GigaDevice

Corporate Overview

Aug. 2024

www.GigaDevice.com

GigaDevice Overview

Key Facts

Y2005

Headquartered in Beijing

1900+

Employees

Y2016

Listed in Shanghai Stock Exchange (SSE 603986)

A Semiconductor Technology Leader

focused on Flash Memory, Microcontroller, Sensor and Analog products

Industry Leadership

No.1 fabless flash memory supplier worldwide

No.2 SPI NOR flash supplier worldwide

Top 10 global MCU supplier

China's No.1 32-bit Arm® general-purpose MCU supplier

China's No.2 fingerprint sensor supplier

1539 patents filed
1044 granted

ISO26262:2018 automotive functional safety ASIL D certified
IEC61508 functional safety production certified
ISO9001, ISO14001, ISO 45001 and DUNS certified

Our Mission and Core Values

To empower better living through technological innovation

Excellence

Teamwork

Open Innovation

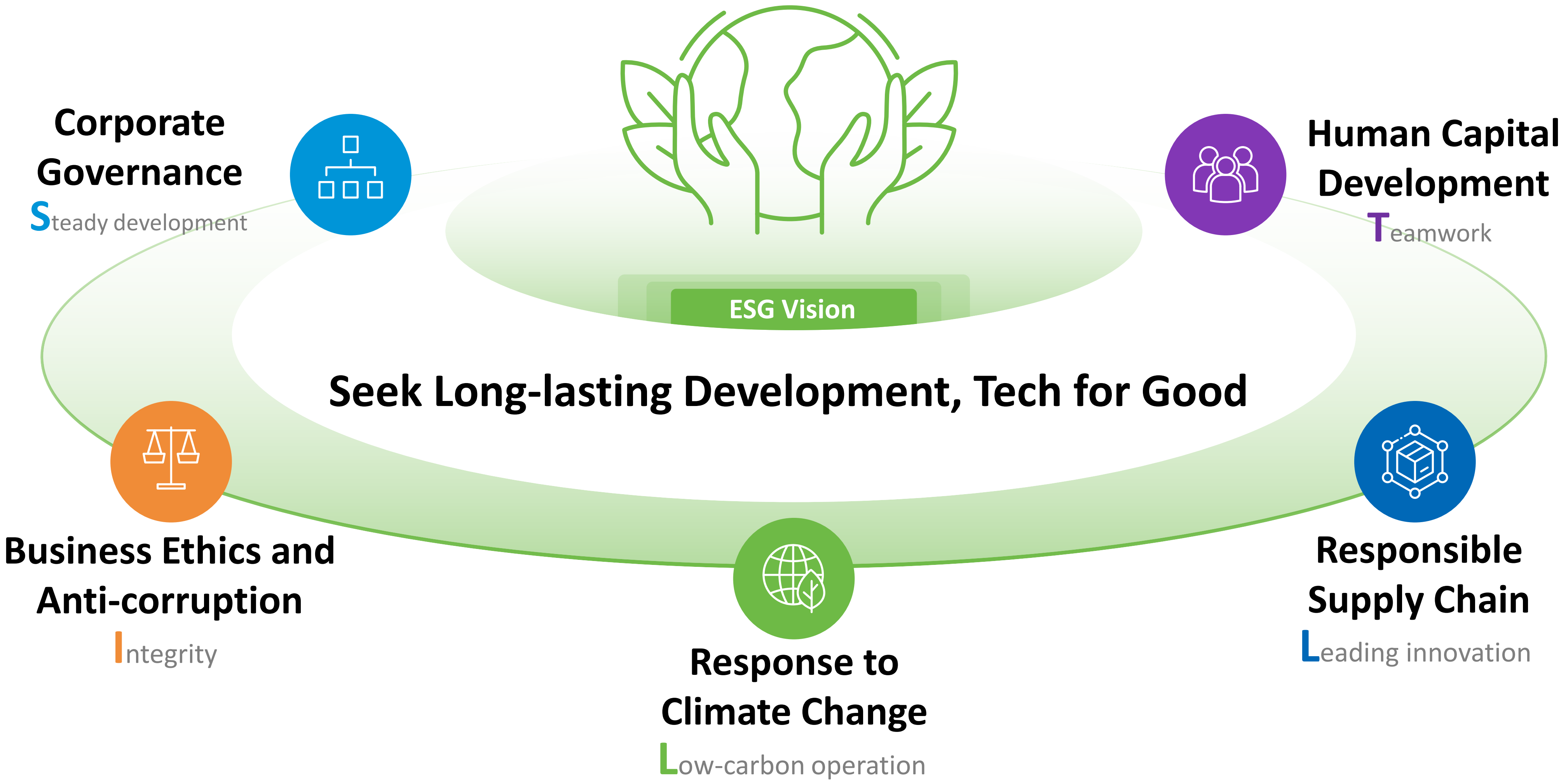
Goal-Driven

Integrity

Accountability

ESG Strategy——STILL Framework

ESG Key Issue and cultural connotation



ESG Vision

Seek Long-lasting Development, Tech for Good

Corporate Governance
Steady development

Human Capital Development
Teamwork

Business Ethics and Anti-corruption
Integrity

Response to Climate Change
Low-carbon operation

Responsible Supply Chain
Leading innovation

Sustainability

- Formulated the ***Administrative Measures for Environmental, Social and Governance (ESG)***, and established a three-level ESG management structure
- Actively respond to UN SDGs
- Prepared ***GigaDevice ESG Improvement Plan (2023-2025)***

Sustainability Key Performance in 2023

Diversification and Occupational Health & Safety

Promoted diversified employment

36%
Female employees

Organized various trainings to all employees

26.73h
Training time per employee

Provide a healthy and safe working environment for employees

ISO 45001
Occupational Health and Safety Management System Certificate

Response to Climate Change

Scope 1 GHG Emissions
226.16 tCO_2e

Scope 2 GHG Emissions
6,095.22 tCO_2e

Density of Total GHG Emissions
109.72 tCO_2e/revenue per CNY 100 million

Scope 3 (Business travel)
851.24 tCO_2e

Clean Technology

In 2023, Hefei rooftop PV electricity generation **27,747 KW•h**, reducing GHG emissions by **15.82 tCO_2e**

We had **243** granted patents related to clean technology

Low Power Products

SPI NOR Flash
GD25WD/WQ Series
GD25LE Series
1.2V GD25UF low voltage series

MCU
Arm® Cortex®-M based MCUs with multiple power-saving modes

Partners and Ecosystem

100%
Type Ⅰ core suppliers received ISO 9001 and ISO 14001 certifications

Drove industrial ecosystem construction, actively participated in industry summits, and collaborated with partners to promote technological innovation in industry

Public welfare programs

1,321,265.55 ¥
Total amount

92.33h
Total time

111
Total number of persons

Milestones

2005.4

Established headquarter in Beijing

2006

Low-power SRAM in mass production

2008

Launched China's first SPI NOR Flash

2013

Launched China's first 32-bit Arm® Cortex®-M3 MCU

Launched world's first 8-pin SPI NAND Flash

2015

China's first in-house developed NAND Flash in mass production

Completed the first NOR Flash AEC-Q100 qualification

2016.8

IPO in Shanghai Stock Exchange (SSE 603986))

2019

Successfully acquired Silead Inc.

