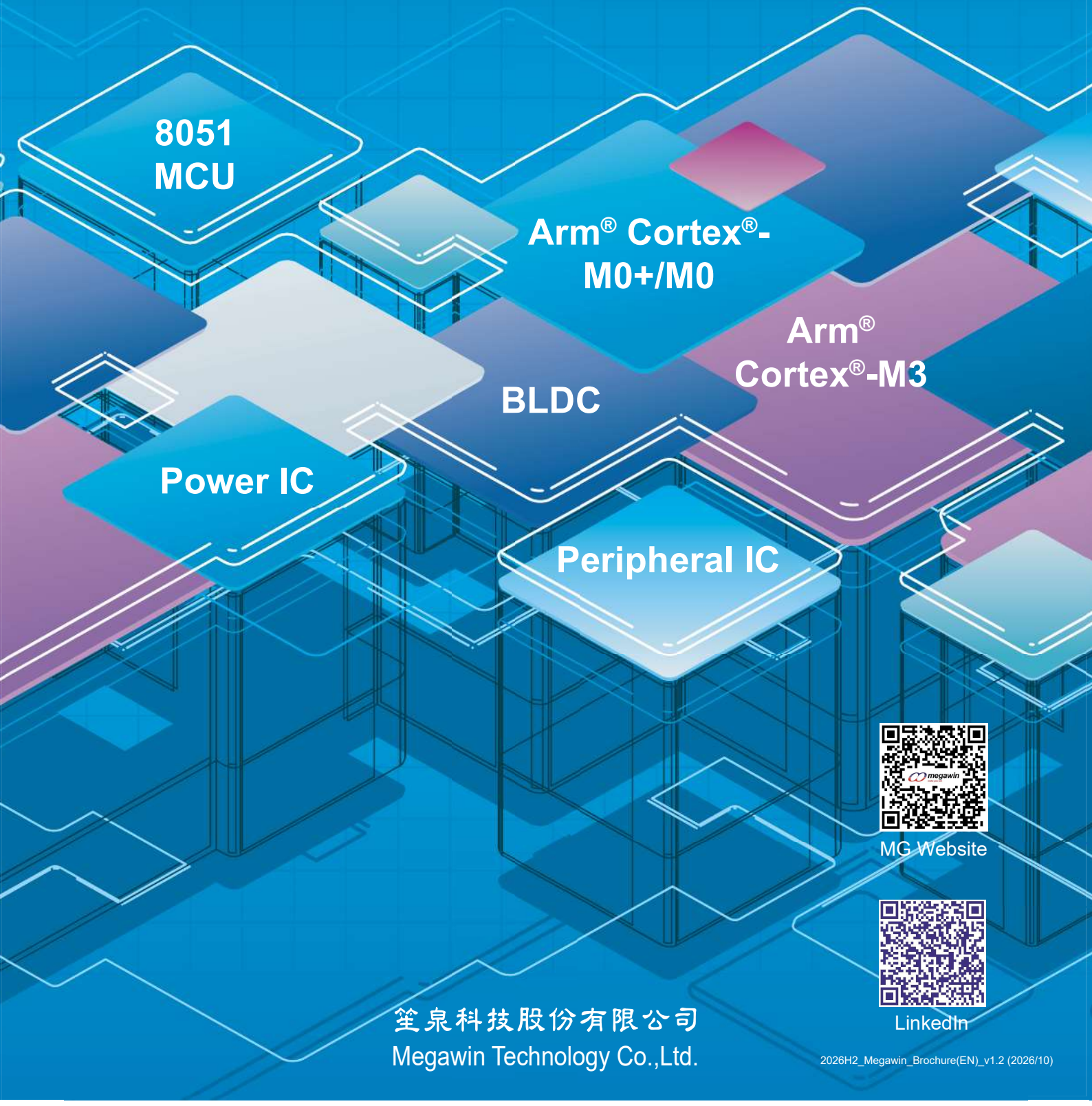
megawin
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2026H2 Professional MCU Design House

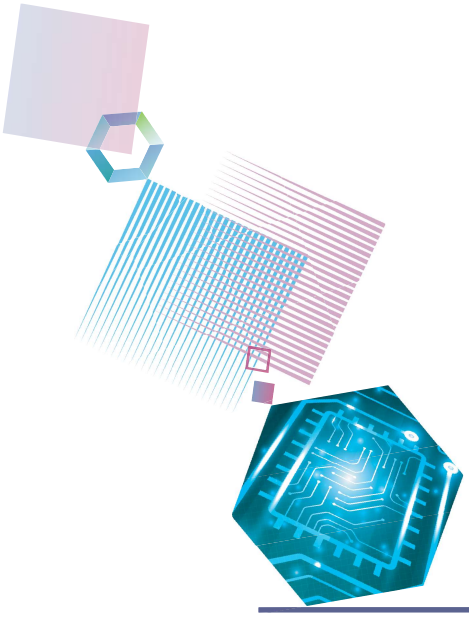


MG Website

LinkedIn

笙泉科技股份有限公司
Megawin Technology Co.,Ltd.

2026H2_Megawin_Brochure(EN)_v1.2 (2026/10)



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Company Overview

Megawin Technology was founded by a team of professionals specializing in MCU hardware and software platforms, dedicated to delivering comprehensive and competitive MCU solutions. In addition to a diverse IC product lineup, we also offer essential development tools—including ICE , Writers, and ISP Programmers—to help customers accelerate project start-up and shorten time-to-market.

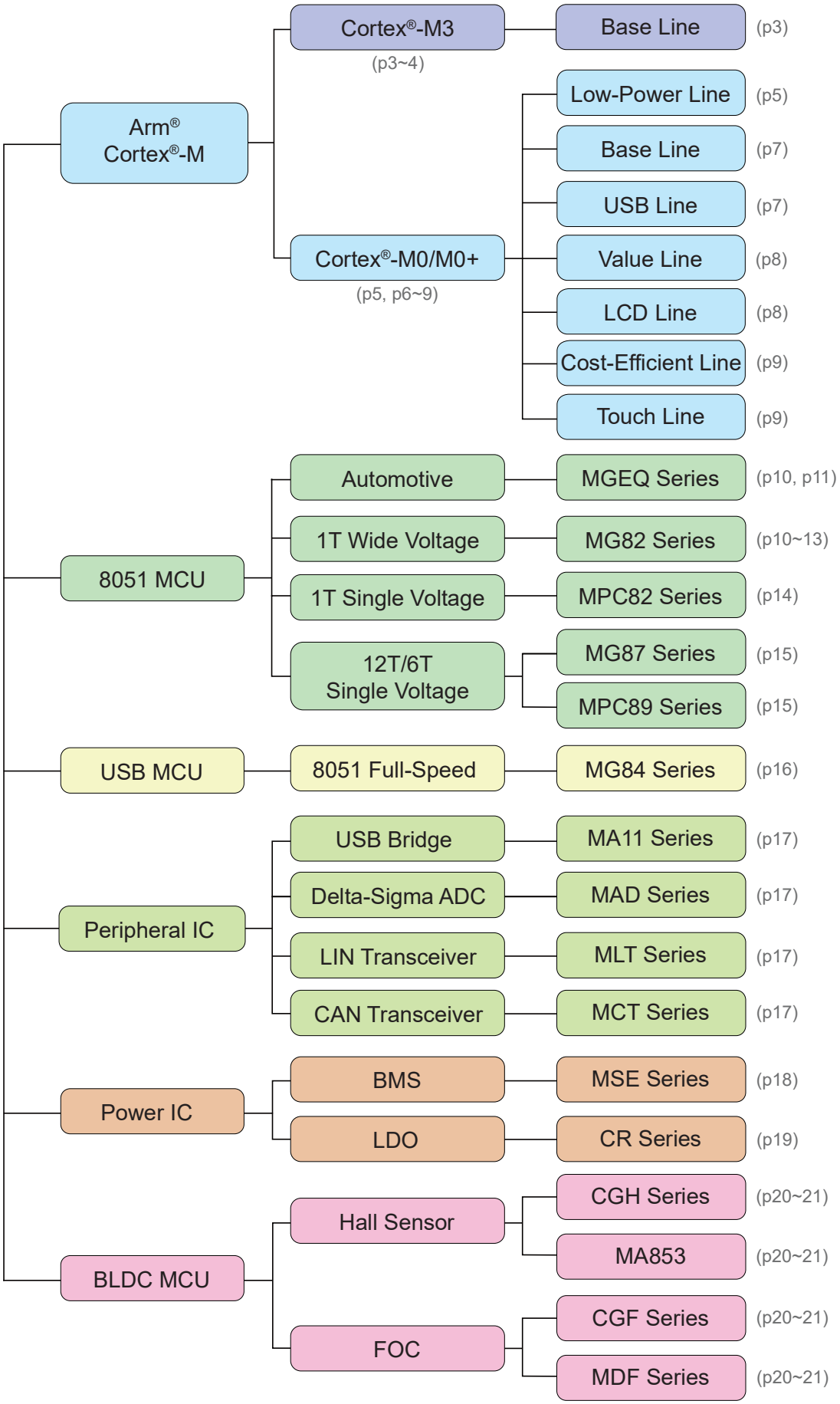
To meet the demands of harsh application environments, we continuously optimize product performance, enhance noise immunity, and expand operating voltage and temperature ranges. We also integrate analog signal modules and a variety of serial communication interfaces to simplify signal acquisition and improve digital system integration. In response to the growing demand for mobile and low-power applications, reducing overall MCU power consumption has become a core focus of our design, enabling customers to build more efficient and competitive products.

At Megawin Technology, we uphold the values of integrity, open-mindedness, and teamwork. We collaborate closely with world-class suppliers and system partners to ensure high-quality services and achieve win-win outcomes. While continuing to strengthen our USB series MCUs, we have also leveraged our technical foundation in 8051 platforms to successfully introduce the Arm® Cortex®-M0/M0+ and M3 cores, launching the high-performance, secure, and market-proven 32-bit MG32F MCU series. Our products deliver stable performance, high security, and strong market competitiveness. We believe that only by continuously improving our technology and service can we earn the lasting trust of leading system providers. By focusing on product refinement and embracing the spirit of being small yet refined — and excellent., we strive toward sustainable growth — the core of Megawin Technology's brand philosophy.

Since 2023, we have actively expanded into the fields of new energy and energy-saving applications, developing a range of power management ICs (PMICs), including LDOs, MOSFETs, and BMS chips, as well as dedicated MCUs for BLDC motor control. These efforts have already yielded stable progress in product rollout and mass production. In 2024, we introduced our first peripheral IC—the first-generation ΔΣ ADC—and continue to invest in next-generation ΔΣ ADCs and related ICs such as LIN/CAN transceivers, to address increasingly diverse market needs.

"Practical foundation, innovation-driven change" is the core value that drives our continuous progress. At Megawin Technology, we challenge ourselves with high standards and embrace disruptive innovation to stay ahead in a rapidly changing market. Becoming a world-class MCU supplier is not just our goal—it is our commitment.

Product Category



Arm® Cortex®-M3 Series

M3 Series (MG32F103/104/157) are based on Arm® Cortex®-M3 as the core, with the excellent computing performance of the existing Arm® Cortex®-M0 MCU to strengthen technology development, improve Core computing performance, Flash supports Cache fast access to greatly reduce read latency.

