boost	70K	SOP-8
HTB7228	12V/18V	300mA/450mA	650V	Buck,Buck-Boost	70K	SOP-8
HTB7210	5V	30mA	650V	斩波+LDO	--	SOP/DIP-8

## DC-DC

P/N	Vin	Output Voltages	Output Current	Topology	MOSFET Vds	Package
HTB7315	36~120V	15V	350mA	BUCK	150V	SOP-8
HTB7316	18~120V	15V	350mA	BUCK	150V	SOP-8
HTB7325	25~170V	5V	500mA/800mA	BUCK	200V	SOP-7
HTB7326	25~120V	5V	1.2A	BUCK	150V	SOP-8
HTB7458	8~100V	adj	100mA~3A	BUCK	100V	ESOP-8
HTB73232	3.7~23V	adj	2A	BUCK	25V	TSOT23-6

## Battery-Management

P/N	VDD Max	LDO	Op Amp	DA	Fan control module	Package
HTB7825	20V	Y 5V/25mA	Y datum-adjusted by DA	Y	Y	SOP-16

## 快速选型

## 其他产品选型

## I/O Type MCU Series

P/N	CPU CORE	ROM		RAM bytes	GPIO	USB Interface	Timer	WUP	I80	SPI	PWM	USB FIRC	RTC	Voltage Range	Max. Freq.
		Size	Type												
TMU3131F8	RISC	8K*14	Flash	160+128	16	Full speed	2	--	--	64-bytes	1	V	--	4.5~5.5	12 MHz
TMU3132LV	RISC	4K*14	MTP	160+128	16	Full speed	1	--	--	64-bytes	--	V	--	4.5~5.5	12 MHz

## USB Audio ASSP Series

P/N	Description	USB Interface	ADC	SPI	Buz	PWM Class-D	Max. Output	Voltage Range	Max. Freq.	Package
TP6902	USB speaker	Full speed	6-bit *1	--	--	2-ch	1.2W	4.5~5.5	12 MHz	HSOP-28



## A/D Converter

P/N	Type	ADC Output	ENOB	Conversion Rate	Build-in Amp.	Input Channel	I/F	Operating Volt.	Package
TR8124	Sigma-Delta	24-bit	17.5 bits	10Hz~3.9KHz SPS	PGA(max 128x)	2 differential	I <sup>2</sup> C	2.4~3.6	SOP-16

## TK ASIC

P/N	TK-ch	Operation Current	Operation Voltage	LVR	Select Mode	Package
TK8811CS	1-key	2.7uA@3V	2.2V~5.5V	2.0V	Direct/Toggle	SOT23-6,DFN-6

## Display Driver

P/N	VDD	DOT	Bias	SEG Current(mA)	GRID Current(mA)	Built-in OSC	PWM Gray Scale	EXT. Crystal	Max Key Scanning	Interface	Package
HTC650E	3~5.5V	8*4	--	30	100	√	8	--	7*4	2-Wire Serial	DIP/SOP-16
HTC1616	3~5.5V	7*4	--	30	100	√	8	--	--	3-Wire Serial	DIP/SOP-16
HTC1617	3~5.5V	7*3~8*2	--	30	100	√	8	--	6*1	3-Wire Serial	DIP/SOP-16
HTC1620	3~5.5V	8*6~10*4	--	30	100	√	8	--	--	3-Wire Serial	SOP-20
HTC1620B	3~5.5V	6*7~9*4	--	30	100	√	8	--	6*1	3-Wire Serial	SOP-20
HTC1621	2~5.5V	32*4	1/2,1/3	--	--	√	--	√	--	4-Wire Serial	SSOP-48/24,LQFP-44
HTC1627	3~5.5V	10*7~13*4	--	30	100	√	8	--	10*2	3-Wire Serial	SOP-28
HTC1628	3~5.5V	10*7~13*4	--	30	100	√	8	--	10*2	3-Wire Serial	SOP/SSOP-28
HTC1629(3 line)	3~5.5V	16*8	--	30	100	√	8	--	8*4	3-Wire Serial	QFP/LQFP-44
HTC1629(4 line)	3~5.5V	16*8	--	30	100	√	8	--	8*4	4-Wire Serial	QFP/LQFP-44
HTC1629A	3~5.5V	16*8	--	30	100	√	8	--	--	3-Wire Serial	SOP/LQFP-32
HTC1629B	3~5.5V	14*8	--	30	100	√	8	--	8*2	3-Wire Serial	SOP/LQFP-32
HTC1629C	3~5.5V	15*8	--	30	100	√	8	--	8*1	3-Wire Serial	SOP/LQFP-32
HTC1629D	3~5.5V	12*8	--	30	100	√	8	--	8*4	3-Wire Serial	SOP/LQFP-32
HTC1640	3~5.5V	8*16	--	30	100	√	8	--	--	2-Wire I2C	SOP/SSOP-28
HTC1668	3~5.5V	10*7~13*4	--	30	100	√	8	--	10*2	3-Wire Serial	SOP/SSOP/QFN-24
HTC1740	3~5.5V	8*16	--	80	100	√	16	--	--	2-Wire I2C	SOP/ESSOP-28
HTC6932	3~5.5V	8*16	--	30	100	√	8	--	--	3-Wire Serial	SOP-32

## Thermometer

P/N	VDD	UVLO	LCD	Bias/Duty	Range(°C)	Mode	Built-in OSC	EXT. Crystal	Package
HTC1501	1.25~1.65V	1.3±0.05V	10*3	1/2bias,1/3duty	32.0~42.9,±0.1	°C/°F	√	√	COB

## Gate Drive

型号	耐压 (V)	电源电压(V)	输入逻辑	驱动类型	IO+/IO-	死区时间 (ns)	Ton/Toff(ns)	VCC(UV+/UV-)	封装
HTB6220T	200	7~20V	HIN/LIN	三相	1.0A/1.0A	200	250/250	6.4V/6V	TSSOP-20L

## Amplifier

型号	电源电压 (V)	低电源电流	输入偏置和失调参数	差分输入电压	开环差分电压增益	封装
HTB358	单电源: 3-36V 双电源: ±1.5~±18V	0.7mA	输入失调电压: 3mV 输入失调电流: 2nA 输入偏置电流: 20nA	±36V	100dB	SOP/MSOP-8
HTC358LV	6V	130uA	输入失调电压: 4mV 输入失调电流: 1nA 输入偏置电流: 20nA	/	110dB	SOP/MSOP-8

## Darlington Tube Drive Circuit

型号	输入电压 (V)	集电极-发射极电压(V)	达林顿管驱动个数	输出电流 (单路)	静态电流	封装
ULN2001D	30	50	3	500mA	50uA	SOP/DIP-8
ULN2003	30	50	7	500mA	50uA	SOP/DIP-16



# 海速芯（杭州）科技有限公司

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