MindMotion
SoC Solutions



MM32 MCU

灵动微电子 MindMotion Microelectronics

MCU Product and Solution Provider



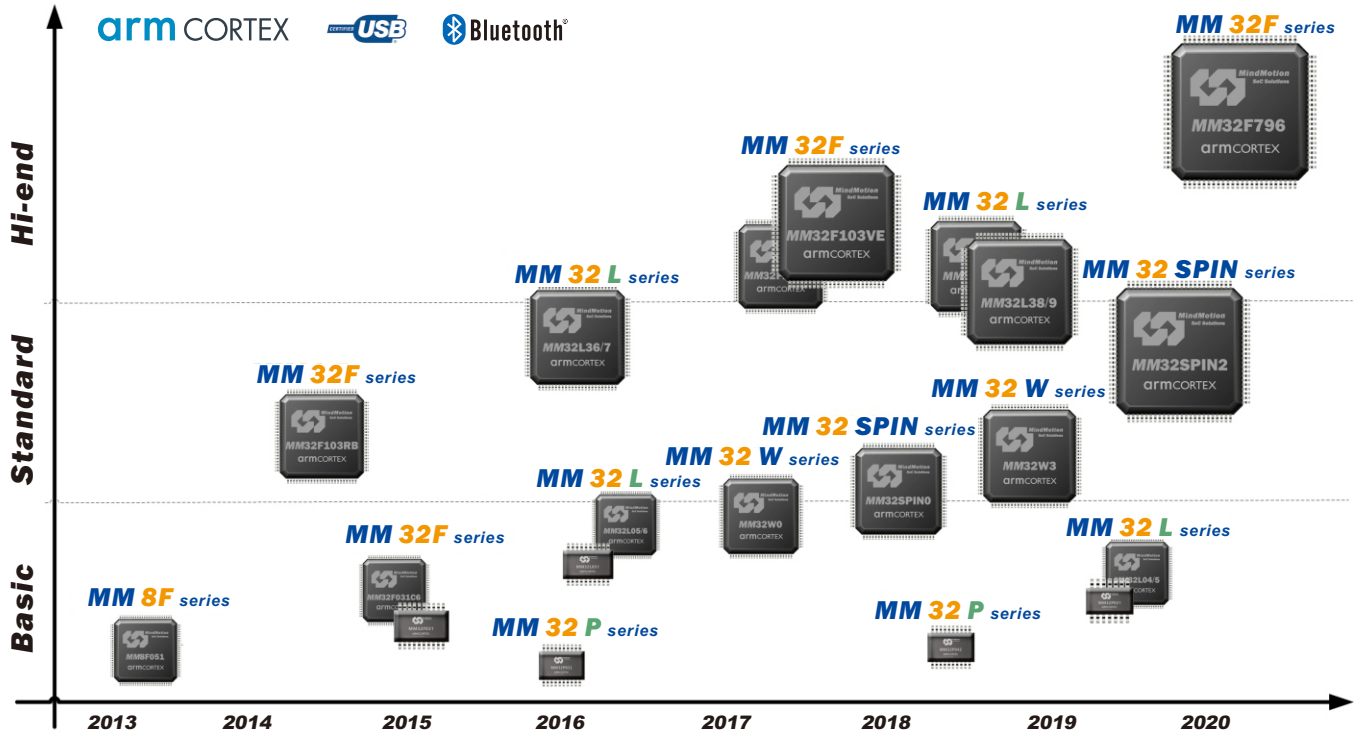
MindMotion Microelectronics is a leading domestic solution provider in both MCU design and application field. Since March 2011, MindMotion has successfully designed and promoted hundreds of MCU products. The following series of MindMotion MCU products, based on Arm Cortex-M0 and Cortex-M3 core, are available in both batch and sample supplies: the MM32F is designed for general purpose and high performance market, the MM32L falls in ultra-low power and high safty applications field, the MM32W is designed for multiple wireless connectivity, the MM32SPIN is designed for motor drive and power, and the MM32P is a Ultra Value product. The MindMotion products and solutions are widely used in industrial control systems, smart homes, wearable applications, automotive electronics, instrumentations, and many other fields.

With deep understanding of MCU market, MindMotion provides a "cradling style" service through our comprehensive support tailored to our customers' needs. And, by interacting with our customers in the early stage of co-operation, MindMotion provides integrated complete solution. Not only the software algorithm and example code, but also the product definition and market analysis, MindMotion provides valuable services to help our customers achieve great success.

灵动微电子是国内专注于MCU产品与MCU应用方案的领先供应商，是中国工业及信息化部和上海市信息化办公室认定的集成电路设计企业，同时也是上海市认定的高新技术企业。自2011年3月成立至今，灵动微电子已经成功完成数百余MCU产品的设计及推广，灵动微电子目前已批量供货的基于Arm Cortex-M0及Cortex-M3内核的MCU产品包括：针对通用高性能市场的MM32F系列，针对超低功耗及安全应用的MM32L系列，具有多种无线连接功能的MM32W系列，电机及电源专用的MM32SPIN系列，以及超精简型的MM32P系列等，以满足客户及市场多领域、多层次的丰富应用场景需求。

灵动微电子立足本土，洞悉市场，贴近客户，以为客户提供“保姆式”的全方位支持为特色，坚持“专业、可靠、便捷、高效”的服务理念，贯彻差异最大化，成本最优化的经营策略，不断强化自身生态价值，维护良好产品品牌。公司在销售初期就与客户充分接触，为客户提供产品整体解决方案，从产品功能定义、市场竞争力分析到算法整合、软件驱动、应用例程等都深入参与，为客户提供精准的市场分析和全面的应用方案，帮助客户把握好成功的每一个重要环节。