M3 Features

- Core efficiency improvement
- Flash equipped Cache to enhance efficiency
  - ▲Flash 96~256KB
- Clock source up to 96MHz
- All series support USB 2.0 Device

- MG32F157 other features:
  - ▲Flash 256KB，RAM 64KB
  - ▲Support 1 CAN2.0B, communications interface increased to 15
  - ▲Support hardware AES encryption algorithm
  - ▲3 sets of ADCs, 2 sets can be synchronously sampled
  - ▲Support 3 sets of OPA and 2 sets of DAC
  - ▲Support 3 sets of I^2S
  - ▲Support SDIO
  - ▲up to 100 Pin, multiple pins support 5V input; no conversion circuit required

Typical Applications

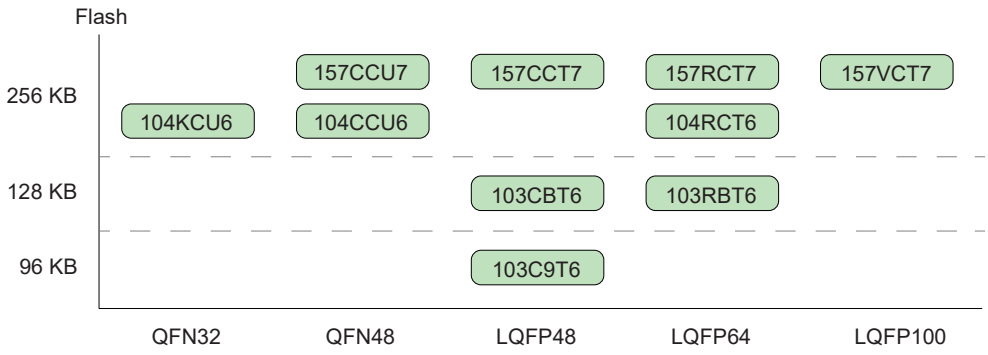
- Sweeping Robot
- High-end Smart Lock
- Aerial Camera
- Thermal Printer / POS
- Brushless Motor Control
- Outdoor Energy Storage Power Supply
- Charging Station/Charging Gun



Recommended Applications

	Features	Applications pictures
Smart Lock	• Electronic Lock MCU Control ▲Keyboard(I/O) ▲Touch(I2C) ▲Fingerprint(SPI/UART) ▲NFC(UART) ▲Motor(PWM) ▲Voice(DAC/Flash) ▲RF(SPI) ▲Data record(EEPROM/Flash)	 (Recomm. Series: MG32F103)
Thermal printer	•Thermal printer application usually use M3 ▲128KB ~256KB Flash; ▲At least 20KB RAM ▲Generate QR code: 72MHz~120MHz •Print width of printer ▲58~72mm; ▲Taxi, store	 (Recomm. Series: MG32F104)
Energy Storage Power Supply	•3 x 12-Bit ADC (charge detection / current and voltage sampling) •1 x CAN2.0B bus (as communication) •Support SMBus (as BMS communication) •96MHz High-speed main frequency (energy saving) •Sine wave PWM (for inverter)	 (Recomm. Series: MG32F157)
Charging Gun & Charging Station	AC Charging Gun (IC-CPD) solution, its achievable functions: ▲Set indicator lights and digital display to show operating status ▲Protection functions such as leakage, short circuit, overvoltage, undervoltage, and overcurrent to ensure safe and reliable operation of the charging gun. ▲Charging power, default 7KW, optional 1.7KW, 3.3KW, 7KW, 12KW ▲Optional charging current display ▲Optional emergency stop switch power-off protection to prevent unexpected situations ▲Required Input voltage: 220V±15% ▲Charging time: 6-7 hours to fully charge	 (Recomm. Series: MG32F10x/F157)

Arm® Cortex®-M3 Base Line



Part No.	Vdd	Flash ROM	Data RAM	Max Freq.	20-Bit Timer	IO	12-Bit ADC	Comp.	Features	Package
MG32F103	2V~3.6V	96KB 128KB	28KB	72MHz	4+RTC	37 51	10-CH 16-CH	2	UARTx3, I²C x2, SPI Mx1, SPI S x2,QSPI,I²S,USB, LED SEG x8	LQFP48 LQFP64
MG32F104	2V~3.6V	256KB	36KB	96MHz	4+RTC	25 37 51	10-CH 16-CH	2	UARTx3, I²C x2, SPI Mx1, SPI S x2,QSPI,I²S,USB, LED SEG x8	QFN32 QFN48 LQFP64
MG32F157	2V~3.6V	256KB	64KB	96MHz	8+RTC	37 51 80	18-CH	3*1	UARTx5, I²C x2, SPIx3, QSPI,CAN,USB,SDIO CRC,OPA x3,AES,DAC x2,ADC x3	QFN48 LQFP48 LQFP64 LQFP100

*1Comparator shared with OPA

Arm® Cortex®-M0+ Series

The MG32L series is Megawin Technology's entry-level 32-bit low power MCU. It uses Arm® Cortex®-M0+ as the core and has the advantage of low power consumption. It is more suitable for battery-related products and other applications.

M0+ Features (MG32L003 only)

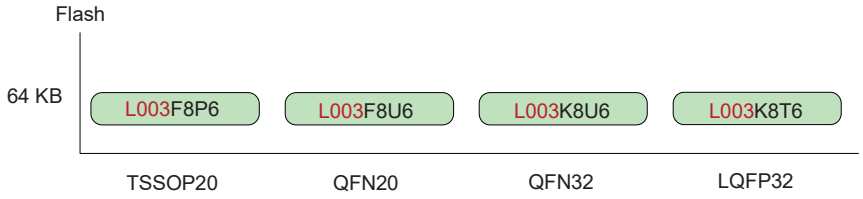
- Power consumption of only 1.8mA at full speed (24MHz)
- Measured power consumption of just 890nA in sleep (STOP) mode
- Hardware calendar function RTC (Real-Time Clock/Calendar)

Typical Applications (MG32L003 only)

- Smoke detector
- Charging gun
- Smart lock
- Massage device/Fascia gun



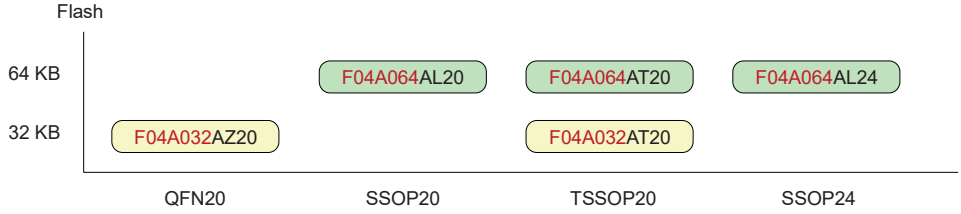
Low-Power Line Arm® Cortex®-M0+



Part No.	Vdd	Flash ROM	Data RAM	Max Freq.	Timer	IO	12-Bit ADC	ACMP.	Features	CCP*4	ISP/IAP	Package
MG32L003*1	2.5V~ 5.5V	64KB	4KB	24MHz	9+RTC LP Timer	16/28	15-CH	1*5	UART*2x2, LPUART, I²C, SPI, CRC16,1-Wire	6-CH	only IAP*3	TSSOP20 QFN20 QFN32 LQFP32

*1 Support M-LINK ICE; *2 UART x2: Support SPI Master mode, not support Slave mode;
*3 Share with all Flash zone; *4 CCP: Input Capture/Output Compare/PWM; *5 Low Voltage Detector (LVD) / Voltage Comparator (ACMP)

Cost-Efficient Line Arm® Cortex®-M0+



Part No.	Vdd	Flash ROM	Data RAM	Max Freq.	Timer	IO	12-Bit ADC	ACMP.	Features	CCP*3	ISP/IAP	Package
MG32F04A032*1	2V~ 5.5V	32KB	3KB	48MHz	3	18	9-CH	1	UART*2x2,SPI,I2C, CRC32,UID	3-CH	only IAP	QFN20 TSSOP20
MG32F04A064*1	2V~ 5.5V	64KB	4KB	48MHz	5	18/22	12-CH	1	UART*2x2,SPI,I2C, CRC32,UID, LED SEGx5	4-CH	only IAP	SSOP20 TSSOP20 SSOP24

<Models in the yellow grid will be launched soon.>
*1 Support M-LINK ICE; *2 UART x2: Support SPI Master mode, not support Slave mode;
*3 CCP: Input Capture/Output Compare/PWM

M0 Series

Arm® Cortex®-M0 Series

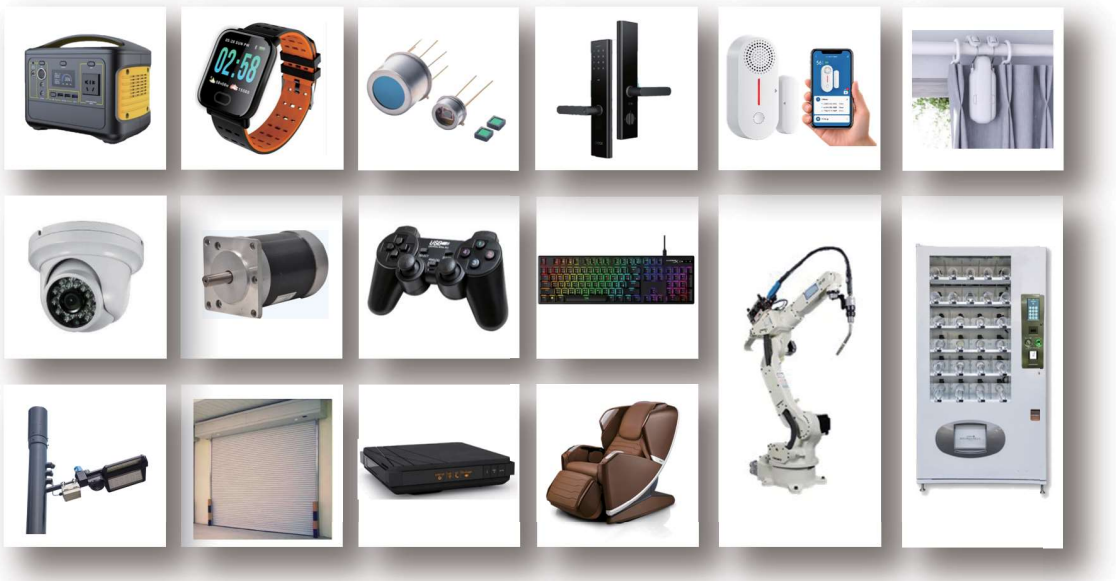
Base on ARM® Cortex®-M0 32-bit core, it is developed with excellent noise immunity capability and excellent encryption technology of traditional 8051 MCU. Built-in PWM function with center/edge-align and dead time control, flexible pin alternate function selection, multiple reset resources, high speed I/O modules and fast comparators (ACMP) can be quickly imported and applied to complex electrical engineering control systems with multiple sets of high-speed peripheral hardware such as UART, SPI, I2C and CRC.

M0 Features

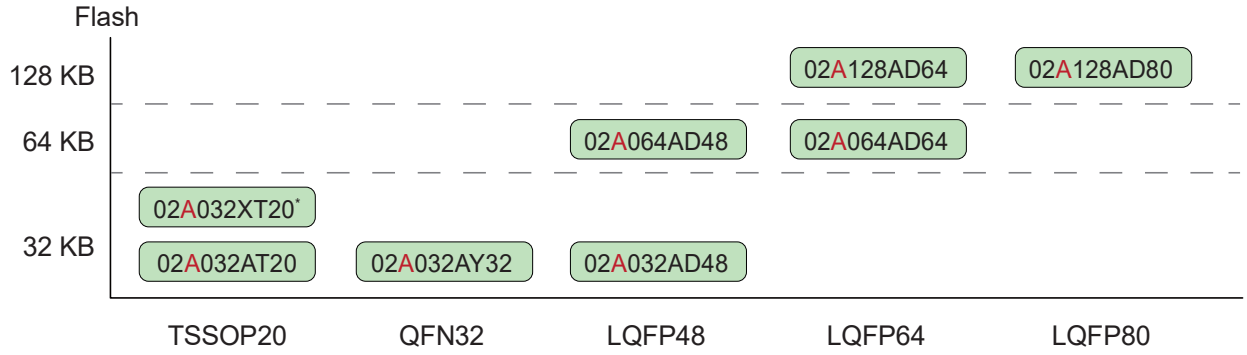
- ADC (Analog-to-digital converter)
- DAC (Digital-to-analog converter)
- Signal Capture W/ DMA
- Hardware Divider
- Support USB 2.0 (total 15 end-points) (only MG32F02U Series)
- ASB (ARGB Series Bus) (only MG32F02V Series)
- PWM: up to 96MHz (output 2 different frequency)
- Built-in a temperature sensor in ADC macro
- Support CAN communication / LCD driver function (only MG32F02N Series)
- NCO (Numerically Controlled Oscillator)
- CCL (Configurable Custom Logic)
- EMB + 8080 LCD/OLED interface
- **Easily initialize various peripherals (Keil Wizard, MG32CoGen)**

Typical Applications

- PES / BMS
- Smart Wristband
- Infrared Sensors
- Smart Electronic Locks
- Door & Window Alarms
- Motorized Curtains / Roller Shutter
- Surveillance Systems / Monitor System
- Monitor Appliactions
- Gaming Keyboards/Joysticks
- Smart Street Light, LED Light Strip(ARGB)
- Modem / Router
- Electric Massage Chairs
- Robot Arms
- Vending Machines



