

S29GL256N MirrorBit™ Flash Memory

256 Megabit (16 M x 16-Bit / 32 M x 8-Bit)

Spansion Overview

Spansion, the Flash memory subsidiary of AMD and Fujitsu, is the world's leading manufacturer of NOR Flash Memory. Spansion is committed to delivering outstanding customer service and expert technical support, as well as providing the highest level of quality and reliability in its products. All Spansion production fabs are certified to the demanding ISO/TS16949:2002 global technical specification, ISO9001:2000 quality standards, and the ISO14001 environmental standard.

General Description

Spansion S29GL256N devices, manufactured using 110-nanometer second-generation MirrorBit™ (two-bit-per-cell) technology, uniquely combine expanded storage capacity with high performance and unparalleled security features to enable the next generation of embedded wireless applications.

Target Applications

- Consumer Electronics
- Networking
- Telecom
- Gaming
- Solid-State Disk
- Automotive
- Mobile Devices

PERFORMANCE CHARACTERISTICS

ACCESS TIMES

Max. Access Time (ns)	90*	100	110
Max. CE# Access Time (ns)	90	100	110
Max. Page Access Time (ns)	25	25	25
Max. OE# Access Time (ns)	25	25	25

* Contact local sales representative for availability.

POWER DISSIPATION

Active Read (@ 10 MHz) (mA)	60
Intra-Page Read (@ 33MHz) (mA)	5
Program (mA)	50
Erase (mA)	50
Standby Mode (µA)	1

Note: Values based on typical.

PROGRAM & ERASE TIMES

Effective Word Program (16-word buffer) (µs)	15
Write Buffer Program (16-word buffer) (µs)	240
Typical Sector Erase (sec)	0.5

FEATURES AND BENEFITS

- **Award-Winning 110nm MirrorBit™ Technology**
- **High Performance Read**
 - Up to 90ns Random Access, 25ns Page Access
- **Highest Quality and Reliability in the Industry**

DISTINCTIVE CHARACTERISTICS

ARCHITECTURAL

- Second generation 110nm MirrorBit technology
- Single 3.3V power supply with Versatile I/O™ (V_{CC} or 1.8V)
- Flexible uniform sector architecture
 - 256 sectors (sector size 64-Kword/128-Kbyte)
- 16-word/32-byte write buffer
- 8-word/16-byte page read buffer
- Industrial temperature
 - (-40 to 85) °C
- JEDEC standard compliant

SOFTWARE AND HARDWARE

- Program and Erase Suspend and Resume
- CFI (Common Flash Interface) compliant
- ACC pin accelerates factory programming