MM32 MCU Roadmap 产品路线图



MM32 MCU Family 产品家族

MM32 F series —— General Purpose & High Performance 通用高性能微控制器产品

MM32 L series —— Low Power & High Safety 低功耗高安全微控制器产品

MM32 SPIN series —— Motor Drive & Power 电机及电源专用微控制器产品

MM32 W series —— Wireless Connectivity 无线微控制器产品

MM32 P series —— Ultra Value 超精简型微控制器产品

MM32F00 Series: 32-bit Arm® Cortex®-M0 Value MCUs 精简型微控制器

Series	Part No.	Max Speed (MHz)	Memory (KBytes)		I/O	Timer Functions			Connectivity			Analog Interface	Package
			Flash	RAM		Advanced TM	GPTM	WDG	UART	I²C	SPI	ADC	
MM32F003	MM32F003TW	48	16	2	16	1	5	2	1	1	1	8×12bit	TSSOP20
	MM32F003NW	48	16	2	16	1	5	2	1	1	1	8×12bit	QFN20

MM32F031 Series: 32-bit Arm® Cortex®-M0 Standard MCUs 标准型微控制器

Series	Part No.	Max Speed (MHz)	Memory (KBytes)		I/O	Timer Functions			Connectivity			Analog Interface	Package
			Flash	RAM		Advanced TM	GPTM	WDG	UART	I²C	SPI	ADC	
MM32F031	MM32F031F4P6	72	16	4	16	1	5	2	1	1	1	9×12bit	TSSOP20
	MM32F031F4U6	72	16	4	16	1	5	2	1	1	1	9×12bit	QFN20
	MM32F031K4U6	72	16	4	27	1	5	2	1	1	1	10×12bit	QFN32
	MM32F031K4T6	72	16	4	25	1	5	2	1	1	1	10×12bit	LQFP32
	MM32F031C4T6	72	16	4	39	1	5	2	1	1	1	10×12bit	LQFP48
	MM32F031F6P6	72	32	4	16	1	5	2	1	1	1	9×12bit	TSSOP20
	MM32F031F6U6	72	32	4	16	1	5	2	1	1	1	9×12bit	QFN20
	MM32F031K6U6	72	32	4	27	1	5	2	1	1	1	10×12bit	QFN32
	MM32F031K6T6	72	32	4	25	1	5	2	1	1	1	10×12bit	LQFP32
	MM32F031C6T6	72	32	4	39	1	5	2	1	1	1	10×12bit	LQFP48
	MM32F031K8U6	72	64	8	27	1	5	2	2	1	1	10×12bit	QFN32
	MM32F031K8T6	72	64	8	25	1	5	2	2	1	1	10×12bit	LQFP32
	MM32F031C8T6	72	64	8	39	1	5	2	2	1	2	10×12bit	LQFP48

MM32F032 Series: 32-bit Arm® Cortex®-M0 Standard MCUs 标准型微控制器

Series	Part No.	Max Speed (MHz)	Memory (KBytes)		I/O	Timer Functions				Connectivity			Analog Interface	Package
			Flash	RAM		Advanced TM	GPTM	WDG	RTC	UART	I²C	SPI	ADC	
MM32F032	MM32F032K6U6	72	32	8	26	1	5	2	Y	2	1	1	10×12bit	QFN32
	MM32F032K6T6	72	32	8	24	1	5	2	Y	2	1	1	10×12bit	LQFP32
	MM32F032C6T6	72	32	8	38	1	5	2	Y	2	1	2	10×12bit	LQFP48
	MM32F032R6T6	72	32	8	55	1	5	2	Y	2	1	2	10×12bit	LQFP64
	MM32F032K8U6	72	64	16	26	1	5	2	Y	2	1	1	10×12bit	QFN32
	MM32F032K8T6	72	64	16	24	1	5	2	Y	2	1	1	10×12bit	LQFP32
	MM32F032C8T6	72	64	16	38	1	5	2	Y	2	1	2	10×12bit	LQFP48
	MM32F032R8T6	72	64	16	55	1	5	2	Y	2	1	2	10×12bit	LQFP64

MM32**F103** Series: 32-bit Arm® Cortex®-M3 Standard MCUs 标准型微控制器

Series	Part No.	Max Speed (MHz)	Memory (KBytes)		I/O	Timer Functions				Connectivity					Analog Interface	Package
			Flash	RAM		Advanced TM	GPTM	WDG	RTC	UART	I²C	SPI	USB 2.0FS	CAN 2.0B	ADC	
MM32F103	MM32F103K8U6	96	64	20	25	1	3	2	Y	2	1	1	1	1	10×12bit	QFN32
	MM32F103K8T6	96	64	20	23	1	3	2	Y	2	1	1	1	1	10×12bit	LQFP32
	MM32F103C8T6	96	64	20	37	1	3	2	Y	3	2	2	1	1	10×12bit	LQFP48
	MM32F103R8T6	96	64	20	51	1	3	2	Y	3	2	2	1	1	16×12bit	LQFP64
	MM32F103KBU6	96	128	20	25	1	3	2	Y	2	1	1	1	1	10×12bit	QFN32
	MM32F103KBT6	96	128	20	23	1	3	2	Y	2	1	1	1	1	10×12bit	LQFP32
	MM32F103CBT6	96	128	20	37	1	3	2	Y	3	2	2	1	1	10×12bit	LQFP48
	MM32F103RBT6	96	128	20	51	1	3	2	Y	3	2	2	1	1	16×12bit	LQFP64