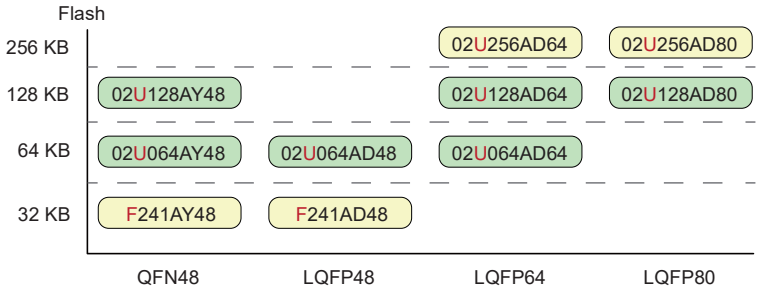
Arm® Cortex®-M0 Base Line



Part No.	Vdd	Flash ROM	Data RAM	Max. Freq.	Timer	IO	12-Bit ADC	Comp.	Features	CCP*4	ISP/IAP	Package
MG32F02A032*1	1.8V~5.5V	32KB	4KB	48MHz	5+RTC	17/29/44	12-CH	2	UART*2 x2, I²C,SPI/QPI, CRC32, DMA	4-CH	YES*3	TSSOP20 QFN32 LQFP48
MG32F02A064*1	1.8V~5.5V	64KB	8KB	48MHz	7+RTC	44/59	16-CH	2	UART*5x7, I²Cx2,SPI*6 x4, CRC32,DMA,DAC,EMB	8-CH	YES*3	LQFP48 LQFP64
MG32F02A128*1	1.8V~5.5V	128KB	16KB	48MHz	7+RTC	59/73	16-CH	2	UART*5x7, I²Cx2,SPI*6 x4, CRC32,DMA,DAC,EMB	8-CH	YES*3	LQFP64 LQFP80

* MG32F02A032XT20 Supports operation temperature: -40~125°C;
*1 Support M-LINK ICE;
*2 All UART support SPI Master;
*3 Share with all Flash zone;
*4 CCP: Input Capture/Output Compare/PWM;
*5 Advanced UART x 3: Support SPI Master/Slave (UART 0/1/2 modules); Basic UART x 4: UART only (UART 4/5/6/7 modules).
*6 Advanced SPI x 1: Support SPI/QPI/OPI (SPI 0 modules); Basic SPI x 3: Standard SPI only (Configurable in UART 0/1/2 modules).

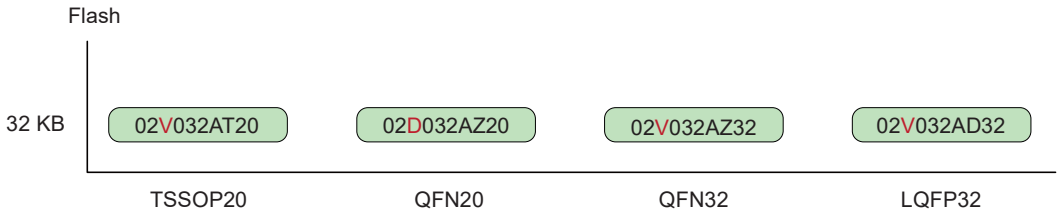
Arm® Cortex®-M0 USB Line



Part No.	Vdd	Flash ROM	Data RAM	Max. Freq.	Timer	IO	12-Bit ADC	Comp.	Features	CCP*3	ISP/IAP	Package
MG32F241*1	2.4V~5.5V	32KB	4KB	48MHz	6+RTC	41	4-CH (10-Bit)	2	UART x2,I²C x2, SPI x2, USB,CRC32, DAC, ASB	24-CH	only ISP	QFN48 LQFP48
MG32F02U064*1	1.8V~5.5V	64KB	16KB	48MHz	7+RTC	41/56	16-CH	2	UART*4 x7,I²C x2, SPI*5 x4, USB,CRC32, DMA, DAC, EMB	8-CH	YES*2	QFN48 LQFP48 LQFP64
MG32F02U128*1	1.8V~5.5V	128KB	16KB	48MHz	7+RTC	56/70	16-CH	2	UART*4 x7,I²C x2, SPI*5 x4, USB,CRC32, DMA, DAC, EMB	8-CH	YES*2	QFN48 LQFP64 LQFP80
MG32F02U256*1	1.8V~5.5V	256KB	32KB	48MHz	7+RTC	56/70	16-CH	2	UART*4 x7,I²C x2, SPI*5 x4, USB,CRC32, DMA, DAC, EMB	8-CH	YES*2	LQFP64 LQFP80

<Models in the yellow grid will be launched soon.>
*1 Support M-LINK ICE;
*2 Share with all Flash zone;
*3 CCP: Input Capture/Output Compare/PWM;
*4 Advanced UART x 3: Support SPI Master/Slave (UART 0/1/2 modules); Basic UART x 4: UART only (UART 4/5/6/7 modules);
*5 Advanced SPI x 1: Support SPI/QPI/OPI (SPI 0 module); Basic SPI x 3: Standard SPI only (Configurable in UART 0/1/2 modules).

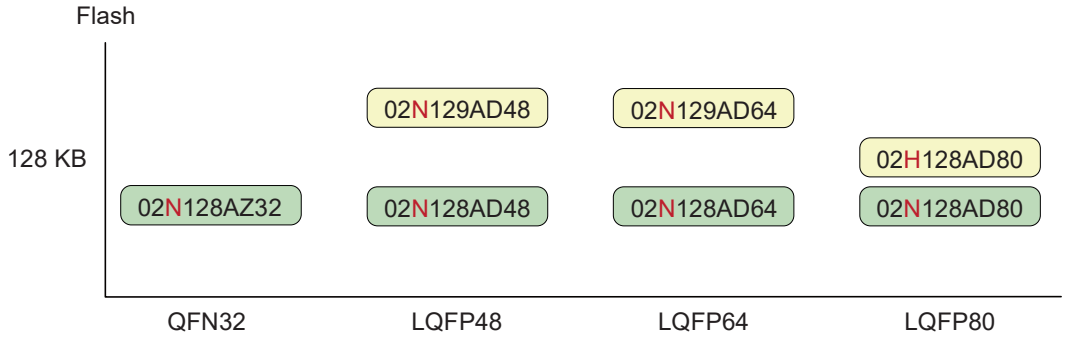
Arm® Cortex®-M0 Value Line



Part No.	Vdd	Flash ROM	Data RAM	Max Freq.	Timer	IO	12-Bit ADC	Comp.	Features	CCP*4	ISP/IAP	Package
MG32F02V032*1	1.8V~ 3.6V	32KB	4KB	48MHz	6+RTC	17/29	8-CH	NA	UART*2 x3, I²C x2 SPI/QPI, CRC32 DMA,ASB	6-CH	YES*3	TSSOP20 LQFP32 QFN32
MG32F02D032*1	2.7V~ 5.5V	32KB	2KB	24MHz	3	13	4-CH	NA	UART*2, I²C, SPI DAC x2	2-CH	YES*3	QFN20

*1 Support M-LINK ICE; *2 Advanced UART x2: Support SPI Master/Slave (UART 0/1 modules);
*3 Share with all Flash zone; *4 CCP: Input Capture/Output Compare/PWM.

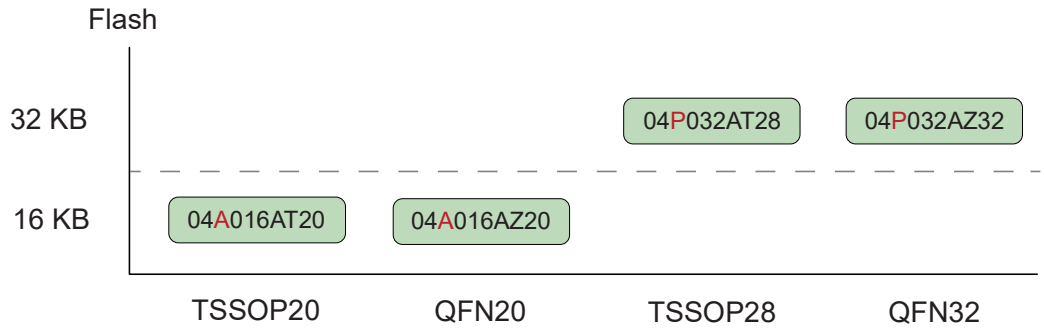
Arm® Cortex®-M0 LCD Line



Part No.	Vdd	Flash ROM	Data RAM	Max. Freq.	Timer	IO	12-Bit ADC	Comp.	Features	CCP*3	ISP/IAP	Package
MG32F02N128*1	1.8V~ 5.5V	128KB	16KB	48MHz	5+RTC	29/44 59/73	16-CH	2	UARTx7,I²Cx2,SPIx4,LIN,LCD, CAN,OPA,DMA,CRC32	8-CH	YES*2	QFN32 LQFP48 LQFP64 LQFP80
MG32F02H128*1	1.8V~ 5.5V	128KB	16KB	48MHz	7+RTC	73	16-CH	2	UARTx7,I²Cx2,SPIx4,LIN,LCD, OPA,DMA,CRC32,△-Σ ADC	8-CH	YES*2	LQFP80
MG32F02N129[1]	1.8V~ 5.5V	128KB	16KB	72MHz	5+RTC	44/59	16-CH	2	UARTx3,I²Cx2, SPI, LIN, CANx2, DMA,CRC32	8-CH	YES*2	LQFP48 LQFP64

<Models in the yellow grid will be launched soon.>
MG32F02N129: Support operation temperature: -40~125°C
*1 Support M-LINK ICE;
*2 Share with all Flash zone;
*3 CCP: Input Capture/Output Compare/PWM.

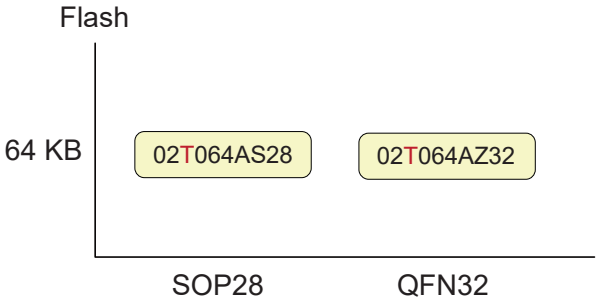
Arm® Cortex®-M0 Cost-Efficient Line



Part No.	Vdd	Flash ROM	Data RAM	Max Freq.	Timer	IO	12-Bit ADC	Comp.	Features	CCP*3	ISP/IAP	Package
MG32F04A016*1	2V~5.5V	16KB	2KB	48MHz	5	18	8-CH	NA	UART*2x2,SPI,I²C, CRC32,UID	4-CH	NA	QFN20 TSSOP20
MG32F04P032*1	2.5V~5.5V	32KB	4KB	60MHz	7	19/26	10-CH	2	OPAx2,USART, DMA,UID,HW Divider	4-CH	only ISP	TSSOP28 QFN32

*1 Support M-LINK ICE; *2 Advanced UART: Support SPI Master/Slave;
*3 CCP: Input Capture/Output Compare/PWM.

