» MEC-PPC-AV1 «

3U cPCI Rugged COTS Turnkey Modular Embedded Computer

» Low-power Dissipation less than 17W
» Preloaded VxWorks 6.2 Real-Time Software
» MIL-STD-1553, UART Serial Lines, Ethernet and GPIOs
» One Year Hotline Support

The MEC-PPC-AV1 is a low-cost 3U CompactPCI rugged COTS subsystem designed to exceed requirements through its compact dimension, low-power dissipation, and real-time software with a very large I/O offering. The MEC-PPC-AV1 is targeted towards the avionics market because of its ATR footprint dimension, 28 VDC power supply, lightweight structure in aluminium, conduction cooled dissipation, MIL-STD-1553 links, MIL-C-38999 connectors and a very low power consumption of less than 17W.

The MEC-PPC-AV1 processor board is the Kontron 3U CompactPCI Single-Slot PowerEngineC7 Embedded Computer, a low-power dissipation and high performance processor board already embedded in major avionics programs.

The Kontron MEC- PPC-AV1 offers a large range of I/Os such as Ethernet, general purpose I/Os, serial lines and MIL-STD-1553 links thanks to the Kontron CPMC-1553-R PCI Mezzanine. The CPMC-1553-R is a redundant MIL-STD-1553B interface with 2 channels. Each channel has an ILC-DDC BU-61688 Advanced Communication Engine and 8 KB dual port RAM. The Kontron CPMC-1553 supports the Bus Controller, Remote Terminal, or Monitor Terminal operating modes.

Kontron boards inside the MEC-PPC-AV1 allow for full control of the product life cycle, short lead time, optimized architecture and fast support. The boards also permit customizable interface configurations to suit application specific requirements.

The Kontron Modular Embedded Computer comes as a turnkey system with preloaded VxWorks 6.2. Kontron's VxWorks BSPs are all released according to WindRiver BSP coding and packaging rules and are certified by Wind River. The Modular Embedded Computer concept is customizable to meet customer's requirements by proposing a wide range of options to cover all the specific applications needs. Ask Kontron about the customization options.

Technical Information

Overall Dimensions	4.88" W x 10.00" H x 12.52" L
Input Power Supply	28 VDC Input Std - 5V, +/-12V, 3.3V – 100W
Weight	5 Kg
Power Consumption Typical	17W
Environmental Specifications	Operating Temperature: -40°C to 71°C Storage Temperature: -50°C to 100°C MIL-STD-810E vibration cat 5: 15 to 2000 Hz at 0.1 g2/Hz MIL-STD-810E shock: 40g for 11 ms EMC to MIL-STD-461C DO-160E
Connectivity	MIL-C-38999 connectors
Supported Software	Instant boot-up with pre-loaded Real Time Operating System VxWorks 6.2 from Windriver
Key Features	4 slots 3U cPCI Conduction Cooled Aluminium chassis structure PowerPC 750FX @ 700 MHz » 512 KB L2 Cache clocked at Processor Frequency » 512 MB DDR SDRAM » 64 MB System and 128 MB User Flash	I/Os offering » MIL-STD-1553: Dual Redondant Channel, Bus Controller or C or Remote Terminal » Serial Lines: Either EIA-485/422 or EIA-232 UART » GPIO: IN/OUT General Purpose I/O » Dual Ethernet 10/100
Customization	Optional I/Os » ARINC-429 » Additional MIL-STD-1553 links	Optional Software » DO-178B certifiable and ARINC 653 compliant PikeOS from Sysgo » Embedded Linux ElinOS from Sysgo » VxWorks 5.5.1 from Windriver

Ordering Information

Article	Part No.	Description
MEC-PPC-AV1	MEC-PPC-AV1	Avionics 3U cPCI PowerPC Subsystem based on PowerEngineC7 and CPMC-1553

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