GigaDevice

Automotive Grade SPI NOR Flash

- 3.3V/1.8V SPI NOR Flash
- 65nm 1Mb-512Mb
- Products are AEC-Q100 grade 1 qualified
- PSW & PPAP Support
- Defect rate less than 10ppm
- Extended temperature -40°C to 125°C
- Automotive-qualified package options

Consistency. Reliability. Ruggedness.
Get them all in our new AEC-Q100 compliant GD25 SPI NOR Flash

GigaDevice

High Performance Quad & Octal SPI Flash Memory

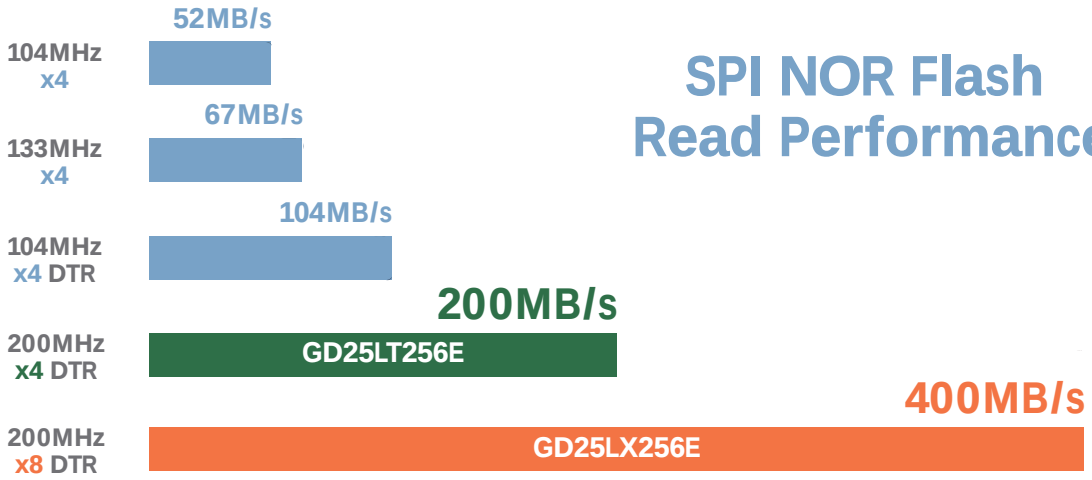
GD25LT256E

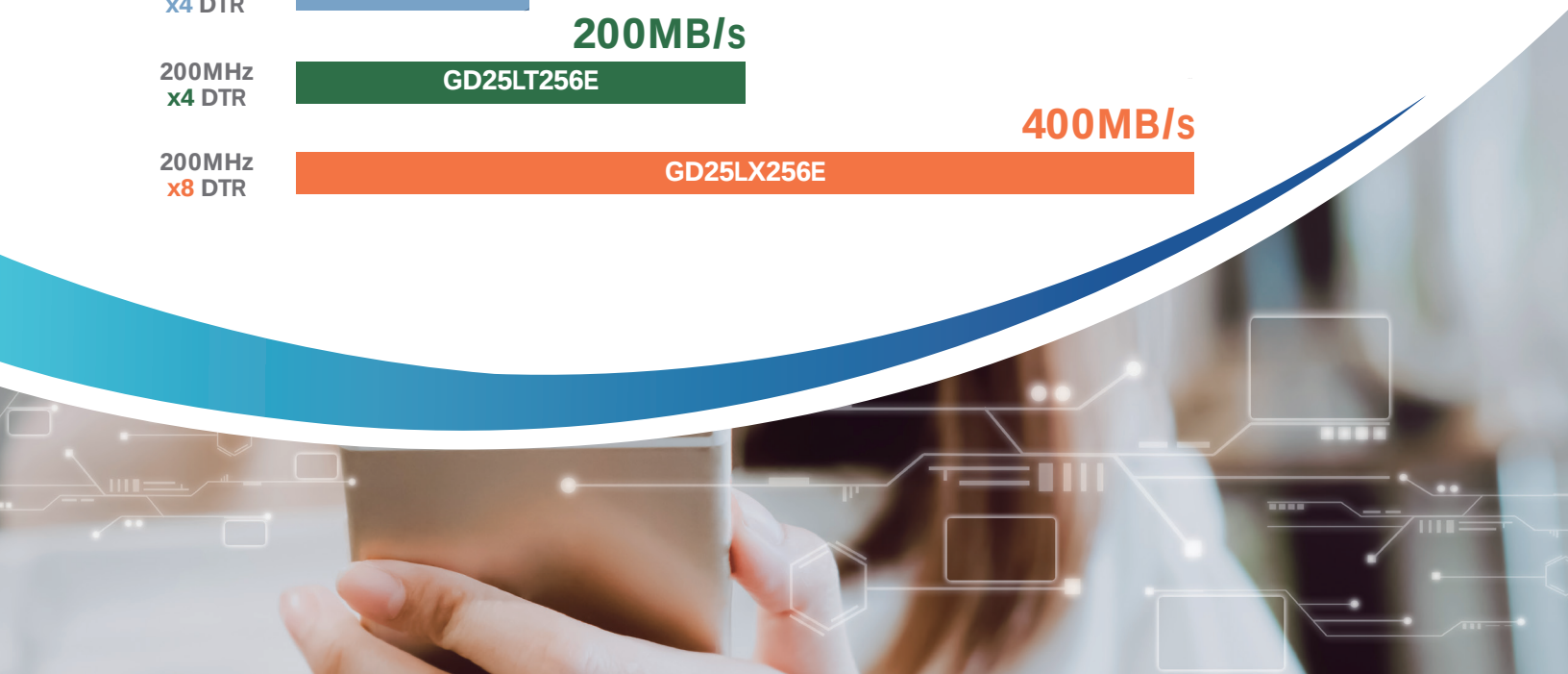
- 1.8V 256M-bit
- Single SPI & Quad DTR SPI interface
- Compatible Quad SPI command set
- Highest Quad I/O read performance with 200MB/s data throughput
- Support "Execute-In-Place" (XIP)
- DQS and DLP features improve high speed performance
- ECC and CRC features improve reliability and I/O integrity
- Standard TFBGA24, SOP16 packages