Arm® Cortex®-M0 Touch Line



Part No.	Vdd	Flash ROM	Data RAM	Max Freq.	Timer	IO	12-Bit ADC	Comp.	Features	CCP*4	ISP/IAP	Package
MG32F02T064*1	1.8V~ 5.5V	64KB	10KB	72MHz	6+RTC	26/30	8-CH	1	UART*2x2, SPI, I²C CRC, DMA,Touch Key x16	6-CH	YES*3	SOP28 QFN32

<Models in the yellow grid will be launched soon.>
*1 Support M-LINK ICE;
*2 Advanced UART: Support SPI Master/Slave;
*3 Share with all Flash zone;
*4 CCP: Input Capture/Output Compare/PWM

MGEQ1C064 Features

Automotive Grade Processes(AEC-Q100 Grade 2 Certification)

- 64KB Flash、4KB SRAM
- Operating Voltage: 2.4~5.5V
- Max. Operation Freq.: 36MHz
- UART 4 sets、Have QPI / SPI / IIC
- Support LIN bus protocol
- ADC 16-Channel1.0Msps
- Central Aligned PWM 144MHz
- CRC16 (Cyclic Redundancy Check)
- EMB(External Memory Bus) can use with DMA
- IO Number 44, Package LQFP48
- Operating Temperature: -40~105°C
- For future upgrades: support OTA (Over-the-Air Technology)


Power Seat


Headlights




Wireless Charging


Power Tailgate


Dynamic Taillights


Windscreen Wipers


Air Conditioning Control


Driving Recorder

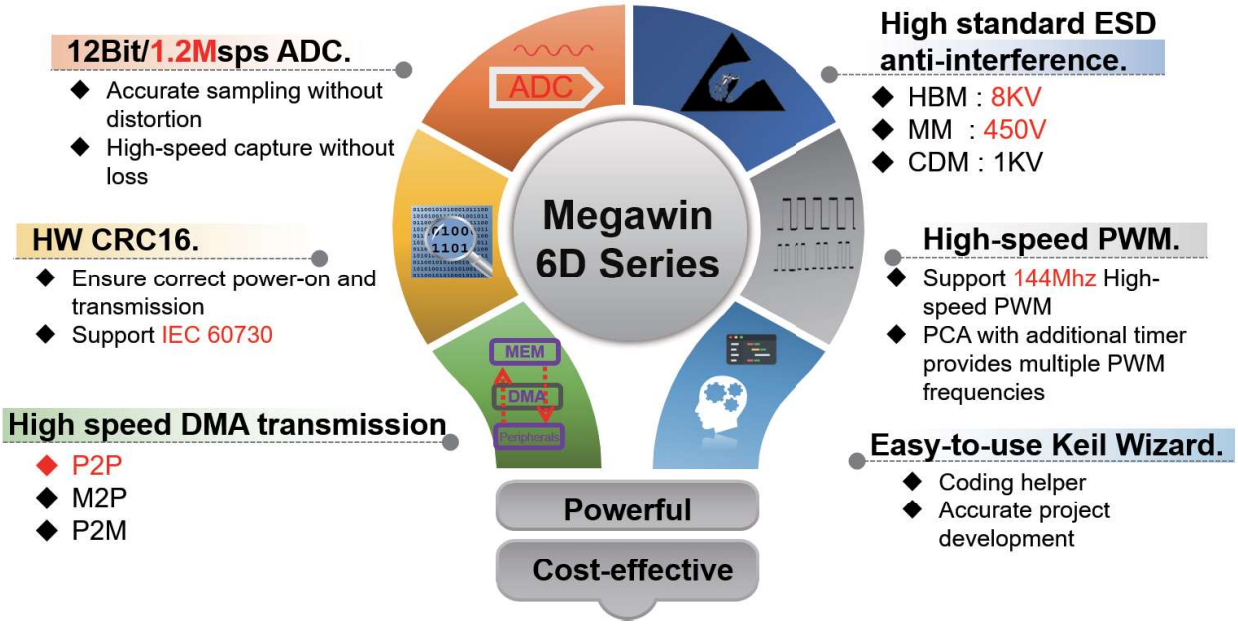

Rearview Mirror


Windows Control


Automotive Lighting

MG82F6D Series Features

6D Series excellent features



Other features:

- Up to 4 sets of UARTs, which can be connected to various sensors
- Exclusive hardware Duty Capture to capture pulse and high-speed PWM signal
- Provides EMB (External Memory Bus) to expand NAND/8080LCM

8051 MCU Typical Applications

- Industrial Instruments
- Industrial Control and Automation
- Home Appliance Display Panel
- Wireless Charging
- Mahjong Machine
- Sensor Applications
- Power Converter
- Electronic Cigarette
- LED Display Equipment/Light Control
- Battery Management System (BMS)
- Electronic Lock
- Sensor Alarm
- UV Disinfection Lamp
- Medical Device Control



Automotive-Grade MCU: MGEQ1C064

Part No.	Operating Voltage	Flash ROM	Max. Operation Freq.	Timer (16-Bit)	12-Bit ADC	Features	PCA	WDT	ISP	Package
		Data RAM		IO	ACMP		PWM		IAP	
MGEQ1C064[*1]	2.4V~5.5V	64KB	36MHz	5 + RTC	16-CH	UART[*2]x2,SPI,I^2Cx2 S/W I^2C,LIN,CRC16	1	YES[*2]	7.5KB Max.	LQFP48
		4KB		44	3		8-CH		63.5KB Max.[*3]	

Passed the certification of AEC-Q100 Grade 2 (Support operation temperature: -40~105°C)

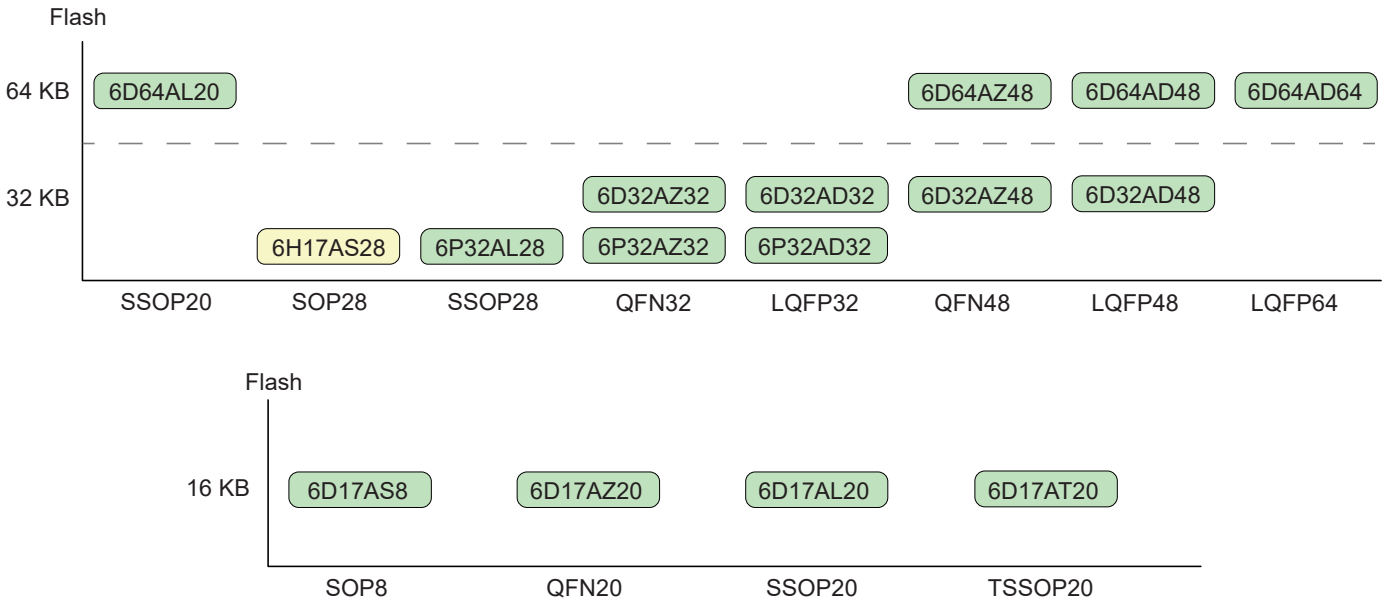
Support Code Protection

[*1] Support SPI Master Mode;

[*2] Support Watch Mode;

[*3] Support S/W setting.

1T 8051 Wide Voltage Base Line



Part No.	Operating Voltage	Flash ROM / Data RAM	Max. Operation Freq.	Timer (16-Bit) / IO	12-Bit ADC / ACMP	Features	PCA / PWM	WDT	ISP / IAP	Package
MG82F6D17[*1]	1.8V~5.5V	16KB / 1KB	36MHz[*5]	4 + RTC / 5/17	8-CH / NA	UART[*2] x2, SPI, I²C S/W I²C, LIN,CRC16	1 / 8-CH	YES[*3]	7.5KB Max. / 15.5KB Max.[*4]	SOP8 QFN20 SSOP20 TSSOP20
MG82F6H17[*1]	1.8V~5.5V	16KB / KB	36MHz[*5]	4 + RTC / 17	8-CH / NA	UART[*2] x2, SPI, I²C S/W I²C, LIN,CRC16 △-Σ ADC	1 / 8-CH	YES[*3]	7.5KB Max. / 15.5KB Max.[*4]	SOP28
MG82F6P32[*1]	1.8V~5.5V	32KB / 2KB	32MHz[*5]	6 + RTC / 25/29	8-CH / 2	OPAx2, PGA, PD en/decoder,DMA UART[*2] x2, SPI, I²Cx2 S/W I²C, CRC16/32	2 / 8-CH	YES[*3]	7.5KB Max. / 31.5KB Max.[*4]	SSOP28 QFN32 LQFP32
MG82F6D32[*1]	1.8V~5.5V	32KB / 2KB	36MHz[*5]	4 + RTC / 29/44	10-CH / 3	UART[*2] x2, SPI, I²Cx2 S/W I²C, LIN,CRC16	1 / 8-CH	YES[*3]	7.5KB Max. / 31.5KB Max.[*4]	QFN32 LQFP32 QFN48 LQFP48
MG82F6D64[*1]	1.8V~5.5V	64KB / 4KB	36MHz[*5]	5 + RTC / 44/59	16-CH / 3	UART[*2] x4, SPI, I²Cx2 S/W I²C, LIN,CRC16	1 / 8-CH	YES[*3]	7.5KB Max / 63.5KB Max.[*4]	SSOP20 QFN48 LQFP48 LQFP64

<Models in the yellow grid will be launched soon.>

Support Code Protection

[*1] Support M-LINK ICE, except SOP8;

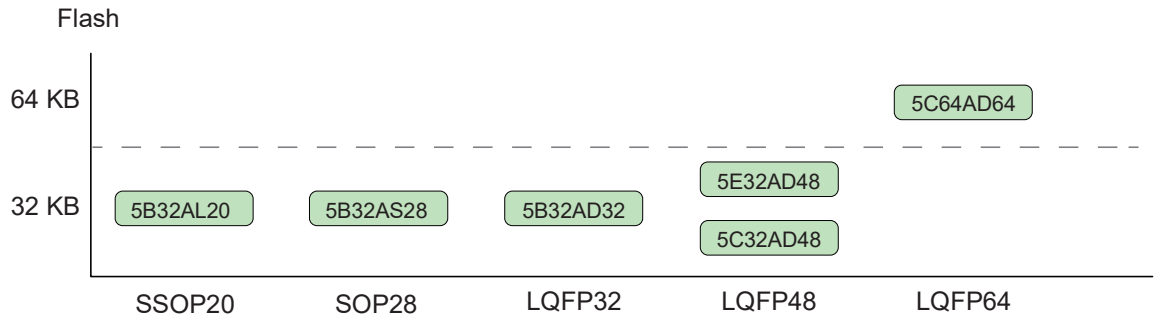
[*2] Support SPI Master Mode;

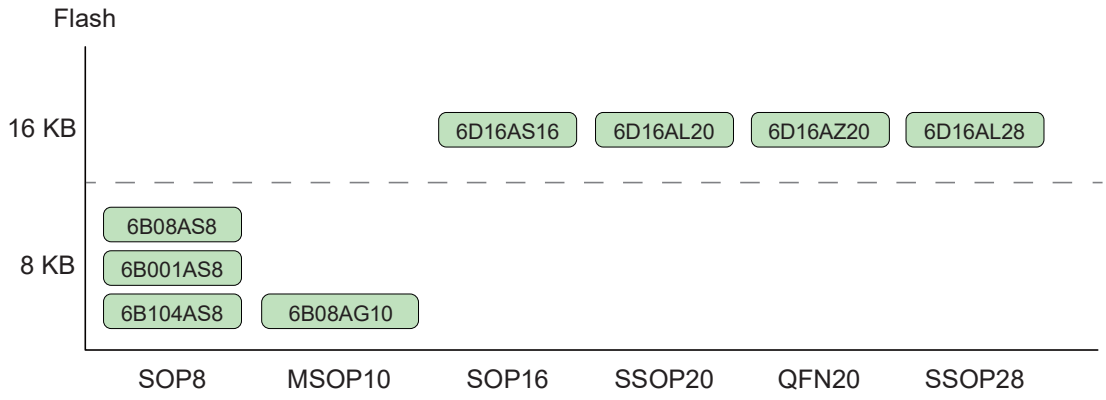
[*3] Support Watch Mode;

[*4] Support S/W setting;

[*5] 12MHz and 11.059MHz as internal RC oscillator, used 12MHz as default. Frequency deviation: at 25℃, under ±1% ; at -40℃~105℃, under ±2%.