Launched world's first RISC-V 32-bit MCU

PMU project kicked off

GD25 SPI NOR Flash passed the AEC-Q100 qualification

2020

24nm SLC NAND Flash in mass production

2021

Established Automotive Product Department

2022

GD5F SPI NAND Flash passed the AEC-Q100 qualification

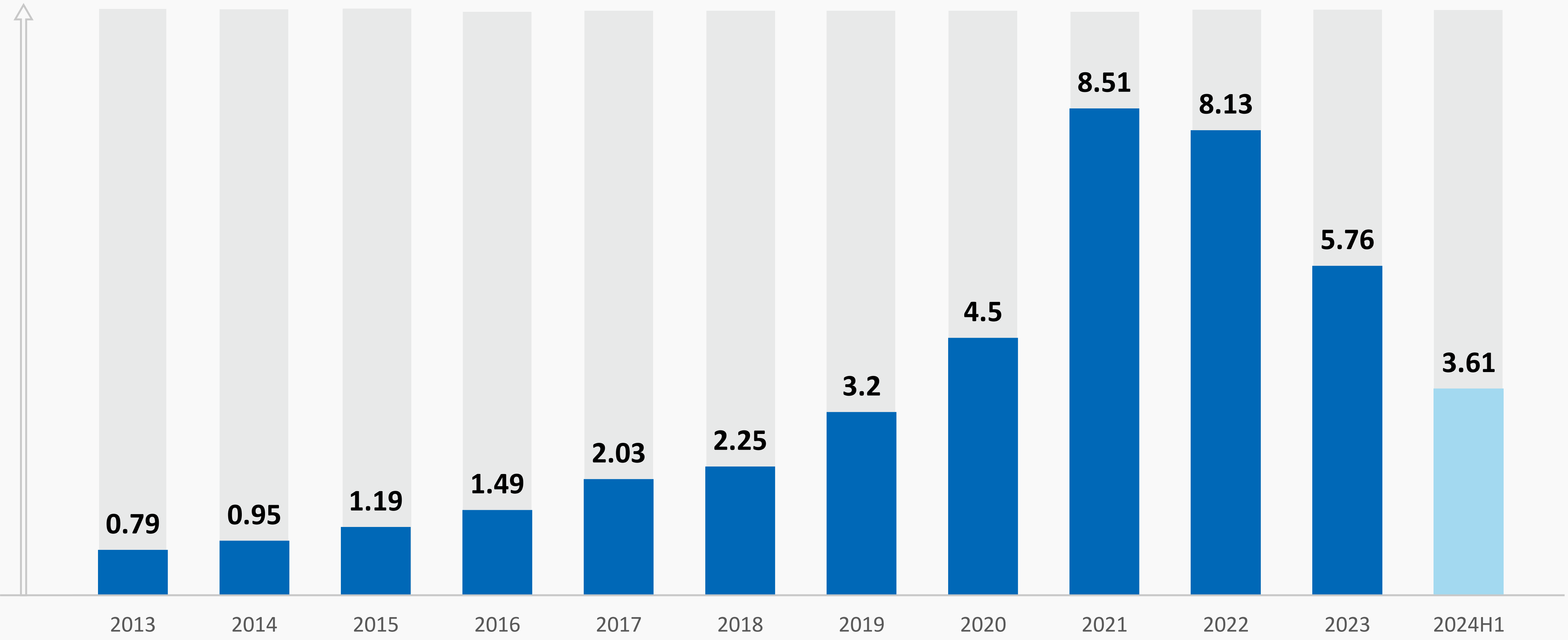
2023

100Mu Automotive Flash memory shipment milestone

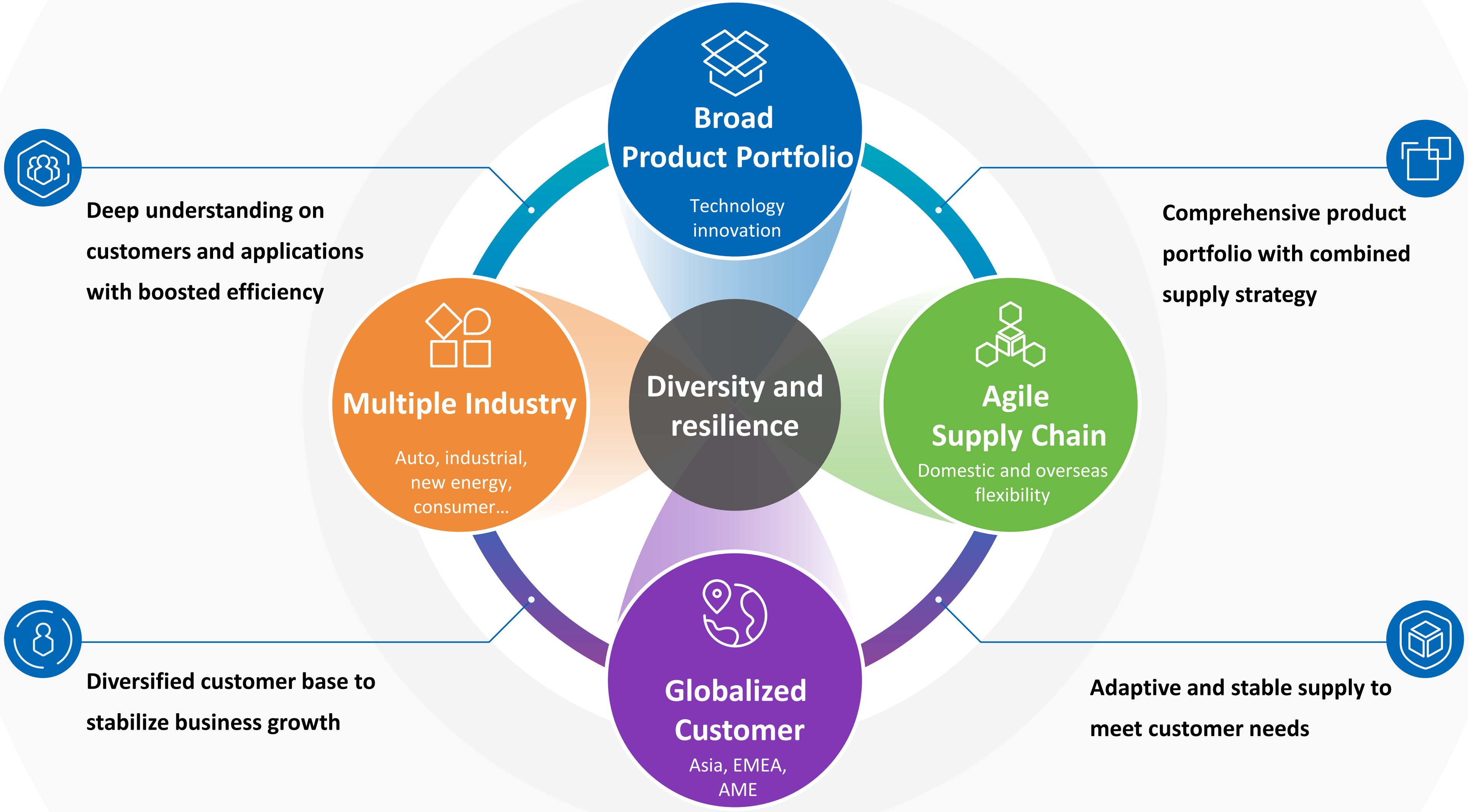
Launched Arm® Cortex® -M7 G32H7 series MCU

