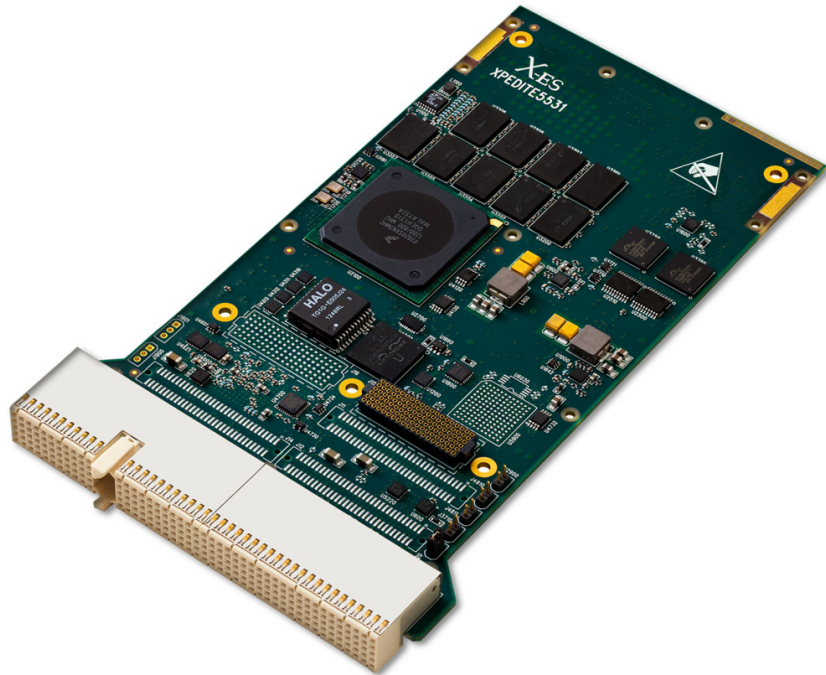# XPedite5531

End of Life

NXP QorIQ P2020 Processor-Based Conduction-Cooled 3U CompactPCI Single Board Computer

Please contact X-ES Sales

- NXP QorIQ P2020 processor with dual Power Architecture® e500v2 cores at up to 1.2 GHz

- Alternate NXP QorIQ processors: P1011, P1020, P2010

- Conduction cooling

- Extended shock and vibration tolerance

- Up to 8 GB of DDR3-800 ECC SDRAM

- Hosts an XMC or PrPMC

- One USB 2.0 port out J2

- x2 PCI Express to XMC site

- One 10/100/1000BASE-T Ethernet port 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

- Linux BSP

- Wind River VxWorks BSP

- Green Hills INTEGRITY-178 BSP

XPedite5531

The XPedite5531 is a high-performance, 3U cPCI single board computer supporting NXP (formerly 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 XPedite5531 features up to 8 GB of DDR3-800 ECC SDRAM, multiple PCI Express interfaces, XMC/PrPMC support, up to 256 MB of NOR flash (with redundancy), and up to 32 GB of NAND flash. One Gigabit Ethernet port, two RS-232/422/485 serial ports, and one USB 2.0 port are routed to J2.

The XPedite5531 provides a high-performance, feature-rich solution for current and future generations of embedded applications. Operating system support packages for the XPedite5531 include Wind River VxWorks, Linux, and Green Hills INTEGRITY-178.

X-ES

Extreme Engineering Solutions

...Always Fast

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Processor

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

Alternate Processor Configurations

- P1011 processor with one Power Architecture® e500v2 core at up to 800 MHz
- P1020 processor with two Power Architecture® e500v2 cores at up to 800 MHz
- P2010 processor with one Power Architecture® 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
- Peripheral slot only

J2 cPCI Interface

- One 10/100/1000BASE-T Ethernet port
- Two RS-232/422/485 serial ports
- Two GPIO signals
- One USB 2.0 port

XMC/PrPMC Site

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

Software

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

Physical Characteristics

- Conduction-cooled 3U 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): 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 (maximum)
Vibration	0.002 g²/Hz (maximum), 5 to 2000 Hz	0.04 g²/Hz (maximum), 5 to 2000 Hz	0.1 g²/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