1T 8051 Wide Voltage Base Line

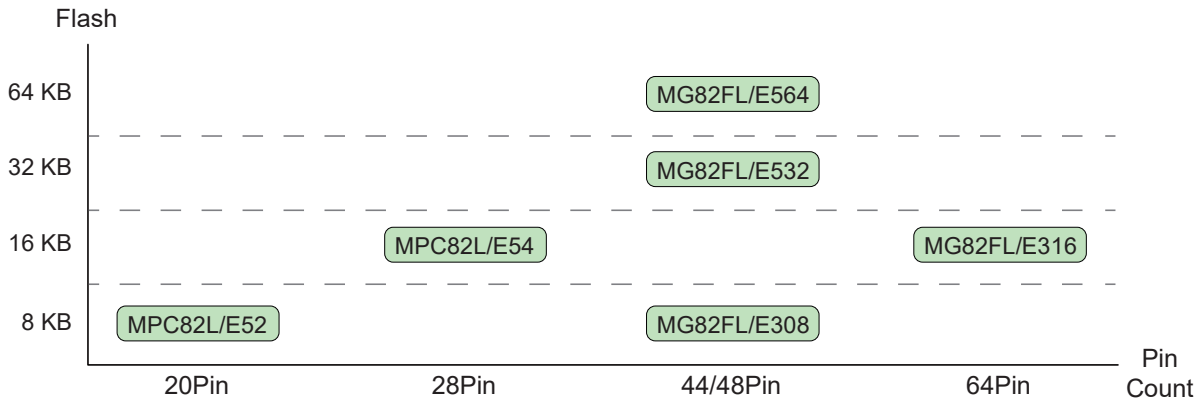




Part No.	Operating Voltage	Flash ROM / Data RAM	Max Operation Freq.	Timer (16-Bit) / IO	10-Bit ADC / ACMP	Features	PCA / PWM	WDT	ISP / IAP	Package
MG82F6B08[*1] **MG82F6B001**[*1] **MG82F6B104**[*1]	2.4V~5.5V	8KB / 1KB	16/22.12 MHz[*6]	3 + RTC / 6/8	6-CH / 1	UART[*2],SPI,LIN S/W I²C,I²C,CRC16	1 / 4-CH	YES[*3]	3.5KB Max. / EEPROM 512B IAP Default NA	SOP8 MSOP10
MG82F6D16[*1]	1.8V~5.5V	16KB / 1KB	32MHz[*5]	3 + RTC / 13/17/25	8-CH / 1	UART[*2],SPI,LIN I²C,S/W I²C,CRC16	1 / 6-CH	YES[*3]	7.5KB Max. / 15.5KB Max.[*4]	SOP16 SSOP20 QFN20 SSOP28
MG82F5B32[*1]	1.8V~5.5V	32KB / 2KB	32MHz[*5]	3 + RTC / 25/29	8-CH[*7] / NA	UART[*2]x2,SPI ISO-7816,LIN,I²C	1 / 8-CH	YES[*3]	4KB Max. / 31.5KB Max.[*4]	SSOP20 SOP28 LQFP32
MG82FG5C32[*1]	1.8V~5.5V	32KB / 2KB	32MHz	5 + RTC / 44	16-CH / 3	UART[*2]x4,SPI/QPI I²Cx2,LIN,ISO-7816x3	2 / 12-CH	YES[*3]	7.5KB Max. / 31.5KB Max.[*4]	LQFP48
MG82FG5C64[*1]	1.8V~5.5V	64KB / 4KB	32MHz[*5]	5 + RTC / 59	16-CH / 3	UART[*2]x4,SPI/QPI I²Cx2,LIN,ISO-7816x3	2 / 12-CH	YES[*3]	7.5KB Max. / 63.5KB Max.[*4]	LQFP64
MG82G5E32[*1]	1.8V~5.5V	32KB / 2KB	32MHz[*5]	4 + RTC / 44	8-CH / 2	UART[*2]x2,SPI,I²C S/W I²C,CRC16	1 / 8-CH	YES[*3]	7.5KB Max. / 31.5KB Max.[*4]	LQFP48

Support Code Protection;[*1] Support M-LINK ICE, except SOP8;[*2] Support SPI Master Mode;
[*3] Support Watch Mode;[*4] Support S/W setting;
[*5] 12MHz and 11.059MHz as internal RC oscillator, used 12MHz as default. Frequency deviation: at 25℃, under ±1% ; at -40℃~85℃, under ±2%;
[*6] 16MHz and 22.12MHz as internal RC oscillator. Frequency deviation: at 25℃, under ±2% ; at -40℃~85℃, under ±3.8%;
[*7] Factory default 10 Bit,200Ksps; Program adjustment 12 Bit,400Ksps.

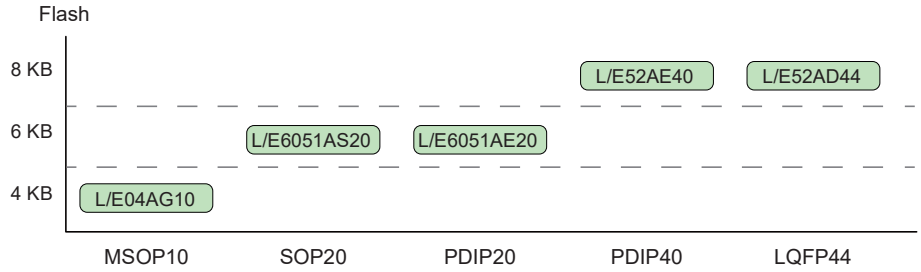
1T 8051 Single Voltage MCU



Part No.	Operating Voltage	Flash ROM / Data RAM	Max Operation Freq.	Timer (16-Bit) / IO	ADC / ACMP	Comm.	PCA / PWM	WDT	Code Protection	ISP / IAP	Package
MPC82L/E52	L:2.4V~3.6V E:4.5V~5.5V	8KB 256B	25MHz	2 15	8-Bit,8-CH NA	UART,SPI	1 2-CH	YES	YES	3KB Max. 7.5KB Max.	PDIP20 SOP20 TSSOP20
MPC82L/E54	L:2.4V~3.6V E:4.5V~5.5V	15.5KB 512B	25MHz	2 23	10-Bit,8-CH NA	UART,SPI	1 4-CH	YES	YES	3.5KB Max. 15KB Max.	PDIP28 SOP28 SSOP28
MG82FL/E532[*1]	L:2.4V~3.6V E:4.5V~5.5V	32KB 1280B	24MHz[*2]	3 45	10-Bit,8-CH NA	UARTx2,SPI	1 6-CH	YES[*4]	YES	4KB Max. 32KB Max.[*5]	LQFP44 LQFP48
MG82FL/E564[*1]	L:2.4V~3.6V E:4.5V~5.5V	64KB 1280B	24MHz[*2]	3 45	10-Bit,8-CH NA	UARTx2,SPI	1 6-CH	YES[*4]	YES	4KB Max. 63.5KB Max.[*5]	LQFP44 LQFP48
MG82FL/E308	L:2.4V~3.6V E:4.5V~5.5V	8KB 512B	24MHz[*3]	3 45	NA 1	UART	NA 1-CH	YES	YES	4KB Max. 8KB Max.[*5]	LQFP48
MG82FL/E316	L:2.4V~3.6V E:4.5V~5.5V	16KB 512B	24MHz[*3]	3 57	NA 1	UART	NA 1-CH	YES	YES	4KB Max. 15.5KB Max.[*5]	LQFP64

[*1] Support M-LINK ICE;
[*2] Used internal RC oscillator 22.118MHz as default. Frequency deviation: at 25°C,under ±1%; at-20°C ~50°C,under ±2% ; at-40°C ~85°C, under ±4%;
[*3] Internal RC oscillator 12MHz as default. Frequency deviation: at 25°C,under ±1%; at-20°C ~50°C,under ±2% ; at-40°C ~85°C, under ±4%;
[*4] Support Watch Mode;
[*5] Support S/W setting.

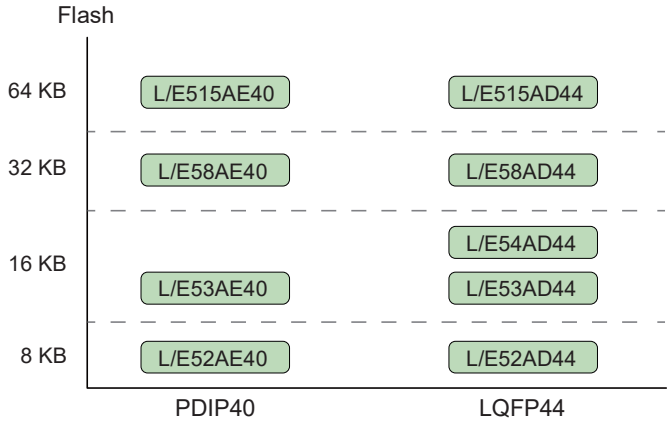
12T/6T 8051 Single Voltage with internal RC oscillator MCU



Part No.	Operating Voltage	Flash ROM / Data RAM	Max. Operation Freq.	Timer (16-Bit) / IO	ACMP	Comm.	PCA / PWM	WDT	ISP / IAP	Package
MG87FL/E52*	L:2.4V~3.6V E:4.5V~5.5V	8KB 256B	48MHz @ 12T 24MHz @ 6T	3 32/36	NA	UART	NA NA	YES	3.5KB Max. S/W setting	PDIP40 LQFP44
MG87FL/E6051*	L:2.4V~3.6V E:4.5V~5.5V	6KB 256B	48MHz @ 12T 24MHz @ 6T	2 17	1	UART	NA 1-CH	YES	3.5KB Max. S/W setting	PDIP20 SOP20
MG87FL/E04	L:2.4V~3.6V E:4.5V~5.5V	4KB 256B	22.118MHz/Int RC	2 7	1	UART	NA 1-CH	YES	1.5KB S/W setting	MSOP10

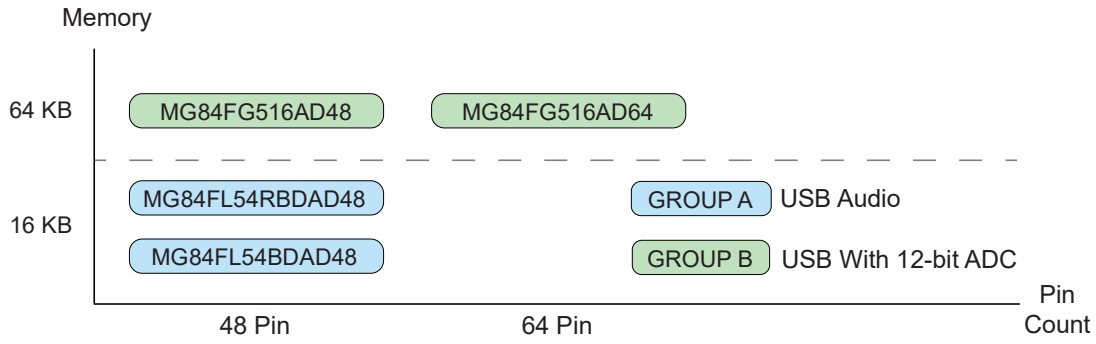
Support Code Protection
* Built-in internal RC oscillator with ±1% frequency deviation at 25°C. And there are 6 kinds of frequency selectable: 6M/11.059M/12M/22.118M/24M/24.576MHz.