Revenue

Company Revenue (CNY Billion)



Building a Diversified Foundation for Competitive Advantage



Diversity and resilience

Broad Product Portfolio
Technology innovation

Multiple Industry
Auto, industrial, new energy, consumer…

Agile Supply Chain
Domestic and overseas flexibility

Globalized Customer
Asia, EMEA, AME

Deep understanding on customers and applications with boosted efficiency

Comprehensive product portfolio with combined supply strategy

Diversified customer base to stabilize business growth

Adaptive and stable supply to meet customer needs

Diversified Products and Markets

FLASH

- SPI NOR FLASH® Series
- SPI NAND FLASH® Series
- Parallel NAND FLASH Series

MCU

- GD32 MCU

Analog

- Power Management
- Motor Driver
- Signal Chain

Sensor

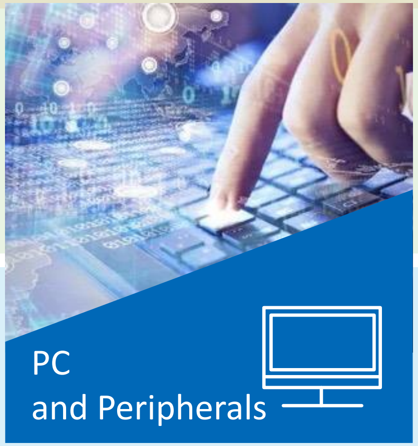
- Fingerprint
- Touch Control

Automotive/ Industrial

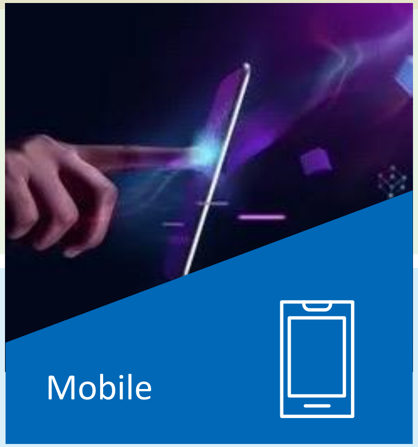
IoT

Consumer Electronics

Network/ Communication



PC and Peripherals



Mobile

Global Organization

Europe

- London, UK
- Munich, Germany

North America

- San Jose, CA
- Dallas, TX
- Boston, MA

Asia

- Beijing HQ
- Shanghai
- Shenzhen
- Hefei
- Xi'an
- Suzhou
- Chengdu
- Hongkong
- Hsinchu
- Singapore
- Korea
- Japan

Key Customers

BYD
TESLA
长安汽车 CHANGAN AUTO
吉利汽车 GEELY AUTO
广汽集团 GAC GROUP
NIO
理想
长城汽车
Panasonic
LEAR
APTIV

ABB
Schneider Electric 施耐德电气
Honeywell
OTIS
SIEMENS
SKYROCKET
INOVANCE
CHAMBERLAIN
阳光电源 SUNGROW
solaredge
ECOFLOW

HCFA 禾川科技
XINJE
invt 英威腾
JACK 杰克
大豪 DAHAO TECHNOLOGY 科技
雷赛智能 Leadshine
MEGMEET
NARI 南瑞集团 NARI GROUP CORPORATION
Simphoenix 四方电气
XJ 许继集团
KELONG 科华技术

CATL 宁德时代
FJ DYNAMICS 丰疆智能
TITANS 泰坦
ninebot 九号
TELD 特来电
Western Digital
ASUS
tineco 添可
CVTE Dream-Future 视源股份
Canon
brother

fitbit
Razor
ECOVACS
iRobot
Goertek We Make It Together
和利时 HollySys
Star Charge
精创®股份 Since 1996
ESTUN AUTOMATION
NESPRESSO
KEURIG

ZEBRA
AUO
BOE
JDI Japan Display Inc.
LG
TCL
Haier
SAMSUNG
Transsion
NOVASTAR
HONOR

Midea
oppo
mi
Hisense
DELL
hp
Lenovo 联想
Google
Baidu 百度
CONTEC
TP-LINK

ZTE中兴
Sagemcom
NETGEAR
D-Link Building Networks for People
Accelink

Quality Principle

Quality:
Everybody's Responsibility

Product Quality Throughout

Promote a Risk Management Culture

Lessons learned & Continual Improvement

Adherent to Promises with Customer-oriented Mindset

ISO 26262

CERTIFICATE

ISO 9001

CERTIFICATE

GigaDevice Semiconductor Inc.

ISO 9001 : 2015

ISO 14001

CERTIFICATE

ISO 14001 : 2015

ISO 45001

CERTIFICATE

ISO 45001 : 2018

CNAS ISO/IEC 17025

China National Accreditation Service for Conformity Assessment

LABORATORY ACCREDITATION CERTIFICATE

Product Testing Center of GigaDevice Semiconductor Inc.

is accredited in accordance with ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories/CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories for the competence to undertake the service described in the schedule attached to this certificate.

The scope of accreditation is detailed in the attached schedule bearing the same registration number as above. The schedule forms an integral part of this certificate.