MM32**F103** Series: 32-bit Arm® Cortex®-M3 High Performance MCUs 高性能微控制器

Series	Part No.	Typical Speed (MHz)	Memory (KBytes)		I/O	Timer Functions				Connectivity						Analog Interface		Package
			Flash	RAM		Advanced TM	GPTM	WDG	RTC	UART	I²C	SPI	USB 2.0FS	CAN 2.0B	SDIO	ADC	COMP	
MM32F103	MM32F103KCU6	144	256	64	25	2	6	2	Y	7	1	2	1	1		7×12bit	2	QFN32
	MM32F103KCT6	144	256	64	23	2	6	2	Y	7	1	2	1	1		7×12bit	2	LQFP32
	MM32F103CCT6	144	256	64	37	2	6	2	Y	8	2	3	1	1		7×12bit	2	LQFP48
	MM32F103RCT6	144	256	64	51	2	6	2	Y	8	2	3	1	1	1	7×12bit	2	LQFP64
	MM32F103VCT6	144	256	64	80	2	6	2	Y	8	2	3	1	1	1	7×12bit	2	LQFP100
	MM32F103KEU6	144	512	128	25	2	6	2	Y	7	1	2	1	1		7×12bit	2	QFN32
	MM32F103KET6	144	512	128	23	2	6	2	Y	7	1	2	1	1		7×12bit	2	LQFP32
	MM32F103CET6	144	512	128	37	2	6	2	Y	8	2	3	1	1		7×12bit	2	LQFP48
	MM32F103RET6	144	512	128	51	2	6	2	Y	8	2	3	1	1	1	7×12bit	2	LQFP64
	MM32F103VET6	144	512	128	80	2	6	2	Y	8	2	3	1	1	1	7×12bit	2	LQFP100

MM32**L0** Series: 32-bit Arm® Cortex®-M0 Low Power MCUs 低功耗微控制器

Series	Part No.	Max Speed (MHz)	Memory (KBytes)		I/O	Timer Functions				Connectivity					Analog Interface		Package
			Flash	RAM		Advanced TM	GPTM	WDG	RTC	UART	I²C	SPI	USB 2.0FS	CAN 2.0B	ADC	COMP	
MM32L050	MM32L050TW	48	32	4	16	1	5	2		1	1	1				2	TSSOP20
	MM32L050NT	48	32	4	27	1	5	2		2	1	1				2	QFN32
	MM32L050PT	48	32	4	25	1	5	2		2	1	1				2	LQFP32
	MM32L050PF	48	32	4	39	1	5	2		2	1	2				2	LQFP48
MM32L051	MM32L051TW	48	32	4	16	1	5	2		1	1	1			9×12bit	2	TSSOP20
	MM32L051NT	48	32	4	27	1	5	2		2	1	1			10×12bit	2	QFN32
	MM32L051PT	48	32	4	25	1	5	2		2	1	1			10×12bit	2	LQFP32
	MM32L051PF	48	32	4	39	1	5	2		2	1	2			10×12bit	2	LQFP48
MM32L062	MM32L062NT	48	64	8	26	1	5	2	Y	2	1	1	1		10×12bit	2	QFN32
	MM32L062PT	48	64	8	24	1	5	2	Y	2	1	1	1		10×12bit	2	LQFP32
	MM32L062PF	48	64	8	38	1	5	2	Y	2	1	2	1		10×12bit	2	LQFP48
	MM32L062PS	48	64	8	55	1	5	2	Y	2	1	2	1		10×12bit	2	LQFP64

MM32**L0** Series: 32-bit Arm® Cortex®-M0 Low Power MCUs 低功耗微控制器

Series	Part No.	Max Speed (MHz)	Memory (KBytes)		I/O	Timer Functions				Connectivity					Analog Interface		Package
			Flash	RAM		Advanced TM	GPTM	WDG	RTC	UART	I²C	SPI	USB 2.0FS	CAN 2.0B	ADC	COMP	
MM32L063	MM32L063NT	48	64	8	26	1	5	2	Y	2	1	1	1	Y	10×12bit	2	QFN32
	MM32L063PT	48	64	8	24	1	5	2	Y	2	1	1	1	Y	10×12bit	2	LQFP32
	MM32L063PF	48	64	8	38	1	5	2	Y	2	1	2	1	Y	10×12bit	2	LQFP48
	MM32L063PS	48	64	8	55	1	5	2	Y	2	1	2	1	Y	10×12bit	2	LQFP64

