Featured

Flash memory, MCU, sensor and power semiconductors
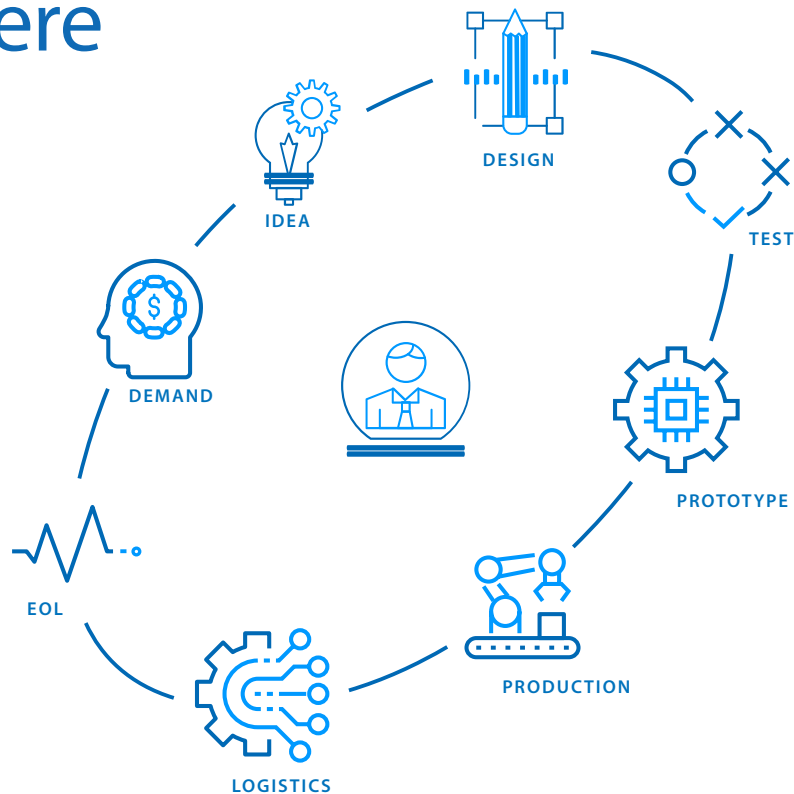
GigaDevice

GigaDevice
& Alcom

GigaDevice Semiconductor is committed to building a complete ecosystem with major product lines- Flash memory, MCU, sensor and power as the core driving force, GigaDevice can provide a wide range of solutions and services in the fields of industrial, automotive, computing, consumer electronics, IoT, mobile, networking and telecommunications.

GigaDevice is currently ranked No. 3 NOR FLASH supplier in the world with accumulated shipments over 21 billion since its inception. GigaDevice GD32 MCU is a leader in China's high performance 32-bit general-purpose microcontroller market, with more than 1.5 billion units shipped, and over 550 part numbers from 42 family series in a variety of applications. In addition, GigaDevice delivers touchscreen controllers and fingerprint sensors to world-renowned mobile makers around the globe.

Contact your Alcom sales contact to learn more about GigaDevice We are able to support our customers with technical design support and any commercial question by a dedicated team of people.
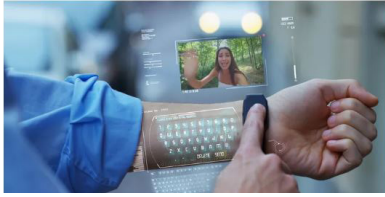
Co-creation
starts here

DESIGN

TEST

IDEA

DEMAND

PROTOTYPE

EOL

PRODUCTION

LOGISTICS

Alcom considers everybody an indispensable added value in the collaborative chain with all of its partners.

Applications & Markets

MOBILE & WEARABLES

AUTOMOTIVE

HOME & BUILDING AUTOMATION

MOTOR CONTROL

MEDICAL, HEALTHCARE

SECURITY & SURVEILLANCE

FACTORY & INDUSTRIAL AUTOMA-TION AND ROBOTICS

IOT

KIOSK, POS AND DIGITAL SIGNAGE

WHITE GOODS & HOME APPLIANCES

E-MOBILITY

SMART RETAIL

Product Family

Flash
- SPI NOR Flash
- SPI NAND Flash
- Parallel NAND Flash

MCU
- M23
- M3
- M4
- M33
- M7
- RISC-V

PMU
- PMICs
- Motor Drivers
- Battery Management

Sensor
- Fingerprint
- Biometrics
- Touch Control

Product Overview

SPI NOR Flash

16 density options from 512Kb to 2Gb to meet the requirements of different real-time operating systems and supports 3V, 1.8V, 1.2V, and battery-powered 1.65~3.6V(WR) wide-voltage power supply.