Duns registered

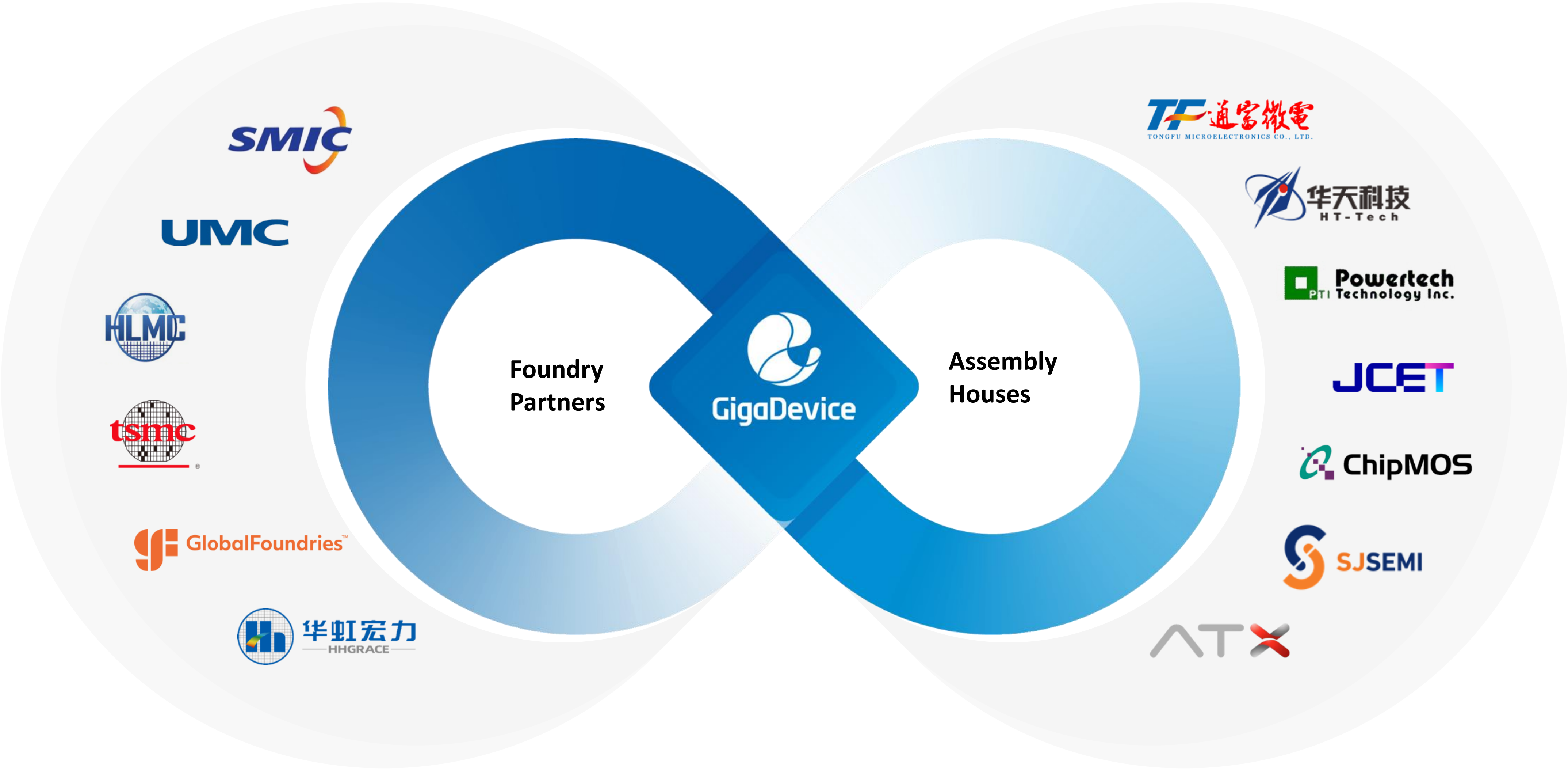
邓白氏注册
D-U-N-S REGISTERED

邓白氏注册® 认证企业
D-U-N-S® REGISTERED™ Company
(2022.2 - 2023.2)

兆易创新科技集团股份有限公司
GigaDevice Semiconductor Inc.

邓白氏编码® 421330360
D-U-N-S® NUMBER

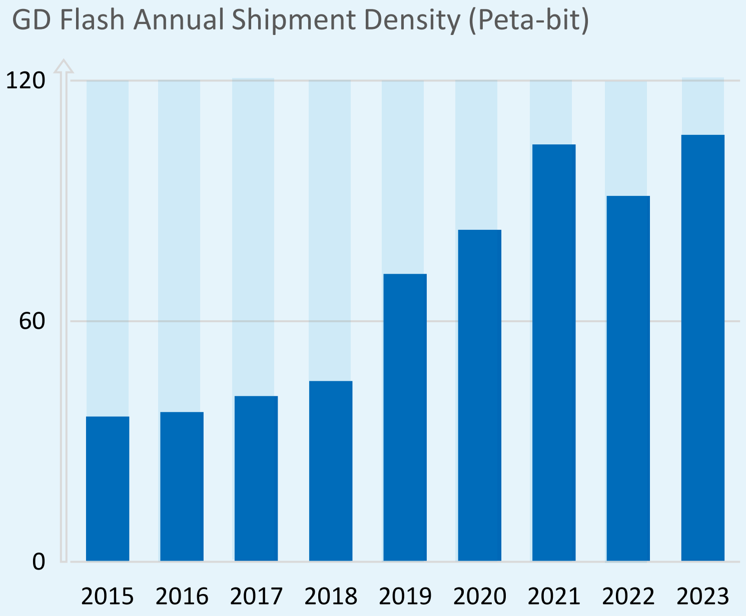
Supply Chain



FLASH

Rapid Growth in NOR Flash

Shipped over 23.7 Billion Units of Flash Memory



Ranked No.2
in SPI NOR Flash

2023 Global SPI NOR Flash Vendor Rank

1	Winbond	27.8%
2	**GigaDevice**	**19.1%**
3	Macronix	16.8%
4	Infineon(Cypress)	12.5%
5	Micron	6.0%
6	Others	17.8%

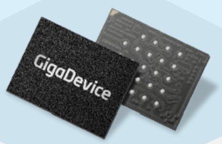
Source: Web-Feet Research, 2024

Flash Product Trends

Full Density

- GD25/55 SPI NOR Flash with 512Kb to 2Gb density to meet market requirements.
- GD5F SPI NAND Flash provides 1Gb to 4Gb density and in mass production.
- GD9F Parallel NAND Flash provides 1Gb to 8Gb density and in mass production.
- The automotive product density of 2Mb to 4Gb in mass production.

High Performance

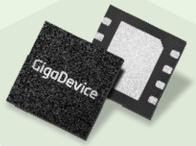


- GD25F/LF is industry highest performance Quad SPI NOR Flash in medium and low density, with data throughput up to 104MB/s.
- GD25T/LT is industry highest performance Quad SPI NOR Flash with data throughput up to 200MB/s.
- GD25X/LX Octal SPI NOR Flash is fully compliant with Micron Xccela Consortium standard, with data throughput up to 400MB/s.

High Reliability

- 20 years data retention typically and 100K P/E cycles.
- Support high temperature up to 125℃.
- 64Mb and above density NOR Flash supports ECC for high product reliability which meets the harsh requirements in automotive application.