MM32**L3** Series: 32-bit Arm® Cortex®-M3 Low Power MCUs 低功耗微控制器

Series	Part No.	Max Speed (MHz)	Memory (KBytes)		I/O	Timer Functions				Connectivity						Analog Interface		Package
			Flash	RAM		Advanced TM	GPTM	WDG	RTC	UART	I²C	SPI	USB 2.0FS	CAN 2.0B	SDIO	ADC	DAC	
MM32L362	MM32L362NT	96	64	20	25	1	3	2	Y	2	1	1	1			10×12bit	2×12bit	QFN32
	MM32L362PT	96	64	20	23	1	3	2	Y	2	1	1	1			10×12bit	2×12bit	LQFP32
	MM32L362PF	96	64	20	37	1	3	2	Y	3	2	2	1			10×12bit	2×12bit	LQFP48
	MM32L362PS	96	64	20	51	1	3	2	Y	3	2	2	1			16×12bit	2×12bit	LQFP64
MM32L373	MM32L373NT	96	128	20	25	1	3	2	Y	2	1	1	1	1		10×12bit	2×12bit	QFN32
	MM32L373PT	96	128	20	23	1	3	2	Y	2	1	1	1	1		10×12bit	2×12bit	LQFP32
	MM32L373PF	96	128	20	37	1	3	2	Y	3	2	2	1	1		10×12bit	2×12bit	LQFP48
	MM32L373PS	96	128	20	51	1	3	2	Y	3	2	2	1	1		16×12bit	2×12bit	LQFP64
MM32L384	MM32L384NT	96	256	64	25	2	6	2	Y	7	1	2	OTG	1		7×12bit		QFN32
	MM32L384PT	96	256	64	23	2	6	2	Y	7	1	2	OTG	1		7×12bit		LQFP32
	MM32L384PF	96	256	64	37	2	6	2	Y	8	2	3	OTG	1		7×12bit		LQFP48
	MM32L384PS	96	256	64	51	2	6	2	Y	8	2	3	OTG	1	1	7×12bit		LQFP64
	MM32L384PH	96	256	64	80	2	6	2	Y	8	2	3	OTG	1	1	7×12bit		LQFP100
MM32L395	MM32L395NT	96	512	128	25	2	6	2	Y	7	1	2	OTG	1		7×12bit		QFN32
	MM32L395PT	96	512	128	23	2	6	2	Y	7	1	2	OTG	1		7×12bit		LQFP32
	MM32L395PF	96	512	128	37	2	6	2	Y	8	2	3	OTG	1		7×12bit		LQFP48
	MM32L395PS	96	512	128	51	2	6	2	Y	8	2	3	OTG	1	1	7×12bit		LQFP64
	MM32L395PH	96	512	128	80	2	6	2	Y	8	2	3	OTG	1	1	7×12bit		LQFP100

MM32**W0** Series: 32-bit Arm® Cortex®-M0 Wireless MCUs 无线微控制器

Series	Part No.	Max Speed (MHz)	Memory (KBytes)		I/O	Timer Functions			Connectivity					Analog Interface		Package
			Flash	RAM		Advanced TM	GPTM	WDG	UART	I²C	SPI	USB 2.0FS	CAN 2.0B	ADC	COMP	
MM32W051	MM32W051NTB	48	32	4	22	1	5	2	2	1	1			7×12bit	1	QFN32
	MM32W051PFB	48	32	4	28	1	5	2	2	1	1			10×12bit	1	LQFP48
MM32W062	MM32W062NTB	48	64	8	22	1	5	2	2	1	1	1		5×12bit	2	QFN32
	MM32W062PFB	48	64	8	28	1	5	2	2	1	1	1		10×12bit	2	LQFP48
MM32W073	MM32W073NTB	48	128	8	22	1	5	2	2	1	1	1	1	7×12bit	2	QFN32
	MM32W073PFB	48	128	8	28	1	5	2	2	1	1	1	1	10×12bit	2	LQFP48

MM32**W3** Series: 32-bit Arm® Cortex®-M3 Wireless MCUs 无线微控制器

Series	Part No.	Max Speed (MHz)	Memory (KBytes)		I/O	Timer Functions				Connectivity					Analog Interface		Package
			Flash	RAM		Advanced TM	GPTM	WDG	RTC	UART	I²C	SPI	USB 2.0FS	CAN 2.0B	ADC	DAC	
MM32W362	MM32W362PFB	96	64	20	27	1	3	2	Y	3	2	1	1		7×12bit	2×12bit	LQFP48
	MM32W362PSB	96	64	20	40	1	3	2	Y	3	2	1	1		13×12bit	2×12bit	LQFP64
MM32W373	MM32W373PFB	96	128	20	27	1	3	2	Y	3	2	1	1	1	7×12bit	2×12bit	LQFP48
	MM32W373PSB	96	128	20	40	1	3	2	Y	3	2	1	1	1	13×12bit	2×12bit	LQFP64
MM32W384	MM32W384PSB	96	256	64	40	2	6	2	Y	7	2	1	OTG	1	7×12bit		LQFP64
MM32W395	MM32W395PSB	96	512	128	40	2	6	2	Y	7	2	1	OTG	1	7×12bit		LQFP64

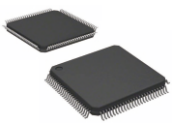
MM32**SPIN** Series: 32-bit Arm® Cortex®-M Motor Control and Power MCUs 电机与电源专用微控制器

