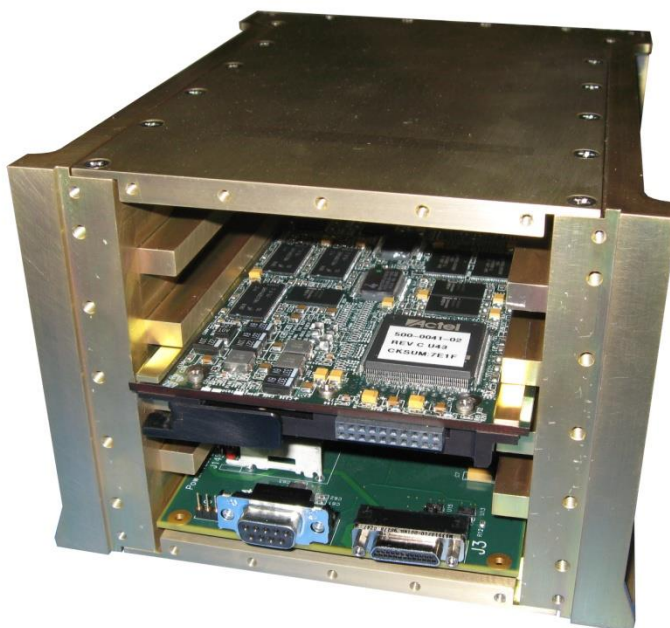# PnP Computing Node

Flight-Ready Plug and Play Processing "Out-of-the-Box"

PnP Innovations, Inc has developed the PnP Computing Node as a fully SPA-S compliant processing element to be used in scalable PnP satellite systems. The node hosts an AiTech S950 PPC750 running VxWorks. The SPA-S interface board provides power, data, and timing in compliance with the SPA-S standard. The minimum node configuration, hosted in a cPCI chassis, includes one processor and one SPA-S interface board. The enclosure may be configured to include two additional AiTech S990 FLASH memory cards, extending the volatile memory storage capacity of the node to >2 GBytes for the flexible accommodation of applications, telemetry, housekeeping, and sensor data of a variety of missions.

Feature	Specification
Processor Architecture	**PowerPC 750FX**
Processing Capability	**>1200 MIPS @ 733 MHz, single/double precision floating point support**
Spacewire Data Throughput	**>300 Mbps, bi-directional**
Operating System	**VxWorks 6.x, with support for real-time debugging via RS-422**
Memory	**128MB triple-voted SDRAM, 64MB ECC FLASH expandable to >2GB**
Dimensions/Mass	**cPCI form factor, 19 x 16 x 11.5 cm, 2.0 kg**
Power Consumption	**<15 Watts @ 28V (processor + SPA-S interface card)**
Radiation Tolerance	**100kRads total dose, latch-up immune to 37 MeV-cm²/mg**
Operating Temperature Range	**-32 to +55 degC**