Low Power



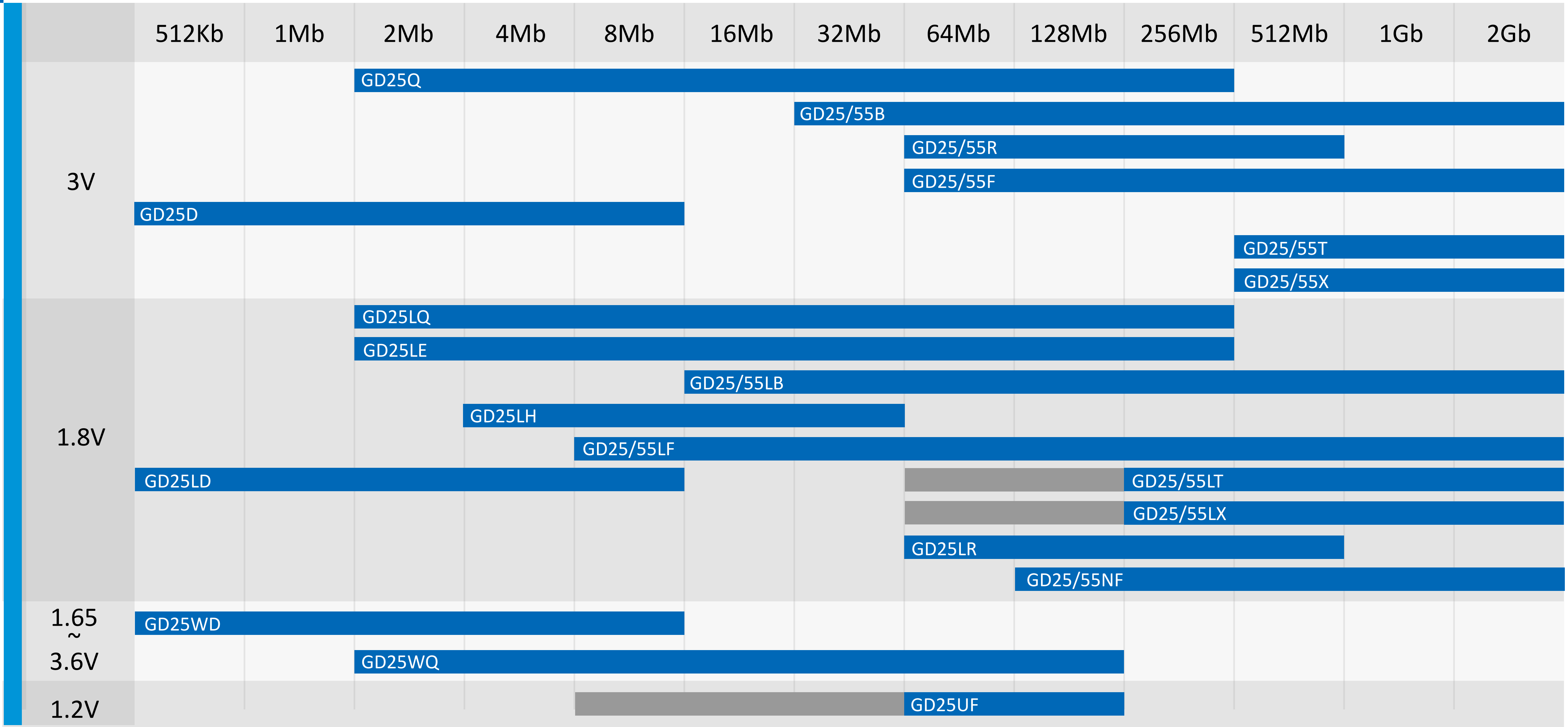
- GD25LE series provides excellent low power performance in industry.
- GD25WD/WQ wide voltage range Flash operates in 1.65V to 3.6V power supply which provides best option for battery powered applications.
- 1.2V Ultra Low Power series for extremely power sensitive applications.
- 1.8V VCC 1.2V VIO dual power flash for lower voltage, lower power and high-performance applications

Small Package

- The demand for WLCSP package is increasing and requires high quality manufacturing standard.
- Introduced industry smallest 1.2x1.2mm USON6 package.
- Introduced industry smallest 128Mb and 64Mb SPI NOR Flash in 3x3x0.4mm FO-USON8 and 3x2x0.4mm FO-USON8 package respectively.
- Provided industry smallest 6x5mm WSON8 package for 1Gb to 4Gb SPI NAND Flash