Series	Part No.	Max Speed (MHz)	Memory (KBytes)		I/O	DIV (32bit)	Timer Functions			Connectivity				Analog Interface				Package
			Flash	RAM			Advanced TM	GPTM	WDG	UART	I²C	SPI	CAN 2.0B	ADC	DAC	OPA	COMP	
MM32SPIN Controller MCU	MM32SPIN05TW	72	32	4	16	1	1	5	2	2	1	1		9×12bit			1	TSSOP20
	MM32SPIN05NW	72	32	4	16	1	1	5	2	2	1	1		9×12bit			1	QFN20
	MM32SPIN05NT	72	32	4	27	1	1	5	2	2	1	1		10×12bit			1	QFN32
	MM32SPIN05PT	72	32	4	25	1	1	5	2	2	1	1		10×12bit			1	LQFP32
	MM32SPIN05PF	72	32	4	39	1	1	5	2	2	1	2		10×12bit			1	LQFP48
	MM32SPIN06NT	96	64	8	26	1	1	5	2	2	1	1	1	10×12bit			2	QFN32
	MM32SPIN06PF	96	64	8	38	1	1	5	2	2	1	2	1	10×12bit			2	LQFP48
	MM32SPIN06PS	96	64	8	55	1	1	5	2	2	1	2	1	10×12bit			2	LQFP64
	MM32SPIN25TW	96	32	8	15	1	2	5	2	2	1	1		10×12bit		1	2	TSSOP20
	MM32SPIN25PT	96	32	8	25	1	2	5	2	2	1	1		11×12bit		2	2	LQFP32
	MM32SPIN25PF	96	32	8	40	1	2	5	2	2	1	2		16×12bit		4	5	LQFP48
	MM32SPIN25NF	96	32	8	40	1	2	5	2	2	1	2		16×12bit		4	5	QFN48
	MM32SPIN27PT	96	128	12	25	1	2	5	2	2	1	1		11×12bit		2	2	LQFP32
	MM32SPIN27PF	96	128	12	40	1	2	5	2	2	1	2		16×12bit		4	5	LQFP48
	MM32SPIN27NF	96	128	12	40	1	2	5	2	2	1	2		16×12bit		4	5	QFN48
	MM32SPIN27PS	96	128	12	56	1	2	5	2	2	1	2		16×12bit		4	5	LQFP64
	MM32SPIN46PF	96	64	20	37	1	1	3	2	3	2	2	1	10×12bit	2×12bit			LQFP48
	MM32SPIN47PF	96	128	20	37	1	1	3	2	3	2	2	1	10×12bit	2×12bit			LQFP48
	MM32SPIN48PS	120	256	64	51	1	2	6	2	3	2	2	1	7×12bit			2	LQFP64

MM32**SPIN** Series: 32-bit Arm® Cortex®-M Motor Driver MCUs 电机驱动专用微控制器

Series	Part No.	Max Speed (MHz)	Memory (KBytes)		I/O	DIV (32bit)	Timer Functions			Connectivity				Analog Interface			Driver	Mosfet	Package
			Flash	RAM			Advanced TM	GPTM	WDG	UART	I²C	SPI	CAN 2.0B	ADC	COMP	OPA			
MM32SPIN Driver MCU	MM32SPIN120B	72	32	4	16	1	1	5	2	1	1	2		8×12bit	1		2phase		QFN32
	MM32SPIN160C	72	32	4	13	1	1	5	2	1	1	1		9×12bit	1		3phase		QFN32
	MM32SPIN320B	96	128	12	16	1	2	5	2	2	1	1		8×12bit	2	1	2phase		QFN32
	MM32SPIN360C	96	128	12	29	1	2	5	2	2	1	1		16×12bit	3	3	3phase		QFN48
	MM32SPIN222C	72	32	4	13	1	1	5	2	1	1	1		9×12bit	1		3phase	1.5A	QFN32
	MM32SPIN422C	96	128	12	13	1	2	5	2	2	1	1		9×12bit	2	2	3phase	1.5A	QFN32

MM32 MCU Package 封装形式



LQFP100
14×14mm



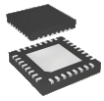
LQFP64
10×10mm



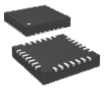
LQFP48
7×7mm



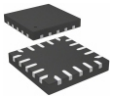
LQFP32
7×7mm



QFN32
5×5mm



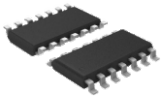
QFN28
4×4mm



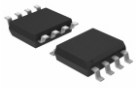
QFN20
3×3mm



TSSOP20
6.5×4.4mm



SOP14
8.65×3.9mm



SOP8
4.8×3.9mm

Technical Platform 技术平台

MindSafe™ MindSPIN™ MindPower™

MindSafe-MM32 MCU 专有安全技术

Code Protection代码保护

UID + UCID
唯一身份编码+唯一客户编码

Flash Code Protection
闪存代码保护机制

- Read Protection 读保护
- Region Protection 分区保护
- Security Space 安全空间

Physical Flash Data Scrambling
闪存数据物理加扰

Debug Port Protection
调试接口保护



Encryption传输加密

CRC 循环冗余校验

AES Encryption 高级加密标准加密

- AES-128
- AES-192
- AES-256

True Random Number Generation
真随机数发生器

Safe Downloading安全下载

MM32 - LINK专有调试烧录器
- Cloud Download 云下载
- Burning Count Control 烧录次数控制
- Encrypted Code Transfer 代码加密传输