SECURITY

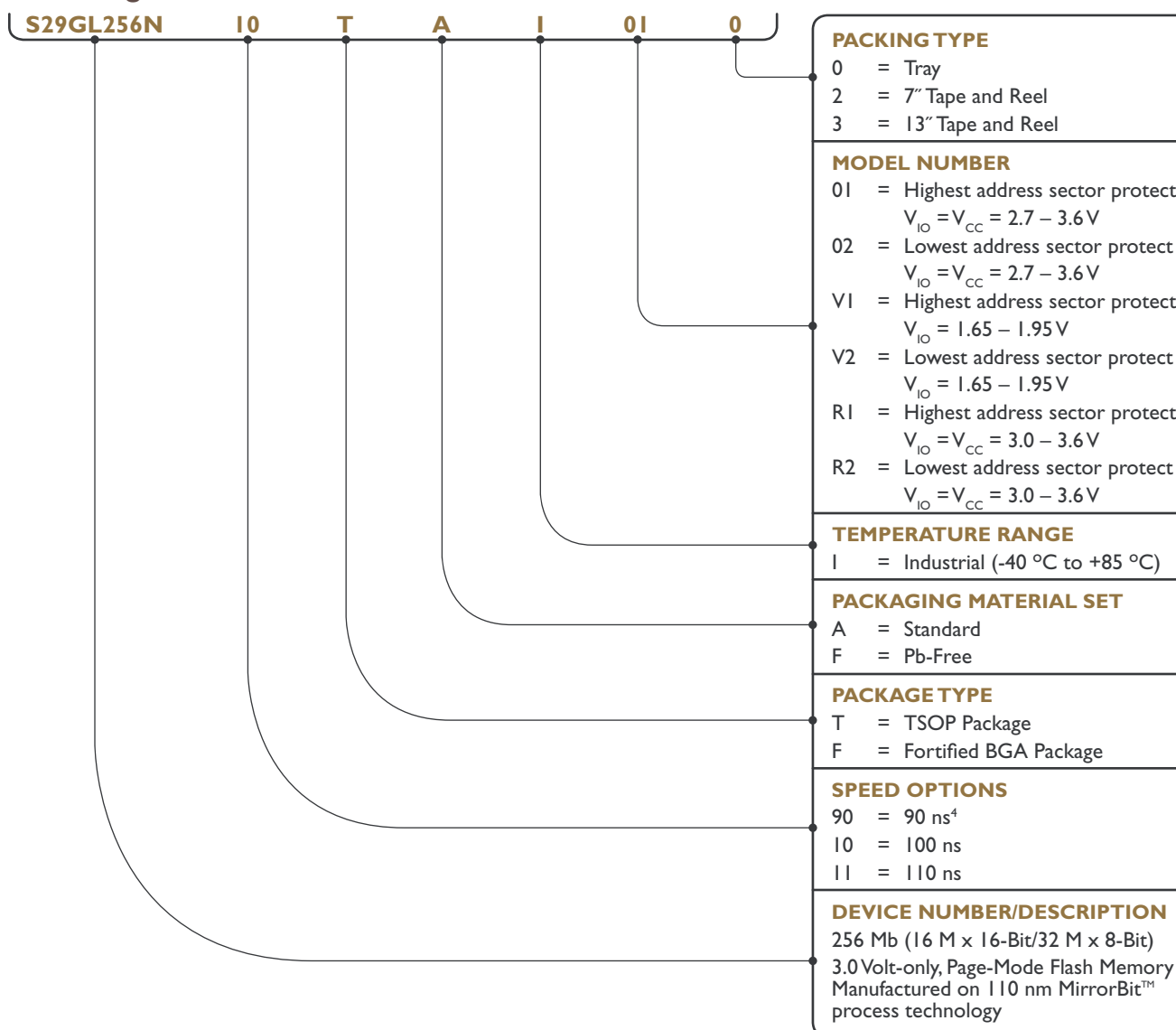
- Advanced Sector Protect
- WP# protects top and bottom sectors
- 128-word/256-byte SecSi™ (Secured Silicon) Sector

QUALITY AND RELIABILITY

- 100,000 erase cycles per sector typical
- 20 years data retention typical

PACKAGING

- 56-pin TSOP Package
- 64-ball Fortified BGA Package
- Standard or Pb-Free options available



Device Number	Speed Option	Package & Material Temperature	Model Number	Packing Type	Package Description ²
S29GL256N	90 ⁴	TAI,TFI FAI,FFI	RI,R2	0, 2, 3 ¹	TS056 (TSOP ²) LAA064 (Fortified BGA ³)
	10, 11		O1,02		
	11		V1,V2		

Part Number for New Designs	Legacy Part Numbers
S29GL256N	Am29LV256M
	S29GL256M

1. Type 0 is standard. Specify others as required: TSOPs can be packed in Types 0 and 3; BGAs can be packed in Types 0, 2, or 3.
2. TSOP package marking omits packing type designator from ordering part numbers
3. BGA package marking omits leading "S29" and packing type designator from ordering number. For example, the package marking for Part Number S29GL256N10FA1010 is GL256N10FA101.
4. Contact local sales representative for availability.
5. Refer to related Spanion OPN map for feature mapping.