• Ultra-low power
• Ultra-small package
• High reliabiity

SPI NAND Flash

SPI NAND Flash has a built-in switchable ECC module, supports QSPI, and offers high speed, high reliability and low power consumption.

Parallel NAND Flash

Complies with ONFI 1.0 protocol. The product provides 1Gb to 8Gb density options. It supports either 3V or 1.8V voltage, and x8 or x16 I/O interfaces, as well as mainstream packages such as TSOP48 and BGA63.

Sensor

Touch

GigaDevice is the largest one-glass solution (OGS) supplier with touch control chips that support high-resistance ITO materials, single-layer multi-touch, and super-narrow borders. The touch control chips offer 26 to 72 wide channel options and support screen sizes from 1 to 20 inches.

Fingerprint

GigaDevice launched its first 6*6mm capacitive fingerprint sensor in 2014 and under OLED optical fingerprint sensor in 2018. Over the years, we have become one of the leading suppliers of the front, rear, and side capacitive and optical solutions for flagship and high- to mid-range smartphones.

Product Overview

32-bit general-purpose MCUs with Arm® Cortex®-M and RISC-V

- Arm Cortex-M3
- Arm Cortex-M4
- Arm Cortex-M23
- Arm Cortex-M33
- Arm Cortex-M7
- RISC-V

Performance		Arm® Cortex®-M 32-bit MCUs (Flash KB/RAM KB)						RISC-V MCUs
	Cortex®-M23	Cortex®-M3	Cortex®-M4		Cortex®-M33		Cortex®-M7	RISC-V
High-Performance		GD32F207 120MHz, 3M/256K	GD32F470 240MHz, 3M/768K	GD32F427 200MHz, 3M/256K	GD32W515 180MHz, 2048K/448K	GD32E508 180MHz, 512K/128K	GD32H759 600MHz, 3840K/1024K	GD32VW553 160MHz, 4M/320K
		GD32F205 120MHz, 3M/256K	GD32F425 200MHz, 3M/256K	GD32F450 200MHz, 3M/512K	GD32E507 180MHz, 512K/128K	GD32E505 180MHz, 512K/128K	GD32H757 600MHz, 3840K/1024K	
			GD32F407 168MHz, 3M/192K	GD32F405 168MHz, 3M/192K	GD32E503 180MHz, 512K/128K		GD32H737 600MHz, 3840K/1024K	
			GD32F403 168MHz, 3M/128K					
Mainstream	GD32L233 64MHz, 256K/32K	GD32F107 108MHz, 1M/96K	GD32F307 120MHz, 1M/96K	GD32F305 120MHz, 1M/96K	GD32E502 100MHz, 384K/48K	GD32E501 100MHz, 512K/32K		GD32VF103 120MHz, 128K/32K
		GD32F105 108MHz, 1M/96K	GD32F303 120MHz, 3M/96K	GD32C113 120MHz, 128K/32K				
		GD32F103 108MHz, 3M/96K	GD32E113 120MHz, 128K/32K	GD32C103 120MHz, 128K/32K				
		GD32F101 56MHz, 3M/80K	GD32E103 120MHz, 128K/32K					
Entry-Level	GD32E232 72MHz, 64K/8K	GD32F150 72MHz, 64K/8K	GD32F350 108MHz, 128K/16K	GD32F330 84MHz, 128K/16K				
	GD32E230 72MHz, 64K/8K	GD32F130 48MHz, 64K/8K	GD32F310 72MHz, 64K/8K					
Specific			GD32FFPR 168MHz, 1M/128K		GD32EPRT 168MHz, 384K/96K+4M			

GD30 PMU

High performance power

- Wireless infrastructure
- Telecom/Networking cards
- Industrial application
- IPC
- IoT

Motor Driver

- BLDC, BDC and stepper motors
- Power tools
- Robotics and RC toys
- Industrial Automation
- IoT

Battery Management

- Battery chargers and AFE
- Cleaning robots
- Aeromodelling, drones
- Energy storage
- IoT

Specific power management

- TWS earbuds charging case
- Portable healthcare devices
- Aeromodelling, drones
- Low power applications
- Customized solutions

New product releases

CORTEX®-M33 CORE MCU FOR HIGH-PERFORMANCE APPLICATIONS

The GD32F5 series high-performance MCUs offer significantly expanded storage space, excellent processing efficiency, and a wide array of interface options. Compliant with the system-level IEC61508 SIL2 functional safety standard, they provide a comprehensive software and hardware security solution to meet the industrial market's demands for high reliability and security applications.
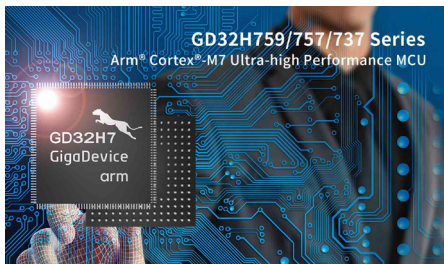
THE PREMIER CHOICE FOR ENTRY-LEVEL APPLICATIONS

The GD32E235 series MCU, powered by the Arm® Cortex®-M23 core, operates at clock frequencies of up to 72MHz. It comes equipped with embedded flash memory ranging from 16 KB to 128 KB and SRAM from 4 KB to 16 KB. With expanded storage capacity compared to the GD32E230 series, it can meet the growing storage space requirements in applications such as communication modules, graphic displays, wireless detectors, and other scenarios.