Support 3rd Party Downloader Development
支持定制烧录器开发

Application 热门应用



RC Servo 机器人舵机



Power Tool 电动工具



PC/Gaming Accessory PC/游戏外设



BLE Remote Control 蓝牙遥控



Auto Electronics 车用电子



Display Solution 高清显示



E-Vehicles 电动车



Wireless Charger 无线充



DC Fan 直流变频风扇



Intelligent Lock 智能锁



Vacuum Cleaner 手持吸尘器



Thermal Printer 热敏打印机



Smart Tag 智能标签



LED Display LED显示

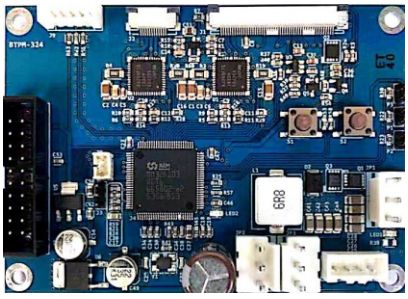


E-Cigarette 电子烟



Smart Meter 智能仪表




MM32 MCU 型号

MM32F103VET6

Characteristics 方案特色

- 一维/二维码打印
- 票据打印
- 有线/无线打印

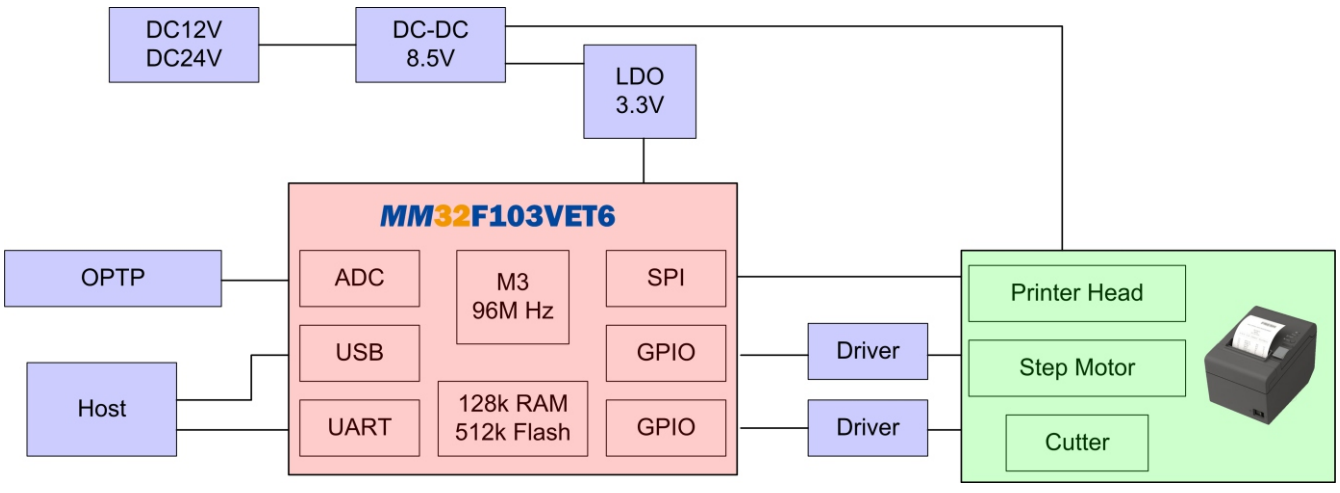
Specifications 方案规格

- Arm Cortex-M3最高运行至144MHz
- 支持SEKIO机芯

  12V：CAPD-245 / CAPD-345 / LTP01-245

  24V：CAPD-247 / CAPD-347

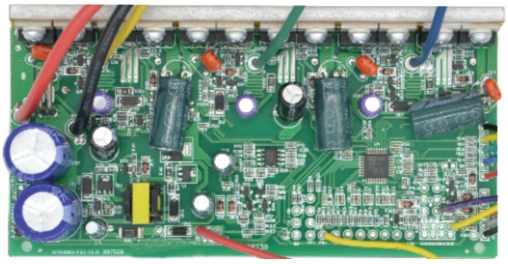
Block Diagram 系统框图













MM32 MCU 型号

MM32SPIN27

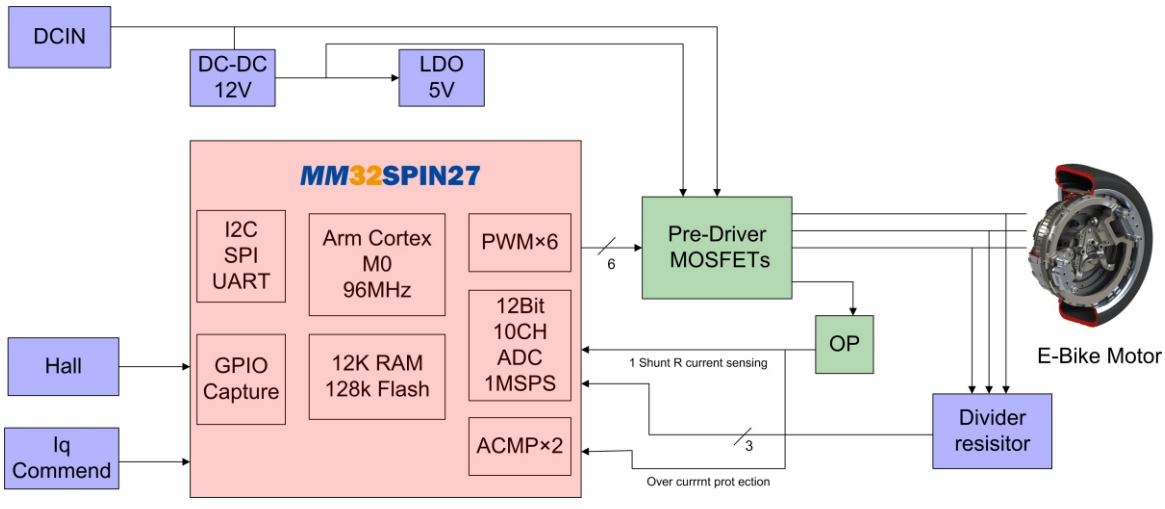
Characteristics 方案特色

- 三模FOC高效率
- 支持霍尔启动与运动控制

Specifications 方案规格

- Arm Cortex-M0 最高可运行至96MHz
- 支持三模驱动
- 单电阻三相电流采样
- 限速，限流，防盗功能
- 定速巡航
- 保护功能：过流，欠压，堵转保护
- 电压：48V

