PRODUCT BRIEF

512 Mbit and 1 Gbit radiation tolerant NOR Flash

Infineon's NewSpace memories are optimized for performance in low Earth orbit

Infineon Technologies offers high-performance, low-pin count, radiation tolerant 512 Mbit and 1 Gbit NOR Flash memories optimized for low Earth orbit (LEO) applications. These non-volatile memory devices feature Infineon's Silicon-oxide-nitride-oxide-silicon (SONOS) technology, ensuring reliable radiation performance essential for high reliability applications. The NewSpace rad tol NOR family offers 512 Mbit and 1 Gbit densities in a plastic package and utilizes the industry standard Quad Serial Peripheral Interface (QSPI).

Our high reliability NOR Flash memories are ideal for use as configuration image storage within space-grade FPGAs. The 133MHz QSPI data interface provides the fastest boot solution for modern space grade FPGAs, and can load a 209Mb bitstream in less than 0.42 seconds in QSPI mode.





Key features

Product features

- 512 Mbit and 1 Gbit densities
- QSPI interface
- 133 MHz per channel
- 10-year data retention @ 125°C
- 1000 P/E endurance cycles @ 125°C
- 100-pin TQFP plastic package
- Operating temp -55°C to +125°C

Radiation Performance

- TID: >100Krad (Si)
- SEU: IMMUNE
- SEL: >80 MeV.cm2/mg [LET] @ 125°C
- SEFI: 2.77e-5 err/dev.day

NewSpace Portfolio Benefits

- Single Lot Date Code (SLDC)
- 100% electrical test
- Certificate of Conformance (CoC)
- Radiation Lot Acceptance (RLAT) for TID

Key Applications

- Space FPGA configuration image storage

New space

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PRODUCT BRIEF

Infineon's radiation tolerant NewSpace memory portfolio features solutions designed for Low Earth Orbit (LEO) space applications and constellations. Our rad tol memories provide the right balance between performance and reliability based on size, weight, power, and cost (SWaP-C) considerations.

Infineon NewSpace memories provide:
- Single Lot Date Code (SLDC)
- 100% guaranteed electrical testing
- Certificate of Conformance (CoC)
- Radiation Lot Acceptance (RLAT) for TID

Product Features
- 512 Mbit and 1 Gbit densities
- QSPI interface
- 133 MHz per channel
- 10-year data retention @ 125°C
- 1000 P/E endurance cycles @ 125°C
- Single chip select
- 100-pin TQFP plastic package (14 x 20 mm)
  - Lead finish Pb-free (NiPdAu)
- Operating temp -55°C to +125°C

Parts list

Density	Interface	Part Number	Description	Package	Temp. range	TID
512 Mbit	QSPI	CYEL17B512-133AZM	512 Mb, QSPI, rad tol NOR Flash	100-pin TQFP	-55°C to 125°C	100 Krad
1 Gbit	QSPI	CYEL17B01G-133AZM	1 Gb, QSPI, rad tol NOR Flash	100-pin TQFP	-55°C to 125°C	100 Krad

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