

XPedite5130

Dual-Core Freescale MPC8640D Processor-Based Conduction- or Air-Cooled 3U cPCI SBC

- ▶ Freescale MPC8640D processor with dual PowerPC e600 cores at up to 1.25 GHz
- ▶ Conduction or air cooling
- ▶ Extended shock and vibration tolerance
- ▶ Two channels of up to DDR2-533 ECC SDRAM, up to 4 GB (2 GB each)
- ▶ Configurable as system controller or peripheral
- ▶ Hosts a PrPMC or XMC
- ▶ PrPMC P14 I/O out J2
- ▶ Two 10/100/1000BASE-T Ethernet ports out J2
- ▶ Two RS-232/RS-422/RS-485 serial ports out J2
- ▶ Up to 256 MB of NOR flash (with redundancy)
- ▶ Up to 4 GB of NAND flash
- ▶ Front I/O available via plugover module
- ▶ Linux BSP
- ▶ Wind River VxWorks BSP
- ▶ QNX Neutrino BSP
- ▶ Green Hills INTEGRITY BSP



XPedite5130

The XPedite5130 is a 3U conduction- or air-cooled CompactPCI (cPCI) single board computer based on the Freescale MPC8640D processor. With dual PowerPC e600 cores running at up to 1.25 GHz, the MPC8640D delivers enhanced performance and efficiency for today's network information processing and other embedded computing applications.

Complementing processor performance, the XPedite5130 features two separate channels of up to 2 GB each of DDR2-533 ECC SDRAM, multiple PCI Express interfaces, PrPMC/XMC support, up to 256 MB of NOR flash (with redundancy), and up to 4 GB of NAND flash. Two Gigabit Ethernet ports, two RS-232/RS-422/RS-485 ports, and P14 I/O from the PrPMC are routed to J2 for additional system flexibility.

The XPedite5130 provides a high-performance, feature-rich solution for current and future generations of embedded applications. Operating system support packages for the XPedite5130 include Wind River VxWorks, Linux, QNX Neutrino, and Green Hills INTEGRITY.

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Processor

- Freescale MPC8640D processor
- Dual PowerPC e600 cores at up to 1.25 GHz
- 1 MB of L2 cache per core

Memory

- Two channels of up to DDR2-533 ECC SDRAM, up to 4 GB (2 GB each)
- Up to 256 MB of NOR flash (with redundancy)
- Up to 4 GB of NAND flash

J1 cPCI Interface

- 32-bit PCI interface operating at 33 or 66 MHz
- System controller capable with onboard clocking and arbitration
- Peripheral slot capable

J2 cPCI Interface

- Two 10/100/1000BASE-T Ethernet ports
- Two RS-232/RS-422/RS-485 serial ports
- PrPMC P14 I/O
- Four GPIO signals

PrPMC/XMC Site

- 32-bit, 66-MHz PCI bus (PMC P11/P12 interface)
- x8 PCIe port (XMC P15 interface)

Front Panel I/O

- Front-panel dual RJ-45 Ethernet and micro DB9 RS-232 serial ports available via optional plugover module

Software

- Linux BSP
- Wind River VxWorks BSP
- QNX Neutrino BSP
- Green Hills INTEGRITY BSP

Physical Characteristics

- 3U conduction- or air-cooled CompactPCI form factor
- Dimensions: 100 mm x 160 mm

Environmental Requirements

- Contact factory for appropriate board configuration based on environmental requirements.
- Supported ruggedization levels (see chart below): 1, 3, 5
 - Conformal coating available as an ordering option

Power Requirements

- Maximum power consumption: 32 W

Supported Ruggedization Level	Level 1	Level 3	Level 5
Cooling Method	Standard Air-Cooled	Rugged Air-Cooled	Conduction-Cooled
Operating Temperature	0 to +55 °C ambient (300 LFM)	-40 to +70 °C (600 LFM)	-40 to +85 °C (board rail surface)
Storage Temperature	0 to +85 °C ambient	-40 to +105 °C ambient	-55 to +105 °C ambient
Vibration	0.002 g ² /Hz, 5 to 2000 Hz	0.04 g ² /Hz (maximum), 5 to 2000 Hz	0.1 g ² /Hz (maximum), 5 to 2000 Hz
Shock	20 g, 11 ms sawtooth	30 g, 11 ms sawtooth	40 g, 11 ms sawtooth
Humidity	0% to 95% non-condensing	0% to 95% non-condensing	0% to 95% non-condensing