GD25LX256E

- 1.8V 256M-bit
- Single SPI & Octal DTR SPI interface
- Compatible to JEDEC xSPI standard
- Xccela™ Flash Consortium Member
- Highest read performance serial Flash with 400MB/s data throughput
- Support "Execute-In-Place" (XIP)
- DQS and DLP features improve high speed performance
- ECC and CRC features improve reliability and I/O integrity
- Standard TFBGA24, SOP16 packages

SPI NOR Flash Read Performance





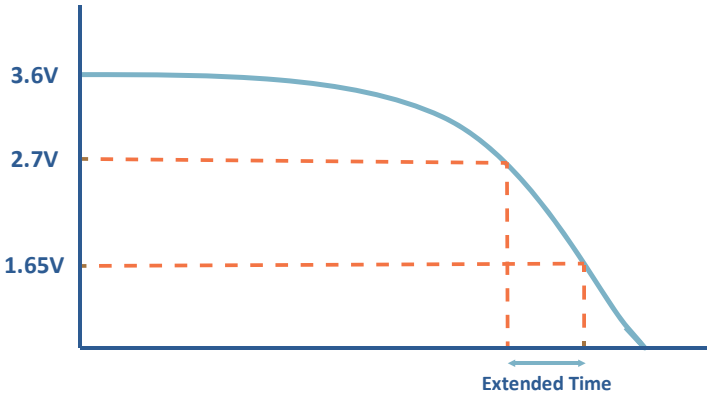
SPI NOR Flash Memory
Wide Voltage Range with Industry's Smallest Package

GigaDevice introduces Low-Power SPI NOR Flash memory series featuring the industry's smallest USON8 (1.5mm x 1.5mm) and WLCSP package, providing maximum design flexibility for IOT devices, wearables, smartphones and other compact battery operated applications.

- 1.65V to 3.6V wide operating voltage range
- Single, dual I/O SPI modes
- 512Kb to 8Mb density options
- Industry's smallest 1.5mm x 1.5mm USON8 package (0.5mm height)
- Operating Frequency up to 100MHz
- High reliability with 20-year data retention and 100,000 program/erase cycles
- Low power consumption:
  Zero standby current (0.1μA typical)
  Low read current (Less than 3mA at 40MHz)
- Advanced security feature:
  Factory preset 128-bit unique ID
- Extended operating temperature range:
  -40°C to 85°C, -40°C to 105°C, -40°C to 125°C

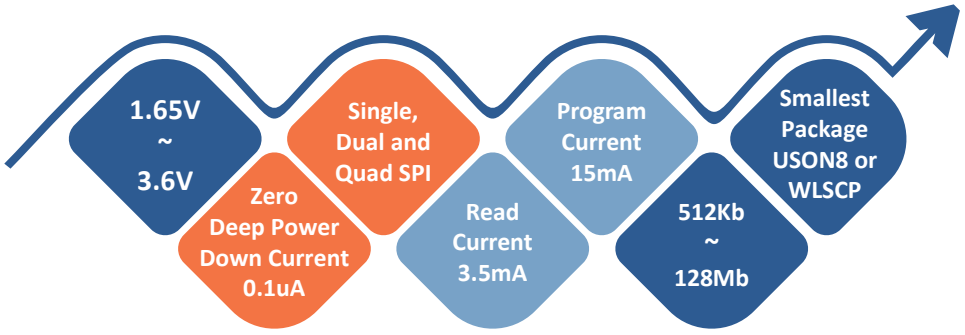
Ultra Low Power Wide Vcc SPI NOR Flash

The new GD25Wx Series from Gigadevice is an ultra low power SPI NOR Flash memory with a wide Vcc range, ideal for wearables, IoT, and battery operated applications.