12T/6T 8051 Single Voltage without internal RC oscillator MCU



Part No.	Operating Voltage	Flash ROM / Data RAM	Max. Operation Freq.	Timer (16-Bit) / IO	ACMP	Comm.	PCA / PWM	WDT	Code Protection	ISP / IAP	Package
MPC89L/E52	L:2.4V~3.6V E:4.5V~5.5V	8KB 512B	48MHz @ 12T 24MHz @ 6T	3 32/36	NA	UART	NA NA	YES	YES	4KB Max. 6KB Max.	PDIP40 LQFP44
MPC89L/E53	L:2.4V~3.6V E:4.5V~5.5V	15KB 512B	48MHz @ 12T 24MHz @ 6T	3 32/36	NA	UART	NA NA	YES	YES	4KB Max. NA	PDIP40 LQFP44
MPC89L/E54	L:2.4V~3.6V E:4.5V~5.5V	16KB 1280B	48MHz @ 12T 24MHz @ 6T	3 32/36	NA	UART	NA NA	YES	YES	4KB Max. 46KB Max.	LQFP44
MPC89L/E58	L:2.4V~3.6V E:4.5V~5.5V	32KB 1280B	48MHz @ 12T 24MHz @ 6T	3 32/36	NA	UART	NA NA	YES	YES	4KB Max. 30KB Max.	PDIP40 LQFP44
MPC89L/E515	L:2.4V~3.6V E:4.5V~5.5V	63KB 1280B	48MHz @ 12T 24MHz @ 6T	3 32/36	NA	UART	NA NA	YES	YES	4KB Max. NA	PDIP40 LQFP44

8051 USB MCU



MG84 (USB FS)

Part No.	Operating Voltage	Flash ROM / Data RAM	Max. Operation Freq.	Timer (16-Bit) / IO	ADC / ACMP	Comm.	PCA / PWM	WDT	End Points	ISP / IAP	Package
MG84FL54BD	2.7V~3.6V	16KB / 832B	24MHz	3 / 36	NA / NA	USB, UART, TWI(I²C), SPI	NA / NA	NA	4	4KB Max. / 15KB Max.	LQFP48
MG84FL54RBD	2.7V~3.6V	16KB / 256B	24MHz	3 / 31	NA / NA	USB, UART, TWI(I²C), SPI	NA / NA	NA	6	4KB Max. / 15KB Max.	LQFP48
MG84FG516[*1]	2.0V~5.5V	64KB / 4352B	32MHz[*2]	4 / 41/55	12-Bit, 8-CH / NA	USB, UARTx2, TWI(I²C), SPI	1 / 6-CH	YES[*4]	11	4KB Max. / 63.5KB Max.[*5]	LQFP48 / LQFP64

[*1] Support M-LINK ICE;
[*2] Used internal RC oscillator 12MHz as default. Frequency deviation: at 25℃, under ±1% ; at -40℃~85℃, under ±1.5% ; at USB activated, under ±0.25%;
[*3] Support SPI Master Mode;
[*4] Support Watch Mode;
[*5] Support S/W setting.

USB Bridge

This product segment can support USB to transfer data or command to other interface, for example UART, I2C, SPI…etc., even GPIO or PWM control. Different USB Bridges can meet different product requirements. It has good compatibility and performance, reducing the requirement for design resources. It also provides easy-to-use development UI interface and library to reduce time to market.

USB bridge chips can be applied in products such as gas detectors, gyroscopes, LED controllers, EEPROM SPI/I2C devices, bill counters, and more.







Part No.	Operating Voltage	USB Speed	Function	Features	Driver	Package
MA111	2.4V~5.5V	Full Speed*1	USB HID to Serial Bridge	UART, SPI Master, TWI(I²C) Master, GPIO	FREE	SOP16, QFN16
MA112	3.0V~5.5V	Full Speed*1	USB to UART Data Bridge MS Windows Driver Supported	Virtual COM (TXD/RXD)	OS	SOP16, QFN16
MA113	3.0V~5.5V	Full Speed*1	USB Data Bridge for UART, RS-232 Modem signal, RS-485 MS Windows Standard Driver supported	Virtual COM(TXD/RXD), RS-232 Modem Signals RS-485 Transceiver Control	OS	SOP16, QFN16

*1 Built in internal RC oscillator 12MHz as default. Frequency deviation: at 25℃, under ±1% ; at -40℃~85℃, under ±1.5%, USB online mode ±0.25%.

Delta-Sigma ADC

This series of ADC chips belongs to Delta-Sigma (ΔΣ) type. It is embedded a precision 24-bit analog-to-digital converter with a 4th-order Delta-Sigma (ΔΣ) modulator and a digital filter, analog input multiplexer with some differential inputs (multiple sets), a low-noise input buffer, a low-noise programmable gain amplifier (PGA) and a serial interface control block.

This series of ΔΣ ADC chips can be widely used in fields such as communication systems, instrumentation, electronic scales, industrial automation, medical equipment, and more.


Electronic Scale


Body Fat Scale


Forehead Thermometer


Blood Pressure Meter


Glucometer


Handheld Measurement Tools


Measuring Instruments


Smart Transmitter

Part No.	Operating Voltage	Power(mA)	ENOB (Bits)	ADC Channel (diff)	AD Rate (Hz)	PGA	Features	Package
MAD2402	2.5V~5.5V	0.7	19.8	1	1280	128	SIF (Serial Interface)	SOP8, DIP8
MAD2402B	2.5V~5.5V	0.1	21	1	1280	128	SIF (Serial Interface)	SOP8, DIP8
MAD2418	5V	7	23	4	30K	64	SPI	SSOP20W SSOP28W
MAD2408	2.5V~5.5V	1	22	4	2K	128	SIF (Serial Interface)	SOP16

<Models in the yellow grid will be launched soon.>

LIN / CAN Transceiver

Part No.	Data Transmission Standard	Operating Voltage	Data Rate (bps)	LDO	Operating Temperature (°C)	Package
MLT1021	LIN2.x	9V~27V	20K	NA	-40 ~ 125	SOP8
MCT1042T-3	CAN2.0x/CAN-FD	3V~5V	5M	NA	-40 ~ 125	SOP8

BMS Series

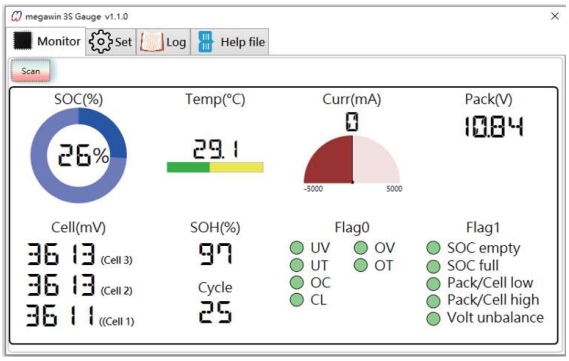
Battery Management System (BMS) is a system that manages batteries, usually with the function of measuring battery voltage and othe information to prevent or avoid abnormal conditions such as over-discharge, over-charge, and over-temperature. Megawin's BMS products offer a total solution, including MCU algorithm, hardware design, UI software, etc., to accelerated user development time and lower the threshold for user to enter the market, providing portable lithium-ion battery applications.

BMS Features

- Megawin Smooth Energy Gauge Algorithm, provide SOC/SOH
- Wake-up with current detection, include Voltage / Current / Temperature measurement function
- Provide storage area for cell production history data
- Automatic cell behavior (abnormality) status recording

BMS (MSE03GM1) GUI

- Support adjust the parameters, includes V/I/T battery information
- Built-in calibration provides quick li-battery calibration
- Product Monitoring Functions , display SOC/SOH etc.
- Built-in Battery Abnormal Record Condition , read history data for analysis



BMS Applications

- Power tool battery pack
- Electric Drill
- Electric Wrench
- Military Knife Saw
- Vacuum cleaner
- Shoe washing brush
- Toy
- Small Fan



Power IC (BMS)

Part No.	Type	Number of series cells	Battery chemistry	Operating Voltage	Features	Package
MSE03GM1	Gauge	3	NCA	8.1V ~ 12.75V	UART, I²C	LQFP48
MSE01PC1	Battery Passport	1	NCM, NCA, LTO, $LiFePO_4$	1.9V ~ 5V	NFC, UART	QFN20
MSE06GC1	Gauge	6	NCA, $LiFePO_4$	6V ~ 30V	I²C	QFN32

<Models in the yellow grid will be launched soon.>

LDO Series

Megawin's linear low dropout regulator (LDO) solution can convert higher input voltage into a stable output voltage in a variety of applications, which has the following characteristics:

LDO Features

- EN turns off LDO to save power

  (notes: If there is an EN Pin requirement, the EN pin function must be selected, and it is a SOT 235 package.)

- Superior Line Regulation, high PSRR anti-ripple interference
- Ultra-low I_Q value, improve voltage conversion efficiency

LDO: Voltage/current/power selection

- Choose the right LDO according to the application
  - Input voltage：100V (max)
  - Output voltage：5V/3.3V (CR2105: V_{out} is adjustable)
  - Input current：0.3A (max)
- Power is related to package limitations, resulting in temperature rise

Formula $P_{LDO} = (V_{in} - V_{out}) \times I_{out}$

Condition：V_{out} = 3.3 V，I_{out} =50mA

When V_{in} = 9 V, LDO power 0.285W

When V_{in} = 15 V, LDO power 0.585W

Due to the power, the latter can only choose SOP8-EP packages.

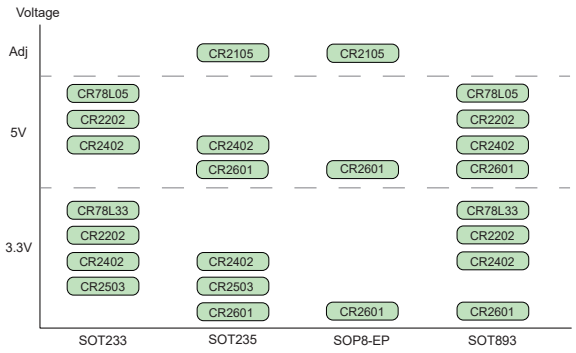
Package	Power (Max)
SOT233	0.4W
SOT235	0.4W
SOT893	1.8W
SOP8-EP	2.2W

LDO Applications

- Motor, Fan, Servo Motor Applications
- Charger application
- Intelligent detection
- Smart Meter/ Smart Water Meter
- Mouse, Power Bank
- Telcom and Servo Power
- Battery Management (BMS)



Power IC (LDO)



*1 Adj: means the voltage can be adjusted.

Part No.	Min. V_{IN}(V)	Max. V_{IN}(V)	I_{OUT} (mA)	V_{OUT} (V)	I_Q (uA)	△V_{LINE} (%)	△V_{LOAD} (%)	PSRR @1KHz (dB)	C_{OUT} (uF)	EN	Package
CR78L33 CR78L05	7	30	100	3.3/5	300	0.3	0.3	84	0.1	NA	SOT233 SOT893
CR2105	7	100	50	Adj*1	23	0.18	1.25	65	10	Yes	SOT235 SOP8-EP
CR2202	2.7	24	150	3.3/5	1.5	0.06	0.15	80	1	NA	SOT233 SOT893
CR2402	2.7	40	250	3.3/5	1.5	0.06	0.6	80	1	Yes	SOT233 SOT235 SOT893
CR2503	2.5	6	300	3.3	0.5	0.6	1	60	1	Yes	SOT233 SOT235
CR2601	2.7	60	150	3.3/5	2.8	0.01	1.5	60	1	Yes	SOT235 SOT893 SOP8-EP

BLDC

8-bit/32-bit MCU BLDC Motor Controllers or ASICs with integrated up to 600V gate drivers; some models support sensorless 3-Phase PMSM/BLDC FOC Motor Control with multiple protection features and parameters configuration capability.