SPI NOR Flash Roadmap

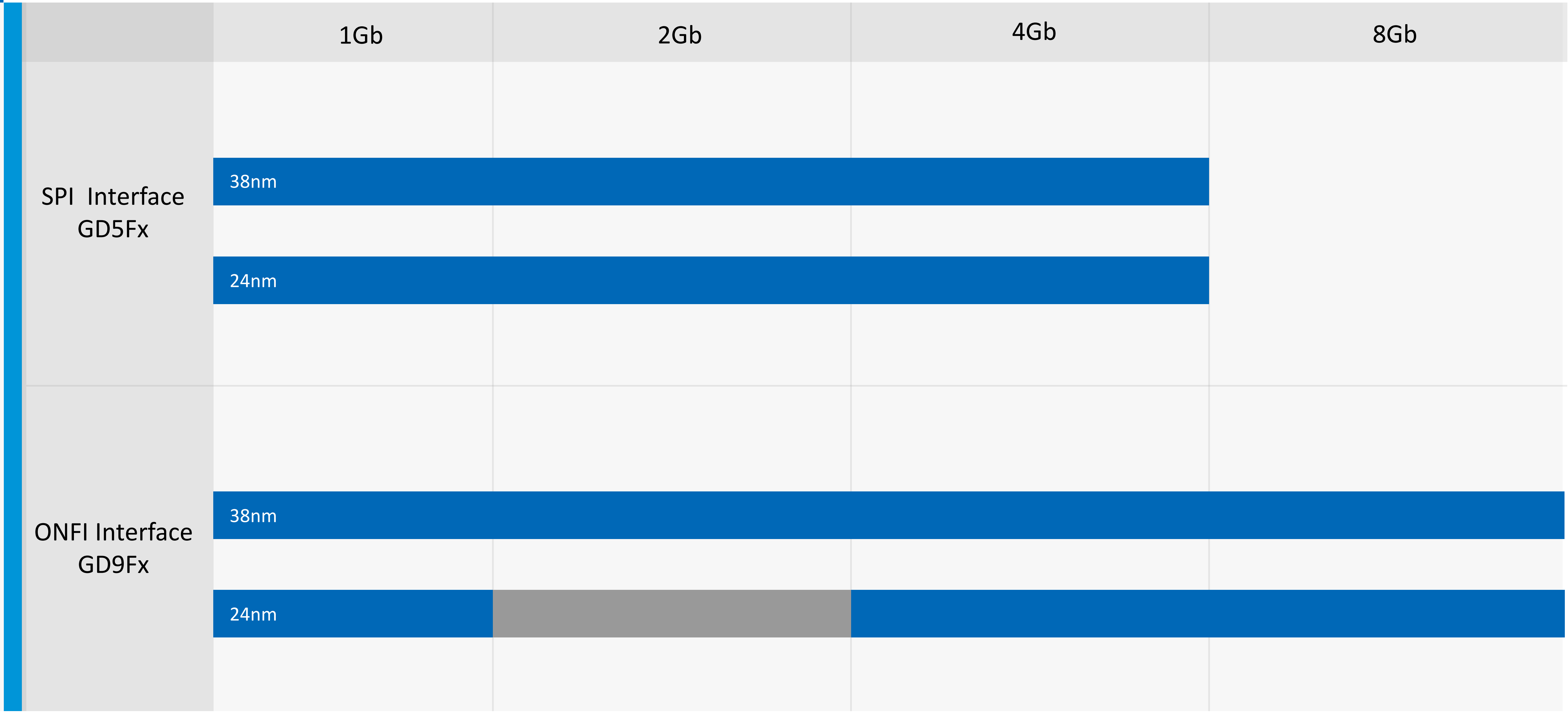
🟦 Mass Production ⬜ Developing



		512Kb	1Mb	2Mb	4Mb	8Mb	16Mb	32Mb	64Mb	128Mb	256Mb	512Mb	1Gb	2Gb
3V	GD25Q			🟦	🟦	🟦	🟦	🟦	🟦	🟦	🟦			
	GD25/55B							🟦	🟦	🟦	🟦	🟦	🟦	🟦
	GD25/55R								🟦	🟦	🟦	🟦		
	GD25/55F								🟦	🟦	🟦	🟦	🟦	🟦
	GD25D	🟦	🟦	🟦	🟦	🟦								
	GD25/55T											🟦	🟦	🟦
	GD25/55X											🟦	🟦	🟦
1.8V	GD25LQ			🟦	🟦	🟦	🟦	🟦	🟦	🟦	🟦			
	GD25LE			🟦	🟦	🟦	🟦	🟦	🟦	🟦	🟦			
	GD25/55LB						🟦	🟦	🟦	🟦	🟦	🟦	🟦	🟦
	GD25LH				🟦	🟦	🟦	🟦						
	GD25/55LF					🟦	🟦	🟦	🟦	🟦	🟦	🟦	🟦	🟦
	GD25LD	🟦	🟦	🟦	🟦	🟦								
	GD25/55LT								⬜	⬜	🟦	🟦	🟦	🟦
	GD25/55LX								⬜	⬜	🟦	🟦	🟦	🟦
	GD25LR								🟦	🟦	🟦	🟦		
	GD25/55NF									🟦	🟦	🟦	🟦	🟦
1.65 ~ 3.6V	GD25WD	🟦	🟦	🟦	🟦	🟦								
	GD25WQ			🟦	🟦	🟦	🟦	🟦	🟦	🟦				
1.2V	GD25UF					⬜	⬜	⬜	🟦	🟦				

NAND Flash Roadmap

🟦 Mass Production ▨ Developing



		1Gb	2Gb	4Gb	8Gb
SPI Interface GD5Fx	38nm	🟦	🟦	🟦	
	24nm	🟦	🟦	🟦	
ONFI Interface GD9Fx	38nm	🟦	🟦	🟦	🟦
	24nm	🟦	▨	🟦	🟦

Approved Supplier in 5,500+ SoC Reference Designs Worldwide

5500+

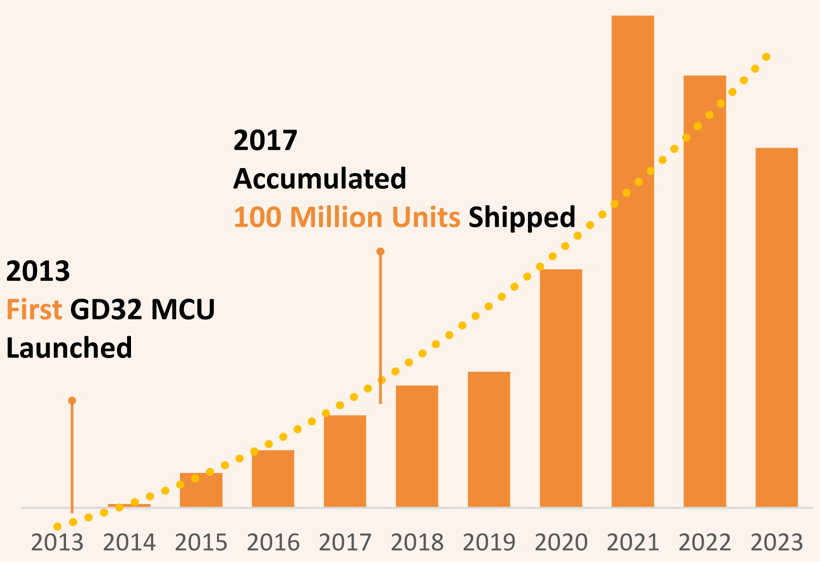
Infineon
SEQUANS
RENESAS 瑞萨
FocalTech
asmedia
BROADCOM
synaptics
dialog SEMICONDUCTOR
Amlogic
MegaChips
OMNIVISION
SigmaStar
Qualcomm
Ambarella AI envisioned™
MEDIATEK
NXP
STARBLAZE
Prolific PROLIFIC TECHNOLOGY INC.
JMicron
SONY
TEXAS INSTRUMENTS
REALTEK
Rockchip
SONiX
ALi
ANALOG DEVICES AHEAD OF WHAT'S POSSIBLE™
intel
NVIDIA
LATTICE SEMICONDUCTOR
VIA
mobileye
NOVATEK
SILICON LABS
AMD
MARVELL
Himax Drive for better vision
Raydium
ublox
GENESYS LOGIC
onsemi
qorvo all around you
artosyn 酷芯微电子
ST
NORDIC SEMICONDUCTOR
兆芯
谷雨半导体 Grain semiconductor
ALLWINNER 全志科技
SUNPLUS
CALTERAH
地平线 Horizon Robotics
黑芝麻智能 BLACK SESAME TECHNOLOGIES
芯驰 SemiDrive
siengine 芯擎科技
AXERA 爱芯元智

MCU

Strong Growth of GD32 MCU

Strong Growth of GD32 MCU
Over 1.57 Billion Units Shipped

GD32 MCU Shipment (Mu)



Over 1.57 Billion Units
Shipped by now

2017
Accumulated
100 Million Units Shipped

2013
First GD32 MCU
Launched

TOP 10

Global Top10 MCU Supplier	Market Share	2022 Rank	2021 Rank
ST	17.3%	1	3
Renesas	16.5%	2	2
NXP	16.5%	3	1
Microchip	13.4%	4	5
Infineon	13.1%	5	4
TI	6.8%	6	6
GigaDevice	**1.8%**	**7**	**8**
Nuvoton	1.6%	8	7
Samsung	1.2%	9	9
Silicon Labs	1.2%	10	10

Source: Omdia Microcontroller Market Tracker - 2H22 Database, Apr.2023

GD32 MCU “One-Stop Shop”

Wafer/KGD offerings

SIP offerings

Arm® Cortex®

RISC-V

eRF

- Wi-Fi
- Bluetooth
- NB-IoT

eNVM

- eFlash
- eMRAM
- eRRAM

Logic

- 110nm, 55nm, 40nm
- 5.5V, 3V, 1.8V etc.

Memory

- NOR
- NAND
- DRAM
- SRAM

Sensor

- Pressure
- GAS
- Fingerprint
- Lighting

Analog

- Op. Amplifier
- AD/DA converter
- Power management

GD32 Product Family

50 Series

600+ Part No.

	Cortex®-M23	Cortex®-M3	Cortex®-M4	Cortex®-M33	Cortex®-M7	RISC-V
High-Performance		GD32F207 120MHz, 3M/256K GD32F205 120MHz, 3M/256K	GD32F470 240MHz, 3M/768K GD32F427 200MHz, 3M/256K GD32F425 200MHz, 3M/256K GD32F450 200MHz, 3M/512K GD32F407 168MHz, 3M/192K GD32F405 168MHz, 3M/192K GD32F403 168MHz, 3M/128K	GD32F527 200MHz, 7.5M/1M GD32E518 180MHz, 512K/128K GD32E517 180MHz, 512K/128K GD32E513 180MHz, 512K/128K GD32E508 180MHz, 512K/128K GD32E507 180MHz, 512K/128K GD32E505 180MHz, 512K/128K GD32E503 180MHz, 512K/128K	GD32H759 600MHz, 3840K/1024K GD32H757 600MHz, 3840K/1024K GD32H737 600MHz, 3840K/1024K	
Main-Stream		GD32F107 108MHz, 1M/96K GD32F105 108MHz, 1M/96K GD32F103 108MHz, 3M/96K GD32F101 56MHz, 3M/80K	GD32F307 120MHz, 1M/96K GD32F305 120MHz, 1M/96K GD32F303 120MHz, 3M/96K GD32C113 120MHz, 128K/32K GD32E113 120MHz, 128K/32K GD32C103 120MHz, 128K/32K GD32E103 120MHz, 128K/32K	GD32E502 100MHz, 384K/48K		GD32VF103 120MHz, 128K/32K
Entry-Level	GD32E235 72MHz, 128K/16K GD32E230 72MHz, 64K/8K	GD32F150 72MHz, 64K/8K GD32F130 48MHz, 64K/8K	GD32F350 108MHz, 128K/16K GD32F330 84MHz, 128K/16K GD32F310 72MHz, 64K/8K			
Low-Power	GD32L235 64MHz, 128K/24K GD32L233 64MHz, 256K/32K					
Wireless				GD32W515 180MHz, 2048K/448K		GD32VW553 160MHz, 4M/320K
Automotive				GD32A513 100MHz, 384K/48K GD32A503 100MHz, 384K/48K		
Specific	GD32E232 72MHz, 64K/8K		GD32FFPR 168MHz, 1M/128K	GD32E501 100MHz, 512K/32K GD32EPRT 168MHz, 384K/96K+4M		