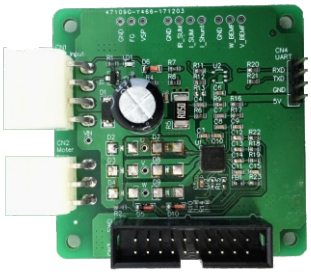
Block Diagram 系统框图

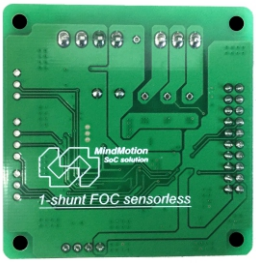














MM32 MCU 型号

MM32SPIN222C

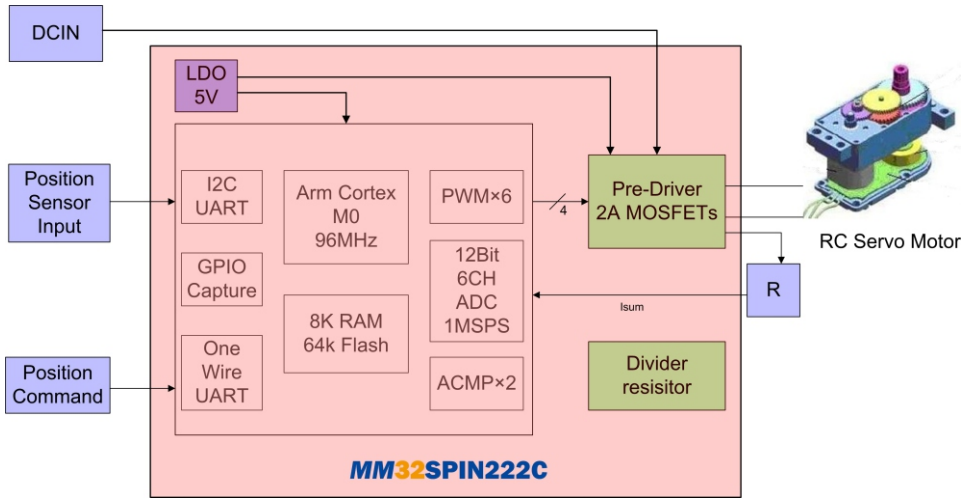
Characteristics 方案特色

- 高效率，集成度高
- 一体化

Specifications 方案规格

- Arm Cortex-M0 最高可运行至96MHz
- 内建 Gate driver 及 20V/2A MOS管×6
- 内建 5V LDO
- 内建单线半双工 UART 通讯功能
- 位置 / 速度控制
- 保护功能：过流保护
- 电压范围：5~15V

Block Diagram 系统框图





MM32 MCU 型号

- MM32FPRNT
- MM32F003NW
- MM32L07x

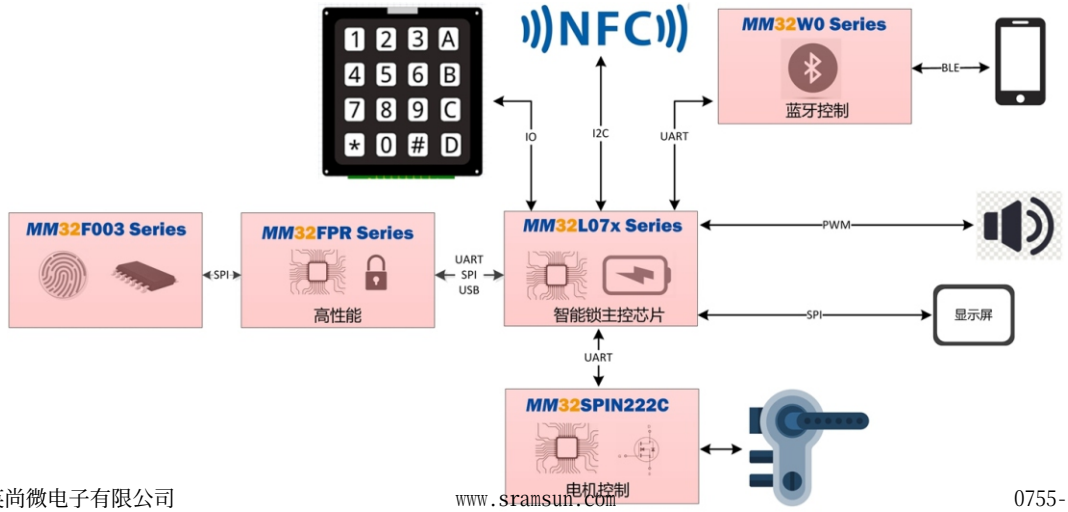
Characteristics 方案特色

- 指纹、蓝牙、按键、NFC开锁
- 指纹识别率高、指纹比对时间短、响应速度快、待机功耗低

Specifications 方案规格

- Arm Cortex M3 最高可运行至144Mhz
- 内置512K Flash和128K SRAM，支持多种指纹存储
- 待机功耗0.4uA，待机唤醒时间230us
- 支持多种数据采集方式
- 丰富的数据通信方式：UART\SPI\I2C\USB
- 通过特斯拉测试