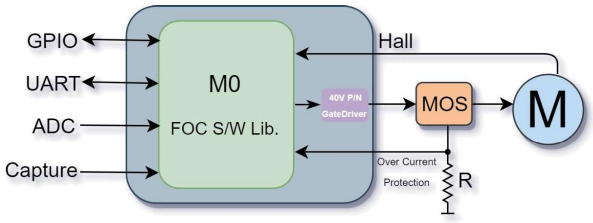
Features

Arm® Cortex®-M0 BLDC:

MDF1x1A:

- Arm® Cort ex®-M0 core 60MHz freq.: Faster control
- FOC control support 1/2-shunt current sampling
- FOC algorithm library & Motor control library
- Built-in 40V ~ 600V Gate Driver & 5V LDO
- 2 sets OPA used for sampling phase current
- Drive MOS P+N / N+N
- Hall Sensor / Sensor-less control: Sine-wave, Square-wave

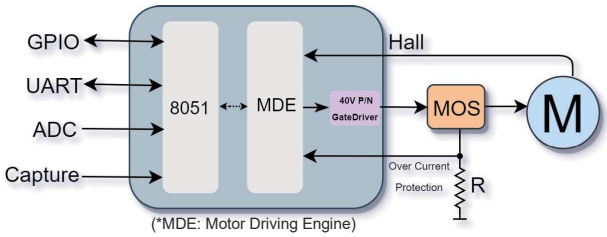
Function Diagram (ex: MDF121A)



8051 core BLDC:

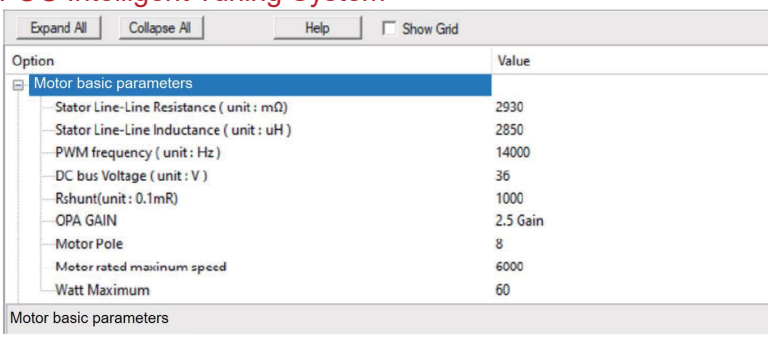
- CGH0x1A: with external Hall IC
- CGF0x2A: FOC* Control (Sensorless)
  - ▲Can be collaborated to FOC Intelligent Tuning System to optimize the motor performance.
  - ▲CGH001A/CGF002A: without Gate Driver
- Built-in MDE HW efficient computing and protection
- Can be used with various gate drivers according to the applications
- MOSFET elements P+N / N+N

Function Diagram (ex: CGH021A)



(*MDE: Motor Driving Engine)

FOC Intelligent Tuning System



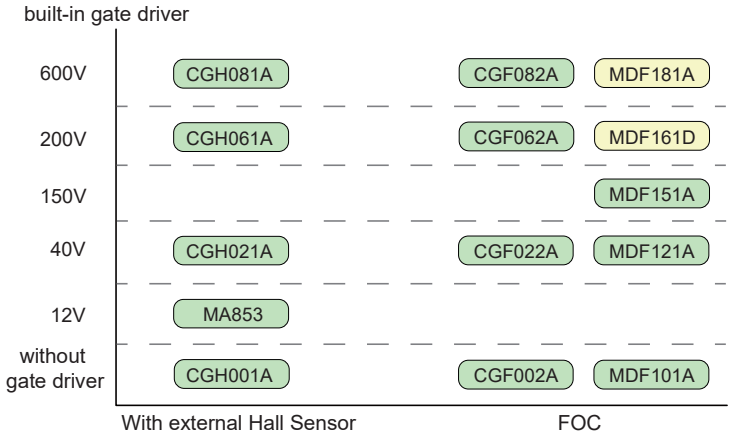
(*FOC : Field-Oriented Control)

Typical Applications

- Fresh Air System, Air-Condition, Water Pump/Drain Pump
- High-Speed Hair Dryer, Turbo Fan, Nail Polishers
- Ceiling Fan, Standing Fan / Wall Fan / Air Purifier
- Servo Fan



BLDC



Arm® Cortex®-M0 BLDC

Part No.	Mode	Gate Driver		V_{IN}	LDO	VDD	Max Freq.	ADC 12-Bit	Capture 16-Bit	OPA*1	Operation Temp.	Package
		Voltage	Type									
MDF101A	FOC	NA		5V	NA	2.5~5.5V	60MHz	10 CH	5 CH	2 sets	-40℃~105℃	TSSOP28 QFN32
MDF121A	FOC	40V	P+N	40V	5V/30mA	2.5~5.5V	60MHz	10 CH	5 CH	2 sets	-40℃~105℃	QFN32
MDF151A	FOC	150V	N+N	21V 13V	12V/300mA 5V/30mA	2.5~5.5V	60MHz	10 CH	5 CH	2 sets	-40℃~105℃	QFN40
MDF161D*2	FOC	200V	N+N	150V 200V	12V/160mA 5V/30mA	2.5~5.5V	60MHz	10 CH	5 CH	2 sets	-40℃~105℃	QFN32 QFN40
MDF181A	FOC	600V	N+N	15V	5V/30mA	2.5~5.5V	60MHz	10 CH	5 CH	2 sets	-40℃~105℃	LQFP48

<Models in the yellow grid will be launched soon.> *2 MDF161D includes DC-DC converter

ASIC BLDC

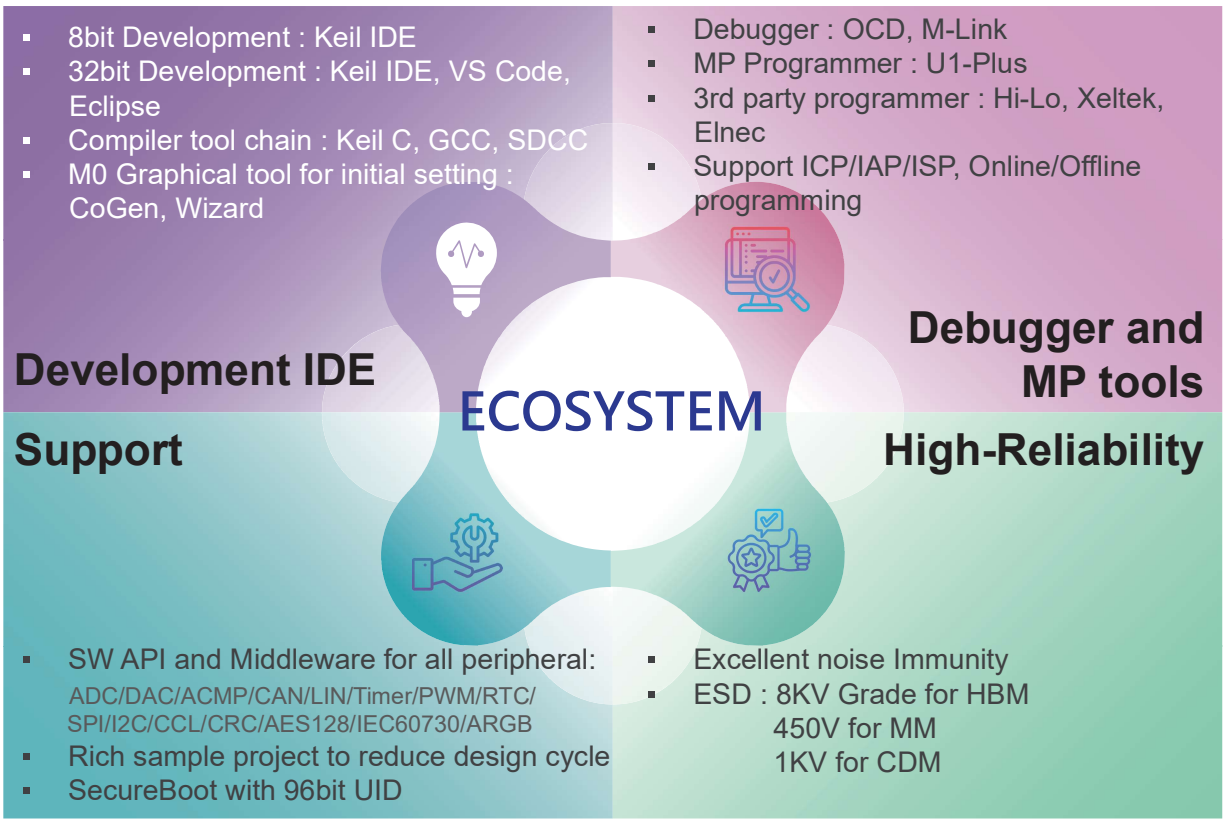
Part No.	Mode	Gate Driver		V_{IN}	LDO	VDD	Max Freq.	ADC 12-Bit	Capture 16-Bit	OPA*1	Operation Temp.	Package
		Voltage	Type									
MA853	180°/150° Sine-wave	12V	N+N	9~16V	5V	2.0~5.5V	48MHz	2 CH	2 CH	2 sets	-40℃~105℃	QFN32

8051 core BLDC

Part No.	Mode	Gate Driver		V_{IN}	LDO	VDD	Max Freq.	ADC 10-Bit	Capture 16-Bit	OPA*1	Operation Temp.	Package
		Voltage	Type									
CGH001A	Hall	NA		5V	NA	4.5~5.5V	48MHz	8 CH	1 CH	1 set	-40℃~105℃	SSOP28 QFN32
CGH021A	Hall	40V	P+N	40V	5V/30mA	4.5~5.5V	48MHz	8 CH	1 CH	1 set	-40℃~105℃	SSOP28W QFN40
CGH061A	Hall	200V	N+N	15V	5V/30mA	4.5~5.5V	48MHz	8 CH	1 CH	1 set	-40℃~105℃	LQFP48
CGH081A	Hall	600V	N+N	15V	5V/30mA	4.5~5.5V	48MHz	8 CH	1 CH	1 set	-40℃~105℃	LQFP48
CGF002A	FOC	NA		5V	NA	4.5~5.5V	48MHz	8 CH	1 CH	1 set	-40℃~105℃	LQFP48
CGF022A	FOC	40V	P+N	40V	5V/30mA	4.5~5.5V	48MHz	8 CH	1 CH	1 set	-40℃~105℃	LQFP48
CGF062A	FOC	200V	N+N	15V	5V/30mA	4.5~5.5V	48MHz	8 CH	1 CH	1 set	-40℃~105℃	QFN40 LQFP48
CGF082A	FOC	600V	N+N	15V	5V/30mA	4.5~5.5V	48MHz	8 CH	1 CH	1 set	-40℃~105℃	LQFP48

*1 OPA: For peripheral use.

ECO System



Development Platform

●Megawin MCU Easy-to-use Development Platform

Feature 01(HW)

*M-Link simulator and U1 Plus-D ...

*Reference design, EVB ...

Feature 02(SDK)

*More than 700 Driver API

*Detailed code comments and high readability

Feature 03(TOOL)

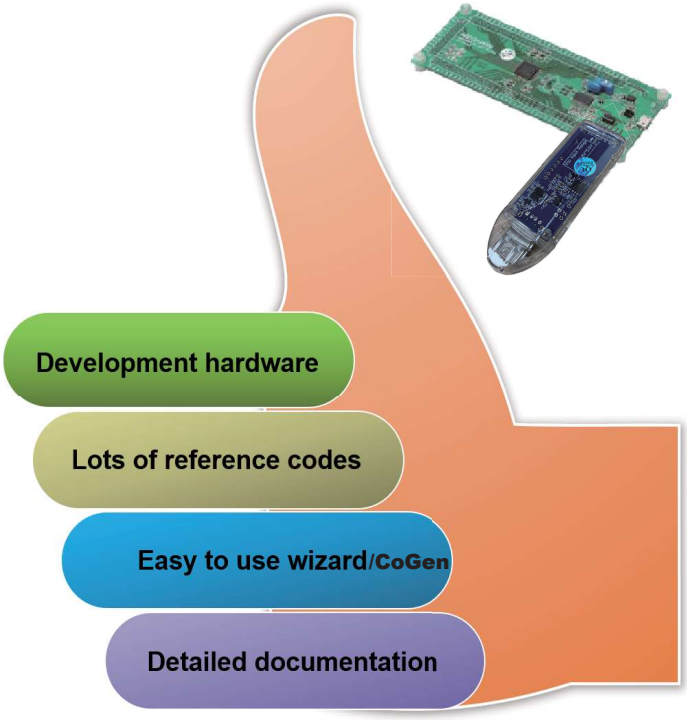
*Keil Wizard/CoGen assists in quick project setup

*Support fast platform switching

Feature 04(DOC)

