

XPedite5530

Freescale QorIQ P2020 Processor-Based Conduction- or Air-Cooled 3U CompactPCI Single Board Computer

- ▶ Freescale QorIQ P2020 processor with dual PowerPC e500v2 cores at up to 1.2 GHz (alternate processors P1011, P1020, P2010)
- ▶ Conduction or air cooling
- ▶ Extended shock and vibration tolerance
- ▶ Up to 8 GB of DDR3-800 ECC SDRAM
- ▶ Configurable as system controller or peripheral
- ▶ Hosts a PrPMC or XMC
- ▶ One USB 2.0 port out J2
- ▶ x2 PCI Express to XMC site
- ▶ Two 10/100/1000BASE-T Ethernet ports out J2
- ▶ Two RS-232/422/485 serial ports out J2
- ▶ Up to 256 MB of NOR flash (with redundancy)
- ▶ Up to 32 GB of NAND flash
- ▶ Front I/O available via plugover module
- ▶ Linux BSP
- ▶ Wind River VxWorks BSP
- ▶ Green Hills INTEGRITY-178 BSP



XPedite5530

The XPedite5530 is a high-performance, 3U cPCI, single board computer supporting Freescale QorIQ P1 and P2 processors. With dual Power Architecture e500v2 cores running at up to 1.2 GHz, the P2020 delivers enhanced performance and efficiency for today's network information processing and other embedded computing applications.

Complementing processor performance, the XPedite5530 features up to 8 GB of DDR3-800 ECC SDRAM, multiple PCI Express interfaces, PrPMC/XMC support, up to 256 MB of NOR flash (with redundancy), and up to 32 GB of NAND flash. Two Gigabit Ethernet ports, two RS-232/422/485 ports, and one USB 2.0 port are routed to J2.

The XPedite5530 provides a high-performance, feature-rich solution for current and future generations of embedded applications. Operating system support packages for the XPedite5530 include Wind River VxWorks, Linux, and Green Hills INTEGRITY-178.

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Processor

- Freescale P2020 processor
- Dual Power Architecture e500v2 cores at up to 1.2 GHz
- 512 kB of shared L2 cache

Alternate Processor Configuration

- P1011 processor with one PowerPC e500v2 core at up to 800 MHz
- P1020 processor with two PowerPC e500v2 cores at up to 800 MHz
- P2010 processor with one PowerPC e500v2 core at up to 1.2 GHz

Memory

- Up to 8 GB of DDR3-800 ECC SDRAM
- Up to 256 MB of NOR flash (with redundancy)
- Up to 32 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-232/422/485 serial ports
- Four GPIO signals
- One USB 2.0 port

PrPMC/XMC Site

- 32-bit, 66 MHz PCI bus (PMC interface)
- x2 PCIe port (XMC interface)

Front Panel I/O

- Dual RJ-45 Ethernet, micro-DB-9 RS-232 serial port, and USB 2.0 port available via optional plugover module

Software

- Linux BSP
- Wind River VxWorks BSP
- Green Hills INTEGRITY-178 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

- Power will vary based on configuration and usage. Please consult factory.

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	-40 to +85°C ambient	-55 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