Block Diagram 系统框图



MM32-LINK 调试器



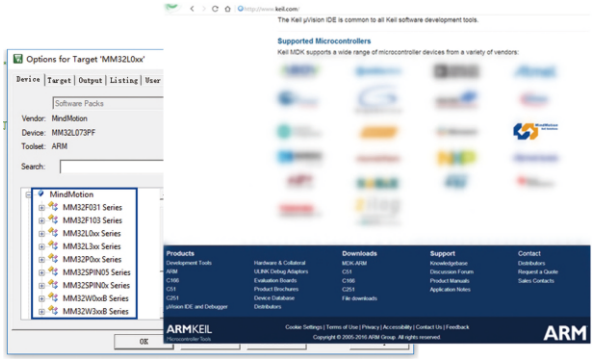
- MindMotion MM32 Full Series MCU Emulation & Debugging Supported
- Downloading Debugging (In KEIL / IAR Environment) Supported
- SWD Downloading/Debugging Supported, 2.54mm Standard 20 pin Socket
- 支持灵动MM32全系列MCU仿真调试
- 支持KEIL 、IAR环境下进行下载调试
- 支持 SWD 下载调试，2.54mm 标准 20 芯 JTAG 插座

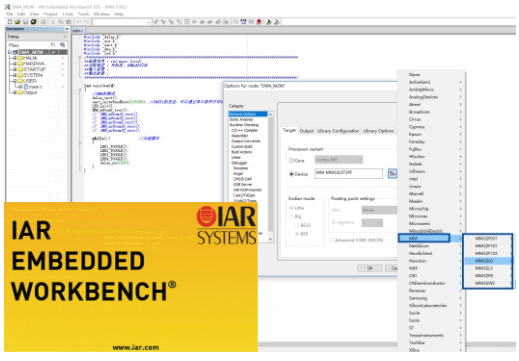
MM32-LINK 下载器

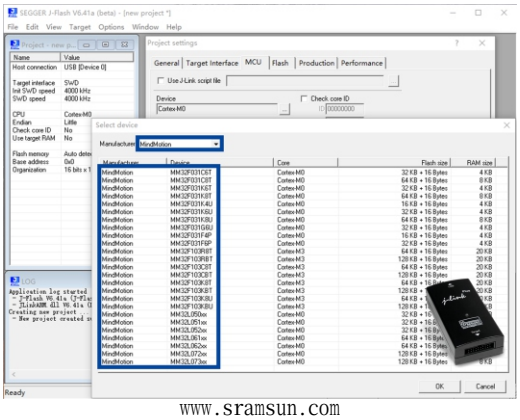


- Program Downloading with SWD Interface and Chip Communication Inside
- Support Online & Offline Burning
- Data Error Checking Function Inside
- 采用SWD接口与芯片通信实现程序下载
- 支持脱机烧录和在线烧录
- 数据正误校验功能

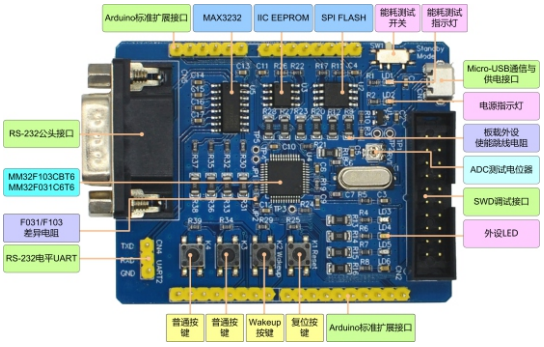
3-rd Party Tool Chain 第三方工具链



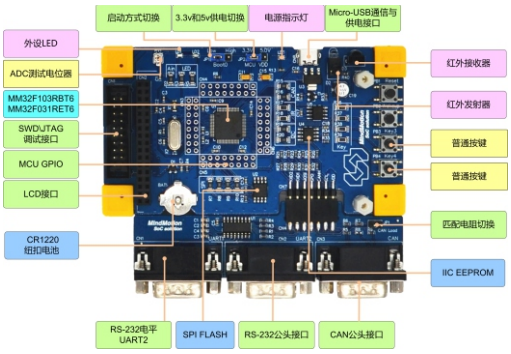




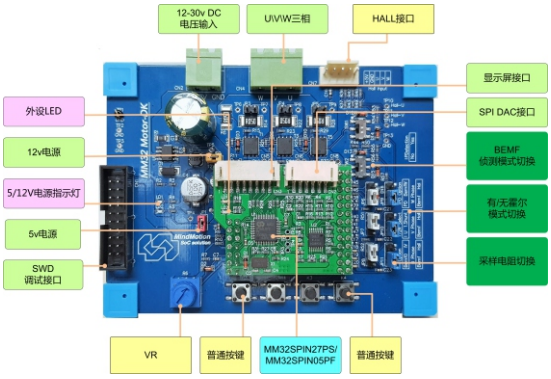
Evaluation Board 评估开发板



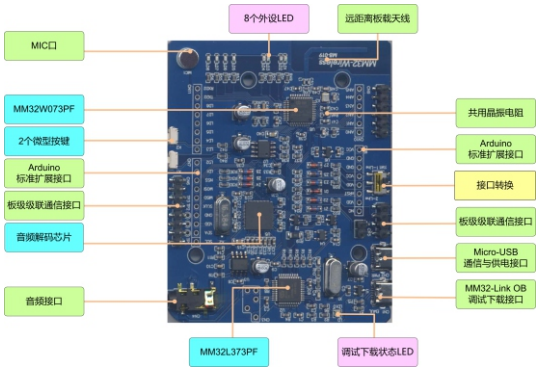
MM32 MiniBoard



MM32 EVBoard



MM32 Motor-DK



MM32 Wireless-DK

OS Support 操作系统支持

AliOS arm MBED AWorks HUAWEI FreeRTOS RT-Thread

Support 在线技术支持

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