GD32 MCU Focused Applications

- IoT
- New Energy
- Industrial Control
- Surveillance
- Network & Communication
- Healthcare
- Home Appliances
- Automotive

GD32 MCU Trends

- 50 Series, 600+ Part Numbers
- Industrial and automotive grade
- Fully compatible and support various IDE
- Comprehensive ecosystem support

High Computing Power	GD32H Series
Wireless	GD32W Series
Low Power	GD32L Series
Automotive	GD32A Series

Analog

GD30 Products and Applications

High Performance Power

- Wireless infrastructure
- Communication
- Industrial application
- IPC
- IoT

01

Motor Driver

- BLDC, BDC, Stepper Motors
- Robotics and RC toys
- Industrial automation
- IoT

02

Specific Power Management

- TWS Charging
- Wireless MIC
- Customized Solution
- PMIC for DDR

03

Lithium battery management

- Lithium battery protection and charging
- IOT
- Cleaning robots
- Energy storage

04

Signal Chain

- Power Measurement and monitoring
- Multiphase motor control
- Battery formation and energy storage
- Industrial control

05

GD30 High Performance Power

🟦 Mass Production
▨ Developing

	GD30DC Series (DC-DC)		GD30LD Series (LDO)		GD30VR（Vref）
	Buck	**Boost**	**Low Noise/High PSRR**	**Low Iq/Low Power**	**High-Precision (0.05%)**
Wide V_{IN} (>30 V)				**GD30LD240x** V_{IN} = 35/46V V_{OUT} = 1.8V I_{OUT}=0.1/0.25/0.3/0.35A	**GD30VR3100** Temp coeff(Max): 3 ppm/degC Flicker Noise: 1.5µVpp/V I_{OUT} = ±10mA
Mid V_{IN} (7 V to 30 V)	**GD30DC135x** V_{IN} = 28V I_{OUT} = 3A **GD30DC13xx** V_{IN} = 18V I_{OUT} = 2A/3A /6A	**GD30DC230X** V_{IN} = 18V Boost CV/CC			**Standard-Precision (≥0.1%)**
Low V_{IN} (≤7 V)	**GD30DC110x** V_{IN} = 5V I_{OUT} = 1A/1.2A/2A	**GD30DC210X** V_{IN} = 5V Boost	**GD30LD100x/3137** V_{IN} = 6.5V V_{OUT} = 0.5V/0.8V I_{OUT} = 1.2A/2A **GD30LD330x** V_{IN} = 6.5V V_{OUT} = 0.5V/0.8V I_{OUT} = 3A **GD30LD2010** V_{IN} = 5.5V V_{OUT} = 0.8V Fixed I_{OUT} = 0.5A **GD30LD103x** V_{IN} = 6.5V V_{OUT} = 0.5V I_{OUT} = 3A	**GD30LD2000** V_{IN} = 5.5V V_{OUT} = 0.8V Fixed I_{OUT} = 0.3A	**GD30VR1100** Temp coeff(Max): 8 ppm/degC Flicker Noise: 1.5µVpp/V I_{OUT} = ±10mA **GD30VR1000** Temp coeff(Max): 15 ppm/degC Flicker Noise: 10uVpp/V I_{OUT} = ±10mA

GD30 Li-ion Charger/Motor Driver

🟦 Mass Production ▨ Developing

GD30BC Series（Li-ion Charger）		GD30SP Series (Over Voltage Protector)	GD30DR Series(Motor Driver)		
Single Cell	**Multi Cells**		**BDC**	**BLDC**	**Stepper**
GD30BC2416 1 Cell, Switch Mode $V_{IN\,max}$= 20V Charging Current ≤ 1.5A	**GD30BC2501** 4/6 Cells, Switch Mode V_{IN} = 32V; Charging Current ≤ 5A	**GD30SP2200** V_{IN} = 30V I_{OUT} = 3A V_{OVLO} = 4-15V	**GD30DR300x** H-Bridge Driver with MOSFET V_{IN} = 40V I_{OUT} = 3.2/4.5/6A	**GD30DR8413** Triple Half Bridge with 3A MOSFET V_{IN} = 30V I_{OUT} = 4.5A	**GD30DR3820** Dual H-Bridge Driver Integrated MOSFET V_{IN} = 10.8V; I_{OUT} = 1A
GD30WS8662 1 Cell, Linear Mode $V_{IN\,max}$ 30V Charging Current ≤ 456mA	**GD30BC2502** 2/3/5 Cells, Switch Mode V_{IN} = 32V Charging Current ≤ 5A	**GD30SP2201** V_{IN} = 30V I_{OUT} = 1.5A V_{OVLO} = 6.0V	**GD30DR380x** H-Bridge Driver with MOSFET V_{IN} = 10/11V I_{OUT} = 1/1.8A	**GD30DR8306** 3-Phase Driver w/ 2A Buck V_{IN} = 30V I_{OUT} = 4.5A	
GD30BC150x 1 Cell, Linear Mode $V_{IN\,max}$= 28V Charging Current 800mA/1A				**GD30DRE23x** 3-Phase Driver SOC V_{IN} = 30V I_{OUT} = 4.5A	
				GD30DRE518 3-Phase Driver SOC V_{IN} = 150V	

GigaDevice

GD30 Signal Chain Product

🟦 Mass Production ▨ Developing

GD30AD Series（ADC）

Sigma-Delta

GD30AD3640
24bit 1KSPS 4-ch
I2C interface
24bit

GD30AD334x
16bit 1KSPS 4-ch
SPI/I2C interface
16bit

SAR

GD30AD33G0
16bit 2x 8-ch
1MSPS
16bit

GD30AD3380
16bit 8-ch
500KSPS/ 1MSPS
16bit

GD30AD3382
16bit 8-ch
250k/500kSPS
16bit

GD30AP Series (Operation Amplifier)

GD30AP321/358/324
1/2/4-ch 1.8V~5.5V
1.2M BW +/-3mV Vos
30nV/sqrtHz@1KHz

GD30AP855x
1/2-ch 1.8V~5.5V
Max 8uV Vos with
+/-40nV/degC drift

GD30AP863x
1/2/4-ch 1.8V~5.5V
9M BW +/-3.5mV Vos
13nV/sqrtHz@1KHz

GD30AP72x
1/2/4-ch 1.8V~5.5V
8nV/sqrtHz@1KHz

GD30CP Series (Comparator)

