

# XPedite2400

**Not Recommended  
for New Designs**

AMD (formerly Xilinx) Virtex-7 FPGA-Based Conduction- or Air-Cooled Digital Signal Processing XMC Module **Please contact X-ES Sales**

- ▶ AMD (formerly Xilinx)  
Virtex-7 FPGA  
XC7VX690T
- ▶ Conduction- or air-cooled  
XMC module
- ▶ Up to 4 GB of DDR3  
SDRAM in two channels
- ▶ 128 MB of user NOR  
configuration flash
- ▶ Non-volatile FPGA  
configuration flash
- ▶ x8 PCI Express Gen3  
on P15
- ▶ x8 GTX transceivers  
on P16
- ▶ Up to 32 LVDS / 64 single-  
ended I/O on P14
- ▶ Up to 19 LVDS / 38 single-  
ended I/O on P16
- ▶ X-ES FPGA Development  
Kit (FDK) is available
- ▶ Linux driver support for  
FDK



## XPedite2400

The XPedite2400 is a high-performance, reconfigurable, conduction- or air-cooled XMC module based on the AMD (formerly Xilinx) Virtex-7 family of FPGAs. With a x8 PCI Express interface, external memory, and flexible, high-density I/O, the XPedite2400 is ideal for customizable, high-bandwidth, data-processing applications.

The XPedite2400 provides a high-performance, feature-rich solution capable of interfacing to and processing streaming data from a wide variety of sensors. The X-ES FPGA Development Kit (FDK) is provided to support the requirements of high-performance, real-time, embedded streaming data applications and simplify FPGA development. It includes IP blocks, example FPGA designs, and software to control and communicate with FPGAs. A Linux Software Development Kit (SDK) is available.

# X-ES

Extreme Engineering Solutions

*“Fast, Flexible, Customer-Focused  
Embedded Solutions”*

### Extreme Engineering Solutions

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FPGA

- AMD (formerly Xilinx) Virtex-7 for high-performance logic and DSP applications
- Standard FPGA is Virtex-7 XC7VX690T

Additionally Supported FPGAs

- Virtex-7 XC7VX330T
- Virtex-7 XC7VX415T
- Virtex-7 XC7VX485T
- Support for commercial and industrial temperature as well as -1, -2, -3 speed grades

Memory

- Up to 4 GB of DDR3 SDRAM in two 64-bit channels
- 128 MB of user NOR flash

XMC Interface

- x8 PCI Express port
- Four GPIO via I<sup>2</sup>C expander

P14 User I/O

- 32 FPGA differential/LVDS user I/O

P16 I/O

- Eight GTX transceivers
- 19 LVDS
- May be used as x8 PCI Express

Software

- X-ES FPGA Development Kit (FDK)
- Linux support

Physical Characteristics

- XMC conduction- or air-cooled form factor
- Dimensions: 149 mm x 74 mm

Environmental Requirements

Contact factory for appropriate board configuration based on environmental requirements.

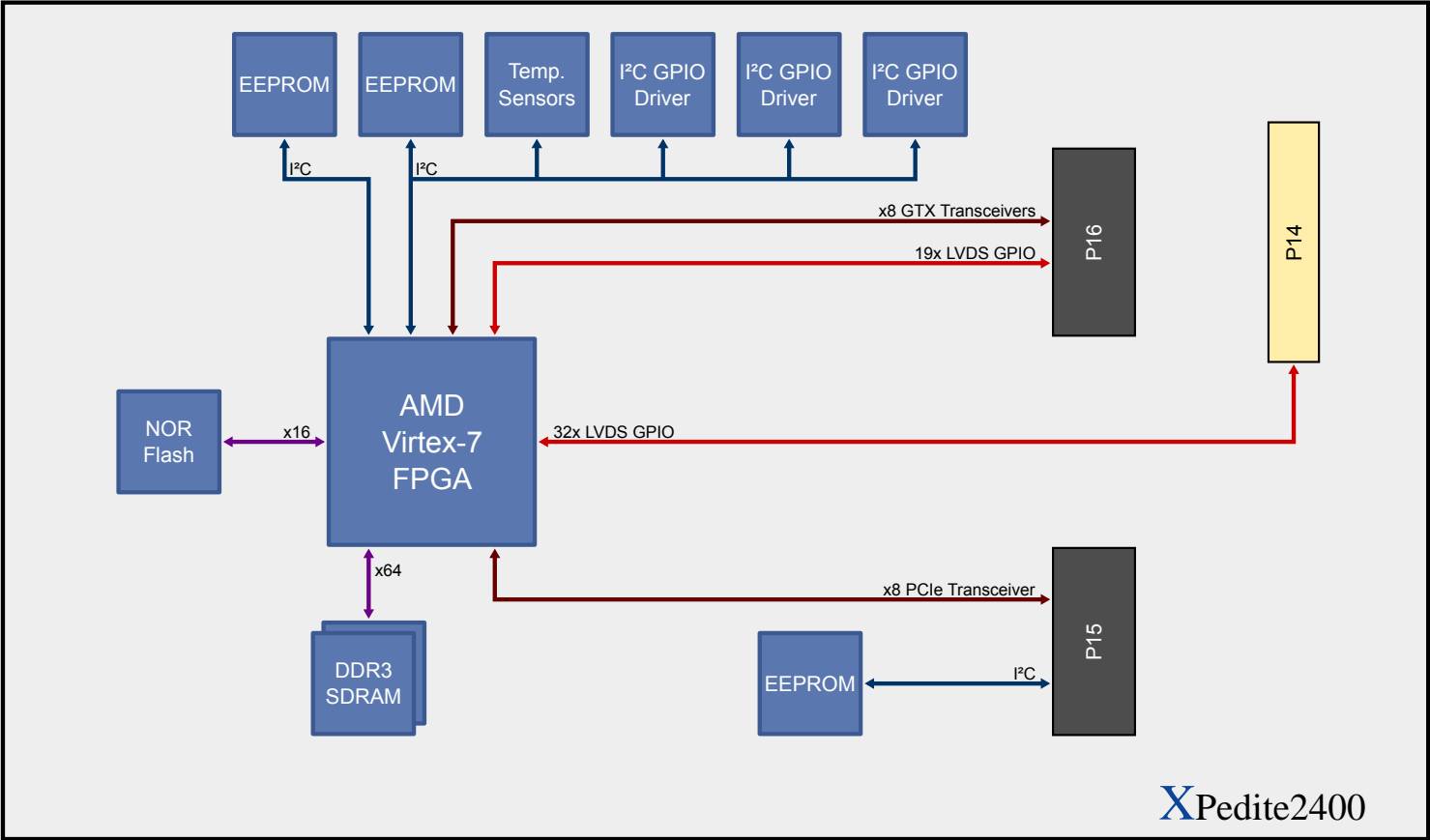
- Supported ruggedization levels (see chart below): 3, 5
- Conformal coating available as an ordering option

Power Requirements

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

Ruggedization Level	Level 3	Level 5
Cooling Method	Rugged Air-Cooled	Conduction-Cooled
Operating Temperature	-40 to +70°C ambient †	-40 to +85°C (board rail surface)
Storage Temperature	-55 to +105°C ambient	-55 to +105°C (maximum)
Vibration	0.04 g <sup>2</sup> /Hz (maximum), 5 to 2000 Hz	0.1 g <sup>2</sup> /Hz (maximum), 5 to 2000 Hz
Shock	30 g, 11 ms sawtooth	40 g, 11 ms sawtooth
Humidity	Up to 95% non-condensing	Up to 95% non-condensing

† Contact factory for airflow rate details.



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