TGN298 NOR Flash Memory

BIWIN TGN298 NOR Flash Memory offers high-speed, high-reliability data storage solutions across single, dual, and quad SPI interfaces. With a maximum data throughput of 480 Mb/s and clock frequency up to 120 MHz, it ensures rapid read access for performance-critical applications, including smart home devices, industrial automation systems, in-vehicle infotainment (IVI), and T-BOX modules.

Available in densities up to 128 Mb, BIWIN NOR Flash supports up to 100,000 program/erase cycles for long-term durability and 20-year data retention. Integrated security features, such as Security Registers with OTP Lock and other advanced protection mechanisms, make it suitable for applications demanding robust data integrity and confidentiality.

Designed to operate reliably across -40°C to +85°C, the BIWIN TGN298 delivers high-density, instant-boot capability and extended lifecycle support to meet the rigorous environments of embedded and automotive-grade.

Key Features

High-Speed and Stable Read Performance

BIWIN TGN298 NOR Flash delivers data throughput up to 480 Mb/s with a clock frequency reaching 120 MHz, enabling fast and stable read operations across a wide temperature range. With up to 20 years of data retention, it is optimized for embedded systems in industrial automation and network communication devices that demand high-speed, reliable memory.

High Reliability for Harsh Environments

Built on a robust 55nm process node, the TGN298 supports 100,000 program/erase cycles (P/E cycles). It operates reliably within a wide temperature range of -40°C to +85°C and a voltage range of 2.7V to 3.6V, ensuring long-term endurance and stability in demanding industrial environments.

Flexible Customization and Wide Compatibility

The BIWIN TGN298 provides multiple package options and supports custom configurations to meet specific needs. With broad compatibility across major platforms, it enables seamless integration into various embedded systems and application environments.

Ultra-Low Power Consumption for Extended Endurance

Designed with power-sensitive applications, the TGN298 features ultra-low standby current, down to 10μA, effectively extending battery life in portable and energy-efficient systems.

Technologies

ECC	DTR	Hardware RESET	WP	Security Registers with OTP Lock	Unique ID

Applications

Mobile Module	Network Communications	Digital Set-Top Box
Automotive Electronics	Security Surveillance	Dash Cam	Smart Wearable

Model Name	TGN298
Interface	SPI NOR
Frequency	104 MHz / 120 MHz
Capacity	32 Mb / 64 Mb / 128 Mb
Voltage	2.7 V - 3.6 V
Quad I/O Data Transfer (Up to)	480 Mbit/s
Operation Current (Max.)	20 mA
Standby Current (Max.)	10 µA
Package	SOP8 / WSON8 / KGD
Operating Temperature	-40°C to + 85°C
Storage Temperature	-40°C to + 85°C
Endurance	100,000 P/E cycles
Data Retention	>20 Years
Certifications	RoHS, REACH
Warranty	5-Year Limited

Order Information

Capacity	Part Number
32 Mb	BW25Q32ASIG
64 Mb	BW25Q64ASIG
128 Mb	BW25Q128ASIG

1. Tested by BIWIN labs. Actual performance may vary due to systems, devices, or environment.
2. Maintenance and future updates are required throughout the product lifecycle. Specifications are subject to change without notice.
3. The pictures are for illustration only. Actual products may vary due to product enhancements or changes.
4. Not all products are sold in all regions of the world.
5. As used for storage capacity, one megabyte (MB)= one million bytes, one gigabyte (GB) = one billion bytes, and one terabyte (TB) = one trillion bytes. Total accessible capacity varies depending on the operating environment. As used for buffer or cache, one megabyte (MB) = 1,048,576 bytes. As used for transfer rate or interface, megabyte per second (MB/s) = one million bytes per second, and gigabyte per second (GB/s) = one billion bytes per second.
6. MTBF = Mean Time Between Failures based on internal testing using the Telcordia stress testing standard.
7. Please visit www.biwintechnology.com for warranty details in your region.
8. For more information, please contact sales@biwintech.com.

BIWIN
Storage Technology

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