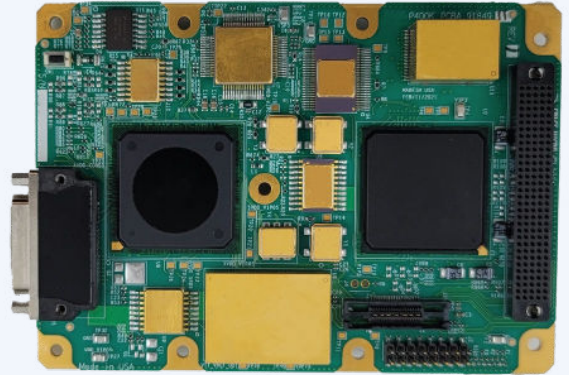


# Proton400K™ Single Board Computer

## OVERVIEW

The Proton400K™ is a radiation-hardened, multi-core payload processing Single Board Computer (SBC) with solid space flight heritage. This high-performance, low power SBC is built around an advanced dual-core PowerPC™. SEU and SEFI performance are enhanced by patented Hardened-Core™ watchdog mitigation technology.



## APPLICATIONS

- High-Performance Computing
- Image Processing
- Command & Data Handling
- Payload Electronics
- Signal Processing

## KEY FEATURES

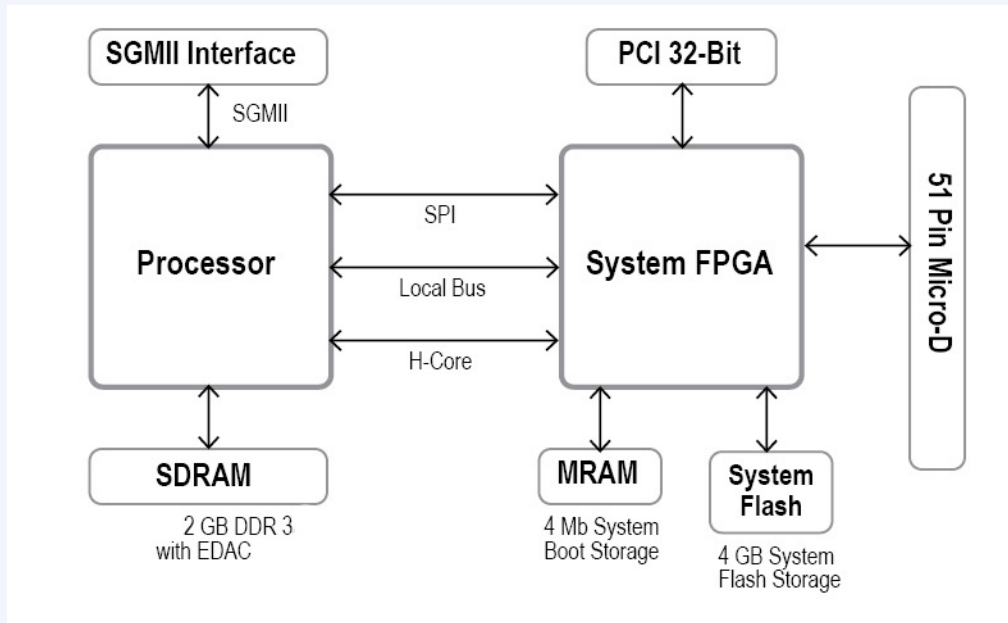
- Dual-core microprocessor
- Multiple memory and interface options
- ProtonX-Box™ and Proton2X-Box™ Form Factors
- Radiation Hardened up to 100 krads

## SPECIFICATIONS

<b>Processor</b>	PowerPC™ high-performance processor 1 Ghz, 32-bit dual core processor with 36-bit physical addressing capable of up to 4,800 MIPS
<b>Memory</b>	2 GB DDR 3 with EDAC 4 Mb boot MRAM 1 - 4 GB Rad Hard NAND Flash
<b>Storage</b>	Optional 256 GB Add-on SSR Slice
<b>Operating Systems And Drivers</b>	Linux VxWorks
<b>Interfaces</b>	I/O Bus: 32bit, 33 MHz 3.3V: I/O Voltage UART: 4-channel buffered 16 GPIO: Prog. General-purpose I/O Options: SGMII Ethernet; SpaceWire; CAN

# Proton400K™ Single Board Computer

## BLOCK DIAGRAM



## SPECIFICATIONS

<b>Connector</b>	51-Pin Connector
<b>Radiation Tolerance</b>	Radiation Tolerant; 100 krads option
<b>Environment</b> <ul style="list-style-type: none"> <li>• Temperature Range</li> <li>• Vibration</li> <li>• Parts Level Options</li> <li>• Suitability</li> </ul>	-24°C to +61°C GSFC-STD-7000 (NASA GEVS) Acceptance Levels Commercial Space, NASA Levels 1, 2, 3 LEO, MEO, GEO
<b>SWAP</b> <ul style="list-style-type: none"> <li>• Dimensions</li> <li>• Mass</li> <li>• Power Consumption</li> <li>• Input Voltage</li> </ul>	ProtonX-Box: 3.6" x 5" Proton2X-Box: 7.6" x 5.5" ProtonX-Box: 165 g Proton2X-Box 475 g 8 W - 12 W (dependent on peripherals and speed) 28 V with Power Supply Card