Radiation-Hardened Single Board Computer

SAMRH71-Based Rad-Hard Single Board Computer (SBC)

PROCESSOR
Microchip SAMRH71 Arm Cortex-M7
Capable of 214 DMIPS @ 100 MHz

FEATURES
100 Mbps Ethernet, Built-in PHY
Dual MIL-STD-1553, Built-in PHY
2x SpaceWire, Built-In PHY
2x CAN, Built-In PHY
4x RS-485 for C&DH interface
8x 12-bit ADC channels
2x 12-bit DAC channels

MEMORY
128 MB MRAM for Execution/Storage
2MB MRAM for Bootloader

SPACE QUALIFIED
EEE-INST-002 Level 1 Parts
Radiation Hardened to 100Krad TID
Latchup Free to 78 MeV-cm^2/mg

SIZE AND WEIGHT
SBC Board: 160 mm x 100 mm (3U)
Packaged: 9.06" L x 6.88" W x 4.34" H
Weight: 5 lbs

ZIN is a proven provider of radiation-hardened single board computers. ZIN's rad-hard single board computer is applied on NASA's Lunar Gateway, as a critical component of the Habitation and Logistics Outpost (HALO) module.

ZIN's solution features a flight-qualified, radiation-hardened computing architecture that uses the powerful new Microchip SAMRH71 processor, an ARM Cortex-M7 device that offers 214 DMIPS performance while consuming less than 5W.

ZIN's SBC includes a wide range of interfaces built-in, including MIL-STD-1553, 100 Mbps Ethernet, dual SpaceWire, dual CAN, dual MIL-STD-1553B, and 4x RS-485 serial. The ZIN SBC's powerful capabilities and proven performance make it ideal for your next data processing or control application.

- ❑ **The ZIN SBC is designed to offer highest possible reliability for mission-critical applications.**

- ❑ **Designed for the radiation environment of NASA's Lunar Gateway**

- ❑ **Easily customized to accommodate additional interfaces and expanded memory capacities.**

- ❑ **Available as an unpacked 160mm x 100mm PWA, or packaged into a Flight-rated enclosure.**

- ❑ **Engineering-grade units available for test and evaluation.**

- ❑ **Customized units available**
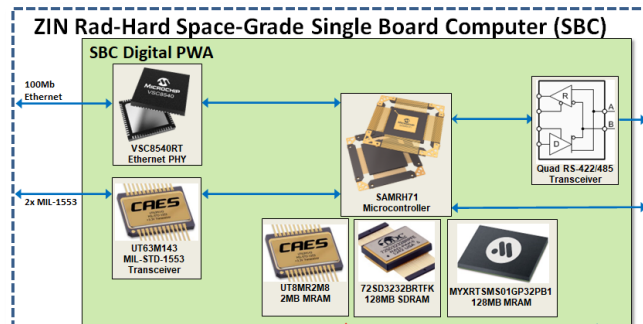
ZIN's Rad-Hard SBC was designed for Northrop Grumman's Habitation and Logistics Outpost (HALO)

ZIN Technologies