Lower Vcc allows you to extend battery life

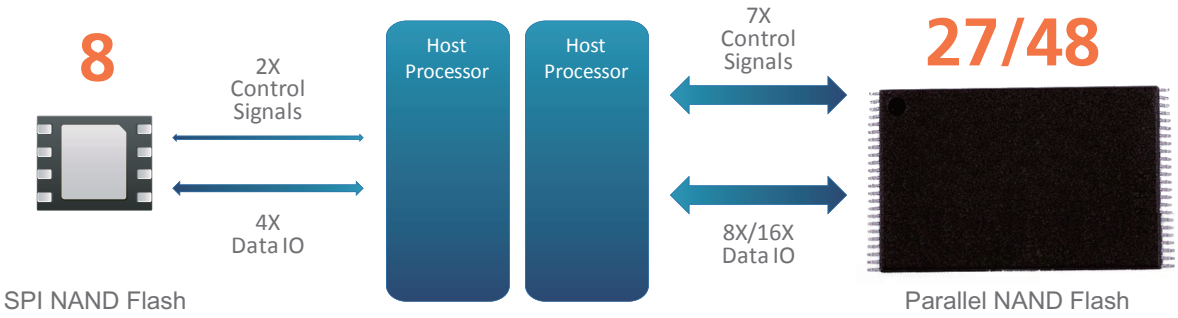
MAIN FEATURES



SPI NAND Flash

Density	1Gb ~ 8Gb		
Voltage	3.3V / 1.8V		
ECC	Internal 8bits/512B	Block0 is good with ECC	
High Speed	120MHz	Qual IO up to 480Mbps	
Page Size	2048 bytes	2KB cache buffer for fast read	Cache read and cache progaram
Temperature	-40℃ ~ 85℃	-40℃ ~ 105℃	-40℃ ~ 125℃
Package	WSON8	BGA24(ball 5x5)	

Pin Count Advantage of SPI Interface



SPI NAND Flash

Parallel NAND Flash

SPI NAND Product Performance

	Page Size	IO	Interface Clock	tRD	Data Transfer Volume	Performance
Read	2KB	x4	120MHz	80us	2KB	17.96MBps
Cache Read	2KB	x4	120MHz	80us	block	25.43MBps
Read with ECC Off	2KB	x4	120MHz	25us	2KB	34.71MBps
Cache Read with ECC Off	2KB	x4	120MHz	25us	block	59.56MBps

Parallel NAND Flash

Density	1Gb ~ 64Gb	
Voltage	3.3V / 1.8V	
ECC	4bits/512B for 3xnm	8bits/512B for 2xnm
Endurance/DR	100KPEC/10Y	
IO	X8 / X16	
Temperature	-40℃ ~ 85℃	-40℃ ~ 105℃
Package	TSOP48	FBGA63
Compatibility	ONFi 1.0	

GigaDevice Parallel NAND Flash offers high-capacity storage and performance with built-in error correction code (ECC) for multimedia data storage applications running on mobile devices, wearable devices, Internet of Thing (IOT), automotive infotainment systems, set-top boxes, data cards, high-standard industrial control, base station, voice storage, network communication, smart TVs and more.

Parallel NAND Product Performance

Product	Density	Voltage	IO	Page Size	Performance Read / Cache read
GD9FU1G	1G	3.3V	X8	2KB+128B	26.88MBps/36.44MBps
GD9FS1G	1G	1.8V	X8	2KB+128B	17.48MBps/21.08MBps
GD9FU1G	1G	3.3V	X16	2KB+128B	40.47MBps/66.93MBps
GD9FS1G	1G	1.8V	X16	2KB+128B	28.81MBps/40.09MBps
GD9FU2G	2G	3.3V	X8	2KB+128B	26.88MBps/36.44MBps
GD9FS2G	2G	1.8V	X8	2KB+128B	17.48MBps/21.08MBps
GD9FU2G	2G	3.3V	X16	2KB+128B	40.47MBps/66.93MBps
GD9FS2G	2G	1.8V	X16	2KB+128B	28.81MBps/40.09MBps