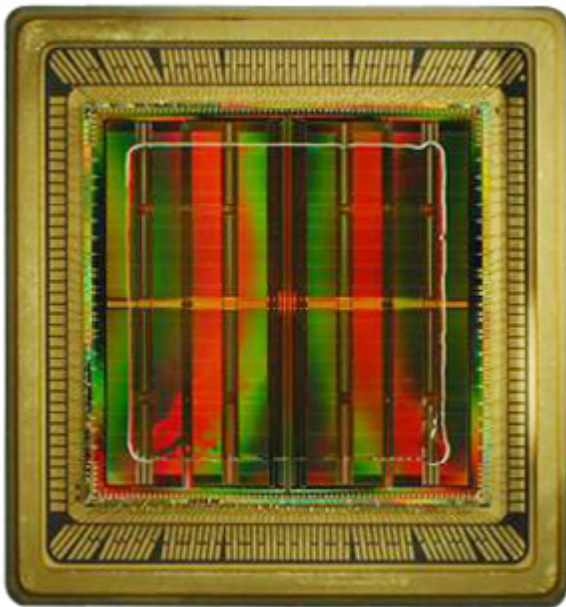


128K x 72 radiation-hardened synchronous SRAM/L2 Cache



The 128K x 72 radiation-hardened, synchronous SRAM (SSRAM) is a high-performance, multi-mode, synchronous, static random access memory that is versatile, has wide I/O, and achieves 7.5 ns cycle times.

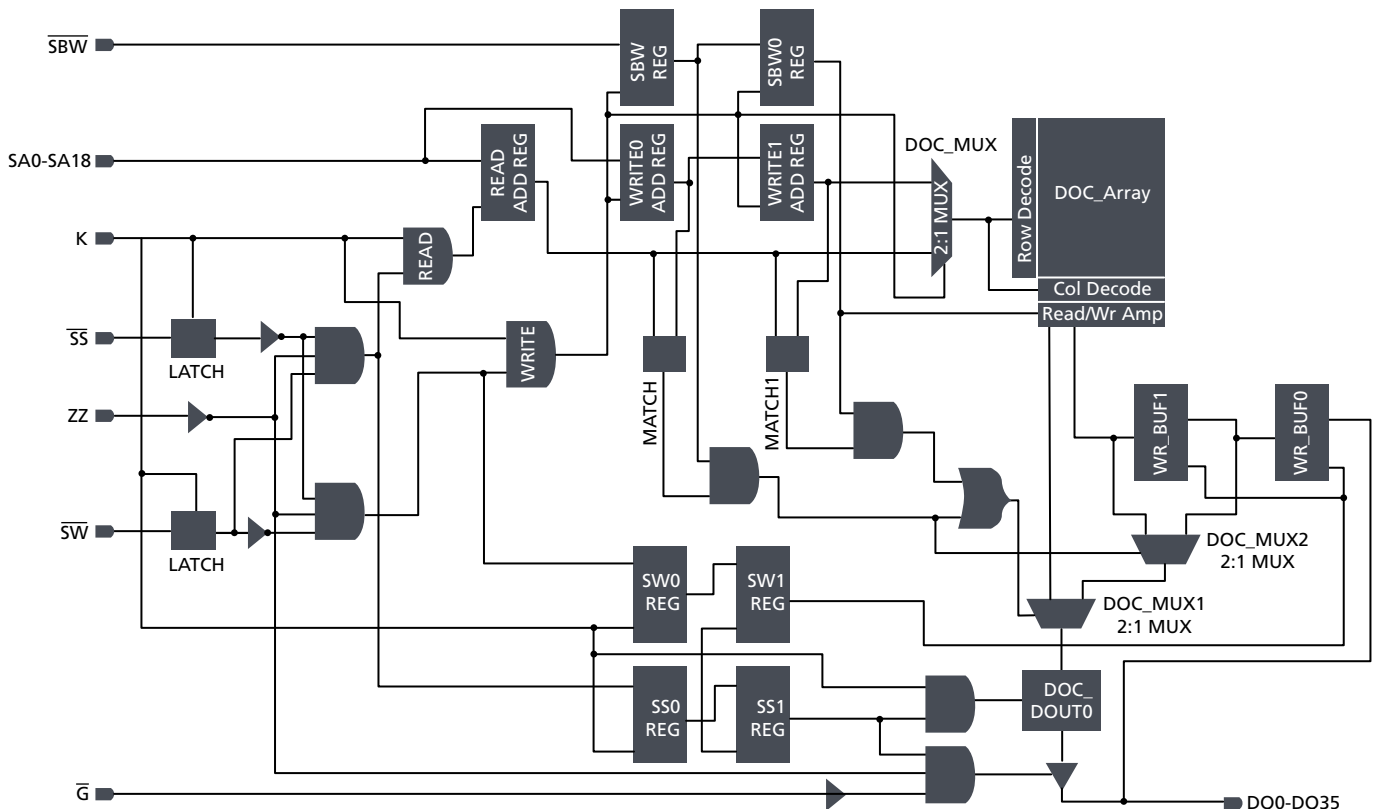
Description

It is fabricated with BAE Systems' radiation-hardened technology and is designed for use in systems operating in extreme environments. The SSRAM operates over the full military temperature range and requires a dual 3.3V and 1.8V ± 10 percent power supply. The SSRAM is available with CMOS-compatible I/O. Power consumption is typically less than 10 mW/MHz in operation.

BAE Systems' enhanced bulk CMOS technology is radiation hardened through the use of advanced and proprietary design, layout, and process-hardening techniques.

Key features

- 128K x 72 synchronous SRAM multi-mode operation
 - Flow-through mode
 - Register-latch mode
 - Pipeline mode
 - Pipeline late-write mode
 - Burst mode with pipeline late-write
 - DQM mode
 - ZZ mode
- Access times
 - Read and write cycle times ≥ 166 MHz
- Technology
 - 0.15 μm bulk CMOS process
- Radiation levels
 - Total dose hardness through 1×10^6 rad(Si)
 - Single event hardness
 - Neutron hardness through 1×10^{14} N/cm²
 - Dynamic and static transient upset hardness through 1×10^9 rad(Si)/s
 - Soft error rate of $< 1 \times 10^{-11}$ upsets/bit-day dose rate survivability through 1×10^{12} rad(Si)/s
 - Latchup immune
- Packaging
 - 340-pin CCGA — ceramic column grid array (26 mm x 28 mm)
 - Two 128K x 36 die per package
- Compatible with commercial cache designs
- Operating temperatures
 - -55 degrees Celsius to 125 degrees Celsius
- Dual power supply
 - 3.3V ± 10 percent I/O
 - 1.8V ± 10 percent core
- CMOS compatible I/O
- Low operating power
 - 10 mW/MHz active current (typical)
 - ≤ 50 mW standby (maximum)



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