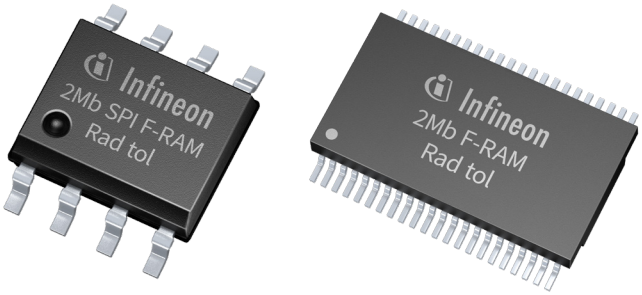
PRODUCT BRIEF

2 Mbit radiation tolerant F-RAM

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

Infineon's 2 Mbit radiation tolerant F-RAM is the industry's lowest power non-volatile memory with SEU immunity and virtually unlimited endurance. With SPI and parallel interface options and a small footprint plastic package, this memory is simple to use with wide ecosystem support. This NewSpace memory is optimized for low Earth orbit (LEO) satellites and constellations, designed to meet the right mix of reliability and radiation performance.

The 2 Mbit F-RAM's virtually infinite endurance, instant non-volatile write, and >100 year data retention makes it an ideal choice for mission critical applications. Infineon's F-RAMs are well-suited for data storage for sensors and instruments, data logging for calibration data for satellites, and processor boot code applications.



Key features

Product features

- 2 Mbit density
- SPI or parallel interface
- 8-pin SOIC or 44-pin TSOPII plastic package
- Operating temp -55°C to +125°C

Radiation Performance

- TID: 50 Krad (Si)
- SEU: IMMUNE
- SEL: 106 MeV.cm2/mg [LET] @ 115^{0}C (SPI); 96 MeV.cm2/mg [LET] @ 115^{0}C (Parallel)
- SEFI: 1.34e-04 err/dev.day (SPI–active/stdby); 5.88e-08 err/dev.day (SPI - sleep); 5.35e-05 err/dev.day (Parallel active/stdby); Immune (Parallel - sleep)

NewSpace Portfolio Benefits

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

Key Applications

- Data storage for sensors and instruments
- Data logging for calibration data for satellites
- Boot code storage for microcontrollers
- Replacement for serial flash and EEPROMs

New space

www.infineon.com/hirelmemory

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

- 2 Mbit density
- SPI and parallel interface options
- Infineon instant non-volatile write technology
- 120 years data retention at +85°C
- 10-trillion read / write cycle endurance
- 10mA (max) low operating current
- 8 pin SOIC (5.23 x 5.28 mm)
  - Lead finish Pb-free
- 44 pin TSOPII (18.4 x 10.2 mm)
  - Lead finish Pb-free
- Operating temp -55°C to +125°C

Parts list

Density	Interface	Part Number	Description	Package	Temp. range	TID
2 Mbit	SPI (x1)	CYEL15B102Q-SXM	2Mb, SPI, rad tol F-RAM	8-pin SOIC	-55^{0}C to 125^{0}C	50 Krad
	Parallel (128K x 16)	CYEL15B102N-SZ60XM	2Mb, parallel, rad tol F-RAM	44-pin TSOP II	-55^{0}C to 125^{0}C	50 Krad

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