GD30CP331/393
1/2-ch 1.8V~5.5V
100ns @ 100mV overdrive
Open drain output

GD30CP872x
1/2-ch 1.8V~5.5V
66ns @ 100mV overdrive
Push pull output

GD30TS Series (Temperature Sensor)

GD30TS112
Measurement Accuracy:
±0.5° C (–40° C to +125° C)
±0.25° C (0° C to +65° C)

GD30TS075
Measurement Accuracy:
±0.5° C (–55° C to +125° C)
Local, remote resolution:
0.0625° C (12 Bits)

GD30TS451
Measurement Accuracy:
Local ±1.0° C (–55° C to +125° C)
Remote ±2.0° C (–55° C to +125° C)
Local, remote resolution:
0.0625° C (12 Bits)

GD30 Specific Power Management

🟦 Mass Production ▨ Developing

GD30WS Series
(TWS Charging)

GD30WS8815
1.5A TWS Case PMIC
Power Path Mgmt

GD30WS8855
1.5A TWS Case PMIC
Power Path Mgmt
Zero voltage charging

GD30WS8805
1.2A TWS Case PMIC
Power Path Mgmt

GD30EC/MC/MP Series
(capacitor sensor)

GD30EC2300
Constant power

GD30EC3x00
580mA Linear Charger
Constant AV/RMS voltage

GD30MC Series
8-bit MCU
Flash&OTP; 1K*14 bit
2K*16bit
16K*8bit

GD30MP9000
Linear charger
MCU； MIC detection
Constant voltage/RMS/power output

GD30MP Series
(PMIC for DDR)

GD30MP10x0
VIN:4.25V-5.5V
3 BUCK Converters 4A+4A+1A
COT Mode
2 LDO Regulators: 1.8V&1.0V

GD30MP1020
For Over clock Application
3xBuck 5A/5A/2A 2xLDOs
for DDR5 SO/UDIMM
TQFN 3x4

GD30PD5118
Compliant with JEDEC JESD300-5B. 01 standard
Transmission rate: 12.5 MHz
Integrated temperature sensor: accuracy of 0.5 ° C

GD30TS139
11-bit resolution: 0.25℃ (1 LSB)
1.8 V and 1.0 V power input
Exceeds JEDEC JESD302-1 temperature accuracy
WLCSP

GD30BM Series
（BMS AFE）

GD30BM1018
Measures up to 18 cells in series
Maximum 2mV total measurement error
Support daisy chain communication

Sensor

Sensor Business Scope

Deeply cultivate sensors, signal chain, algorithms and solutions, and be a key contributor to the smart ecosystem

Advantages

- High integration, high precision and high sensitivity
- Low power
- Develop excellent algorithms and industry solutions

Mobile, Computing, Consumer

- Phone, PC, tablet fingerprint identification
- TFT LCD touch controller IC
- OLED touch controller IC
- Photoelectric physiological sensor

IoT

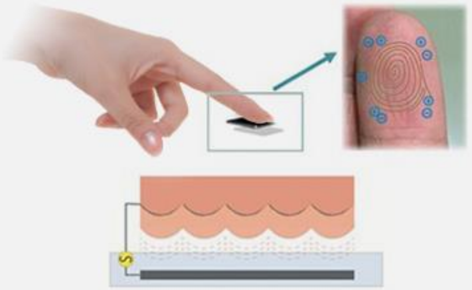
- Fingerprint identification and touch controller IC
  HMI solution for IOT application

Industrial, Automotive

- HMI for industrial and healthcare monitor device
- Sensors for smart cockpit applications

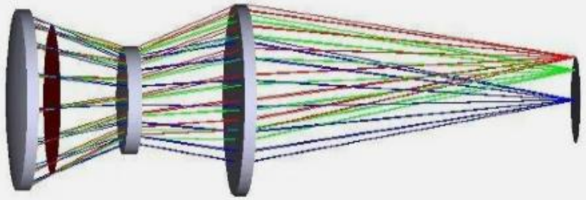
Sensor Technology Platform

Capacitive Detection Technology Platform



- Self/mutual capacity detection
- High precision ADC
- High SNR AFE, signal conditioning

Spectral Technology Platform



- High performance photodiode pixel design
- Optical lens design
- Micro-Lens design
- Spectral color filter design
- Optical simulation

Algorithms and Solutions

- High performance small area fingerprint algorithm
- Embedded fingerprint algorithm
- Heart rate algorithm

Sensor Roadmap

Applications	Mobile/Tablet		PC	IOT
Under OLED Fingerprint	**GSL7002** ● FRR <2% FAR 1/50K ● Support flexible/rigid OLED screen ● Support 3P lens	**GSL7003** ● FRR <2% FAR 1/50K ● Support flexible/rigid OLED screen ● Support 3P/2P lens		
Capacitive Fingerprint	**GSL6135** ● Back-Mounted Round/square Type ● Φ8.9 ~ Φ12mm; 11*10.4 ~ 9*7.5mm ● 508DPI / Pixel Array 64*64 ● FRR <3% FAR 1/50K	**GSL6192** ● Side-Mounted /W1.8mm*L13.5mm ● Support R5.5 Curved LGA ● 584DPI / Pixel Array 180*30 ● Support Over Current Protection ● 1.8v/1.2v IO compatible ● FRR <1.5% FAR 1/50K	**GSL6150** ● MoH(Match on Host) ● FRR 2%, FAR 1/50K ● USB/SPI interface ● Microsoft HLK	**GSL6150H** ● MoH (Match on Host) ● FRR 2%, FAR 1/50K ● USB/SPI interface
	GSL6193 ● Side-Mounted /W2.1mm*L13.5mm ● 508DPI / Pixel Array 118*32 ● Support Over Current Protection ● 1.8v/1.2v IO compatible ● FRR <3% FAR 1/50K	**GSL6195** ● Side-Mounted /W2.1&1.8mm*L13.5mm ● 508DPI / Pixel Array 118*26 ● Support Over Current Protection ● 1.8v/1.2v IO compatible ● FRR <3% FAR 1/50K	**GSL6186** ● MoC (Match on Chip) ● FRR 2%, FAR 1/50K ● Integrated hardware accelerator ● Microsoft HLK/ESS	**GSL6186C** ● MoC (Match on Chip) ● FRR 2%, FAR 1/50K ● Embedded fingerprint algorism
LCD Touch	**GSL915/1691** ● Support <7 inches display ● High SNR ● The most economical system solution	**GSL1680/3670/3676/ 3680/3692/5680** ● Support 7-20 inches display ● High SNR ● The most economical system solution	**GSM377x** ● Up to 26*14 channels, Self + Mutual ● Best-in-class resource & performance ● Full compliance with Window's PTP ● One-shop solution with advanced features	**GSL377x** ● Up to 26*14 channels, Self + Mutual ● Best-in-class resource & performance ● Enhance immunity to RF interference and AC charger noise ● One-shop solution with advanced features

DECLARATION

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Thank You