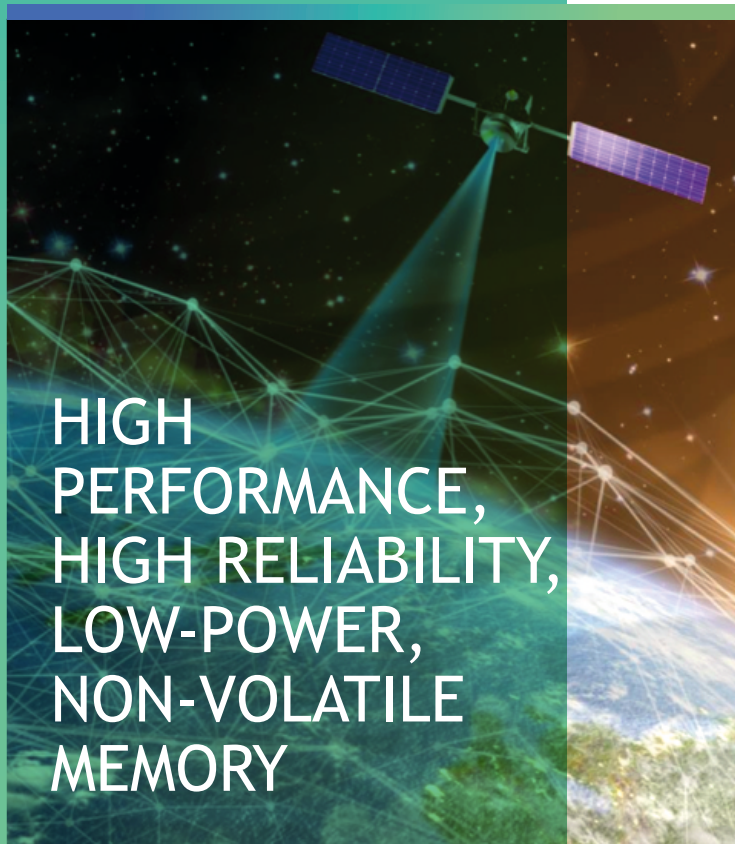


*Tornado Space Grade Family*

# P-SRAM™ [STT\*-MRAM]

*\*Spin Transfer Torque*



HIGH  
PERFORMANCE,  
HIGH RELIABILITY,  
LOW-POWER,  
NON-VOLATILE  
MEMORY

Avalanche's Space Grade P-SRAM incorporates proprietary, leading edge technology to provide a superior solution.



**avalanche**technology

3450 W. Warren Avenue  
Fremont, CA 94538

info@avalanche-technology.com  
+1 (510) 897-3300

- **Highest Density** (up to 8Gb today)
- **Highest Endurance** ( $10^{16}$  write cycles)
- **Lowest Power** (10mA per 1Gb, active)
- **High Reliability** (Multibit error correction)
- **Supports Unified Memory Architecture**
- **Soft error immune**
- **Standard SRAM interface & timing**
- **No wear leveling required**
- **Plastic packages**

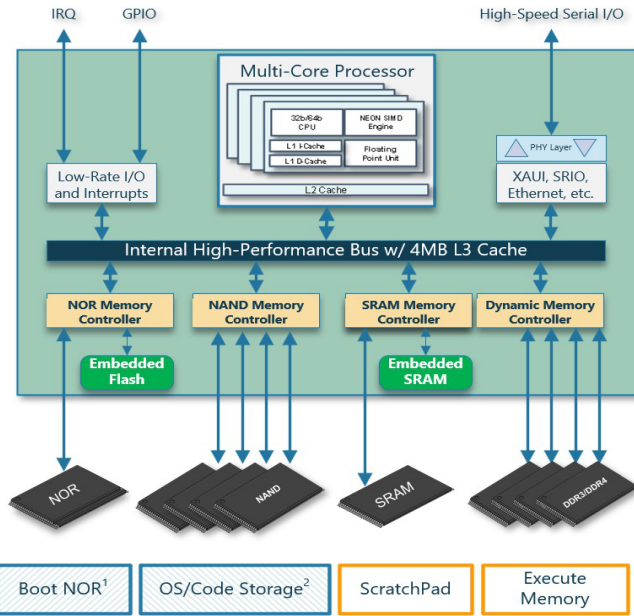
Real-time systems in Space have traditionally relied upon multiple volatile & non-volatile memory devices to support functions such as boot, system configuration, code execution, as well as data monitoring and logging, due to varying performance, endurance, radiation resilience and reliability. Now, for the first time, Avalanche helps you achieve these functions with their high density, high performance, low power, non-volatile MRAM, all in a Single Package! Simplify your design with Avalanche Space Grade solutions!

Data is written into memory instantly, is always non-volatile, protecting data in the event of a power loss.

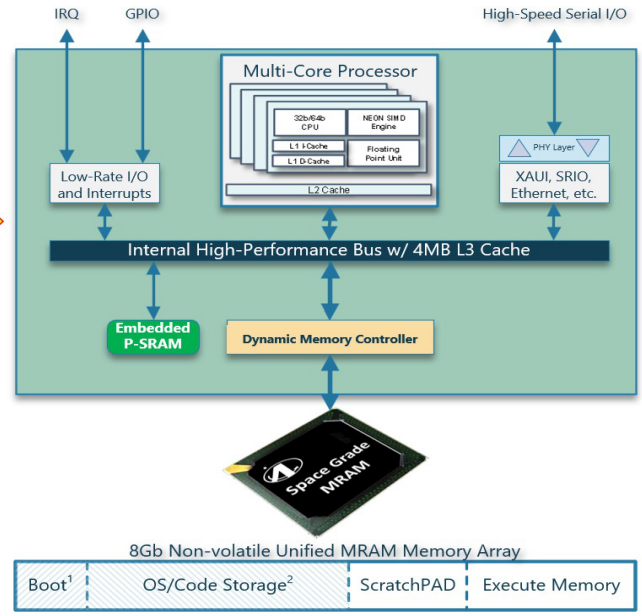
Independent Radiation Tests available at <https://www.avalanche-technology.com/products/discrete-mram/space/#request>

Learn how **avalanche**technology memory simplifies system designs and optimizes SWAP-C.

## Common Legacy Architecture



## Avalanche Enabling



	Parallel P-SRAM	SERIAL P-SRAM
Density Options	16Mb, 64Mb, 1Gb, 4Gb	16Mb, 1Gb, 2Gb, 4Gb, 8Gb
Interface & Timing	Standard parallel interface, 45ns x16 (16/64Mb), x32 (1/4Gb)	Serial Peripheral Interface 54MHz DDR/108MHz SDR Quad SPI
Technology	Incorporates STT-MRAM technology - Byte Addressable, No Delay Writes	
Data Endurance	10 <sup>16</sup> write, unlimited read cycles	
Data Retention	10 years at 125 °C	
Low Power	10mA per 1Gb (active)	
Non-volatile	No battery or capacitor required	
Reliable	Multibit error correction embedded, no wear leveling required, Hardware & Software Data Protection	
Space Grade	Soft Error Immune, Plastic Packaging	

## SPACE GRADE PART NUMBERING OPTIONS