BRAND NEW WI-FI 6 MCU SERIES

The GD32VW553 series Combo Wireless MCU based on the RISC-V core supports Wi-Fi 6 and Bluetooth LE 5.2 wireless connectivity. It features advanced Radio Frequency Integrated Circuits (RFIC), enhanced security mechanisms, generous storage capacity, and a wide range of universal interfaces.
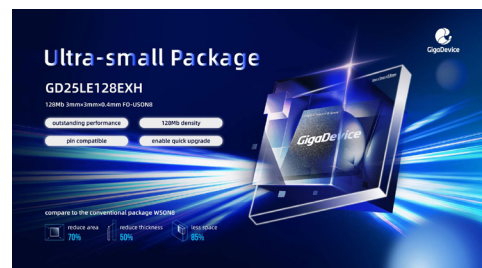
GD32H7 ARM® CORTEX®-M7 MCU PRODUCT FAMILY

First Arm® Cortex®-M7 core microcontroller (MCU) product family, the GD32H737/757/759 ultra-high performance MCU series. The GD32H7 series offers superior processing power with power efficiency, rich connectivity, and comprehensive security functions.

INDUSTRY'S SMALLEST 128MB SPI NOR FLASH IN 3X3X0.4MM FO-USON8 PACKAGE

With its thickness of only 0.4mm, the GD25LE128EXH offers designers unparalleled flexibility in designing compact applications, making it the ideal code storage unit for IoT, wearables, healthcare, and networking products that demand high functionality and low power consumption. The GD25LE128EXH features outstanding performance, with a maximum frequency of 133MHz and a data throughput of up to 532Mbit/s, significantly enhancing system access speed and instant-on capability.

1.2V GD25UF SPI NOR FLASH PRODUCT

The GD25UF series of SPI NOR Flash products are optimized for applications that require ultra-low power consumption or a small board footprint. The GD25UF products operate at a supply-voltage range of 1.14V-1.26V .This is ideal for devices built on advanced process nodes and operating at a core voltage of 1.2V, as it provides for a simpler power system architecture, and for direct interfacing between the I/O pins of the SoC or processor and the GD25UF device.

Alcom product portfolio

ELECTRONIC COMPONENT SOLUTIONS	WIRELESS EMBEDDED CONNECTIVITY & SENSORS	WIRELESS & INDUSTRIAL CONTROLS NETWORKING	DISPLAY & TOUCH
LED & SOLID STATE LIGHTING	POWER & EMC	RUGGED MOBILE COMPUTING	EMBEDDED SYSTEMS, AI & EDGE COMPUTING

- Semiconductors
- Frequency & timing
- Power management
- Circuit protection & discretes
- Magnetics
- Passives & electromechanical
- Connectors & cable assemblies
- Photonics

- Wireless modules
- Antenna's
- Sensors

- Routers & gateways
- Wireless embedded computers
- Industrial ethernet and IP variations
- Wired & wireless machine networking
- Antenna's
- Device to cloud solutions
- Connectivity & remote management services
- Networking & connectivity

- Displays
- Touch screens
- Optical bonding
- Total display solutions

- LED light sources
- Optics
- Thermal management
- Power & intelligent controls
- LED modules

- AC/DC power supplies
- DC/DC converters
- Power management modules
- Wireless charging
- E-mobility solutions
- Transformers & power inductors
- UPS
- EMC filters

- Tablets
- PDA's
- Vehicle mount computers
- Accessories

- Computer-on-modules
- Embedded boards
- Industrial PC & automation
- System integration

Bridging the gap between technology, people and business with a human interface.

Get to know us

ALCOM PROVIDES THE WORLD'S MOST ADVANCED TECHNOLOGIES.

With a team of like-minded entrepreneurs, Alcom will continue to inspire its valued customers to use advanced innovative building blocks in vertical markets. The importance of providing high-level services and a human interface based on specialism, knowledge and design-in expertise will remain key differentiators.

Alcom is positioned for growth. We invite all our customers to discuss their current and future concepts and designs. Let's connect, work and grow together.