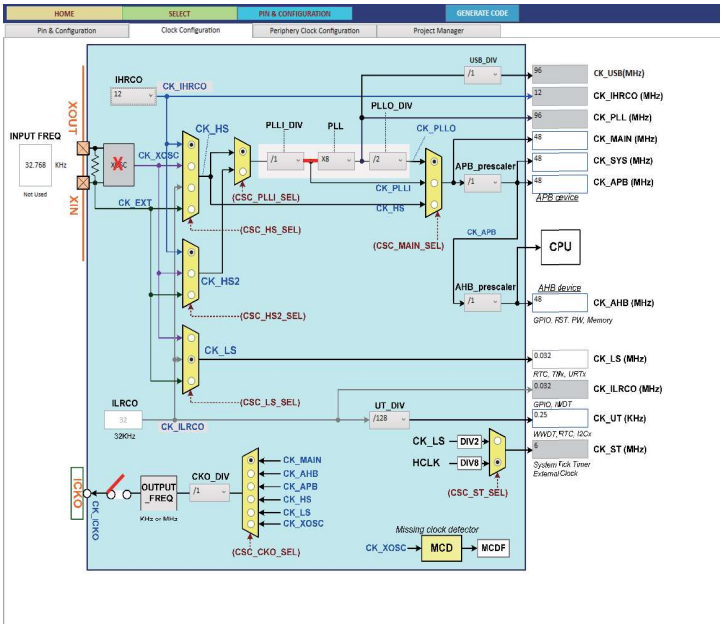
*Software and hardware documents

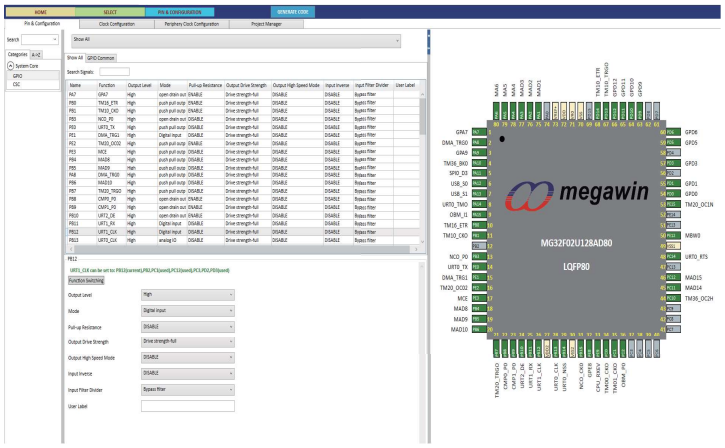
*Technology Application Tutorials



Development tool: MG32CoGen

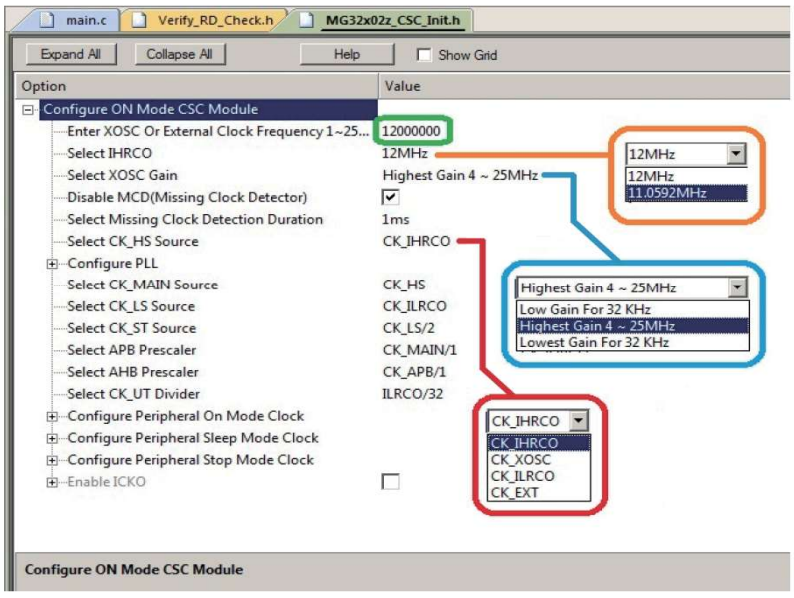
- Megawin GUI Code Generator(MG32CoGen)
- Adds a variety of new peripheral initialization: ADC, UART, TIMER, SPI, LCD, CAN, ASB...
- Graphic interface help developer quickly complete I/O pin configuration and Clock system planning
- Intuitive use interface reduce development period effectively





Development tool: Keil Wizard

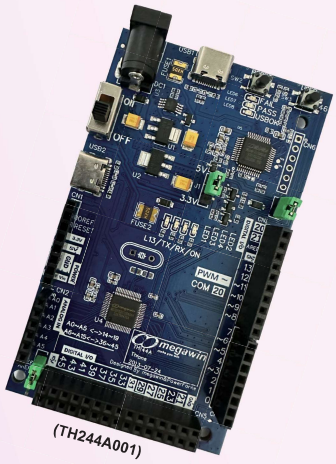
- Easy-to-use Keil Wizard supports all 8051/M0 series
- Code generated quickly by combo box and check box
- Support rich peripherals



Megawin Arduino®-Throne

Product: Arduino®-Throne

Features:


(TH244A001)

1. Supports Arduino® IDE
2. Based on 32-Bit MCU core, operating frequency up to 36MHz
3. 128KB Flash, 16KB SRAM for more programming capacity
4. Switchable 3.3V/5V MCU power, supports multiple sensors power
5. Up to 47 GPIO pins, all of which can be set as external interrupt inputs
6. Increase pin drive current to drive sensors with different currents
7. Supports I2C/SPI/UART and USB 2.0 Full-Speed
8. Provides 7 sets of 8-bit PWMs with frequency and duty cycle fast adjustment
9. Supports 16 ADC channels for setting different reference voltage sources
10. Provides one 12-bit DAC with adjustable voltage output

Buy "Arduino®-Throne" on Alibaba
(Store name:
MEGAWIN TECHNOLOGY CO., LTD.)
or https://megawinmcu.en.alibaba.com/

Arduino®-Throne v.s Arduino® UNO R3

	Arduino® Official	Megawin Technology
Development Board	Arduino® UNO R3	**Arduino®-Throne (TH244A001)**
MCU Core	8-bit AVR®, 16MHz MCU (AVR ATmega328P)	**32-bit** Arm® Cortex®-M0, 36MHz **MG32F02U128** (64-pin LQFP)
Flash / EEPROM / SRAM	32KB / 1KB / 2KB	128KB / - / 16KB
Operating Voltage	5V	3.3V/5V switchable
Communication Interface	I²C, SPI, UART	I²C, SPI, UART, USB
Development Environment	Arduino®	Arduino®, Keil
I/O Drive Current	20mA	40mA (5V) / 13mA (3.3V)
I/O Numbers	14	47 (46 of them are on-board buttons, which are convenient for users to use as pushbuttons)
On-board Buttons	0	1 set
External Interrupts	2	Any pin can be set as an external interrupt input
PWM	6-CH (Not support fast frequency modification)	7-CH, 8-bit default 1KHz, Specialized design of functions to support rapid modification of frequency 300Hz~5KHz adjustable
Analog Input ADC	6-CH, 8-bit	16-CH, 10-bit (8-bit/10-bit/12-bit)
Programming Method	Programming via COM port	Programming via COM port

Diverse Product Lines
Versatile Applications
Your Trusted Partner

Arm® Cortex®-M0+/M0

Arm® Cortex®-M3

USB

8051

Power IC

BLDC


Wireless Charger Application



Battery Management System


Smart light control


Portable energy storage


Communication (Drone)


Washing machine panel


Thermal printer


Meter



Smart bracelet


Massage chair


Smart water meter


Fan


Electronic locks


Monitoring system


Ventilation Mechanical Control system


Ceiling fan


Standing fan


Electronic drawing board


Hair Dryer


Pet feeder

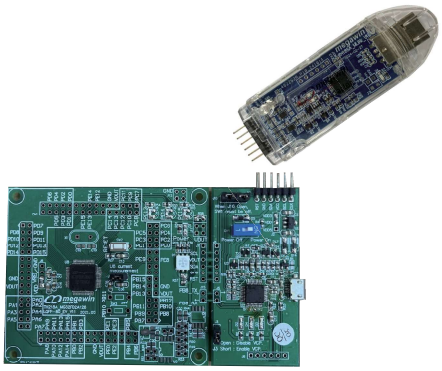

Coffee machine


Smart Street Light

Development Tools(1)

EVB + M-Link (TH185)

- USB Plug & Play
- Support Keil RVMDK development environment
- Support on-line debug
- Support on-line chip programming



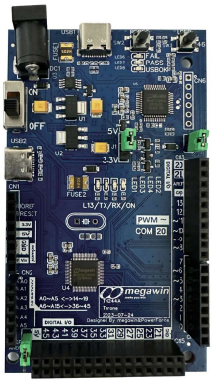
U1 Plus-D Writer (TH200)

- USB Plug & Play
- Support online and offline programming modes
- Automatic serial number insertion
- Maximum programming counts limitation support
- Online software update
- User-defined IAP space
- User-defined ISP space for self ISP code insertion
- Support LCD Display
- Provide signals such as start,busy,pass and fail, which can be combined with automatic programmer

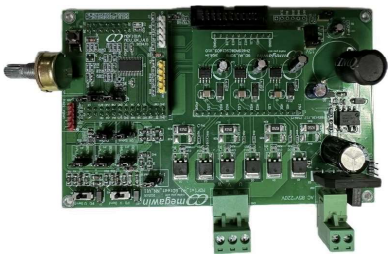
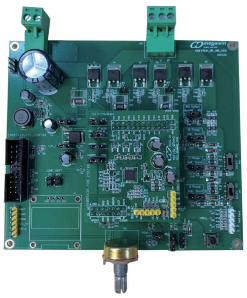
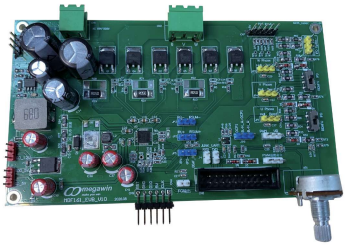


Arduino®-Throne Development Kit (TH244A001)

- M0 MCU (MG32F02U128), operating frequency up to 36MHz
- 128KB Flash; 16KB SRAM
- Supports USB2.0
- Built-in ADC, DAC, I²C, SPI, UART
- 47 GPIO for Arduino pinout at pitch 2.54mm female connectors
- Supports Arduino IDE



Development Tools(2): BLDC Series EVB

MDF Series EVB	 MDF101A + 40V P/N Gate Driver EVB	 MDF101A + 600V N/N Gate Driver EVB	 MDF121A EVB (TH276A/TH277A)
	 MDF151A EVB (TH282A/TH284A)	 MDF161D EVB (TH298A)	

Package Type

Code	Description	Code	Description	Code	Description
AB	COB	AC	LQFP64 (10 x 10mm)	AD	LQFP (others)
AE	PDIP	AF	PQFP	AG	MSOP
AL	SSOP	AM	TQFP	AP	PLCC
AS	SOP	AT	TSSOP	AY	QFN (5 x 5mm ↑)
HS	SOP (Heat Sink)	AK	TOxxx	AZ	QFN (4 x 4mm ↓)
AR	SOT	AI	Ink die	AN	DFN
AW	Wafer	WL	SSOPW (209mil Outline Dimensions)	AH	DICE
WP	WLCSP				

Ordering Information - M0 (M0+)

MG 32 F 0 2A 128 AD 48

megawin

Device family
32 = 32 bit MCU

Application family
F = Mainstream
L = Low power

MCU series
0 = Arm® Cortex®-M0/M0+

Device series
A = Base Line
U = USB Line
V/D = Value Line
H/N = LCD Line
P = Cost-Efficient Line
T = Touch Line

Program memory size
128 = 128 Kbyte
064 = 64 Kbyte
032 = 32 Kbyte
016 = 16 Kbyte

Package type
AS = SOP
AD = LQFP
AL = SSOP
AT = TSSOP
AY = QFN (5 x 5mm ↑)
AZ = QFN (4 x 4mm ↓)

Pin count
80 = 80 pins
64 = 64 pins
48 = 48 pins
32 = 32 pins
20 = 20 pins

Ordering Information - M0+/M3

MG 32 F 1 0 3 C B T 6

megawin

Device family
32 = 32 bit MCU

Application family
F = Mainstream
L = Low Power

MCU series
1 = Arm® Cortex®-M3
0 = Arm® Cortex®-M0+

Pin count
V = 100 pins
R = 64 pins
C = 48 pins
K = 32 pins
F = 20 pins

Flash memory size
C = 256 Kbyte
B = 128 Kbyte
9 = 96 Kbyte
8 = 64 Kbyte

Package type
T = LQFP
P = TSSOP
U = QFN

Temperature
6 = -40°C to 85°C
7 = -40°C to 105°C

Ordering Information - Automotive MCU

MG E Q1 C 064 AD 48

megawin

MCU type
E = 8 bit
T = 32 bit

Automotive Grade
Q = AEC-Q series
1 = Product series

Temperature
A = -40°C to 150°C
B = -40°C to 125°C
C = -40°C to 105°C

Flash memory size

Package type
AD = LQFP

Pin count
48 = 48 pins



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