

# PC720 Kintex™-7 PCIe Card

PCI Express 8 lanes Gen2 with two FMC sites

## FEATURES:

- Kintex-7 160T, 325T, 410T
- PCIe Gen2 x8/4-lane, PCIe Gen3 x4 (softcore)
- 1GB DDR3 SDRAM
- 1x FMC HPC available on front panel (VITA 57.1)
- 1x FMC LPC or 4-channel SFP FMC (FMC404) available on front panel on the secondary side (VITA 57.1)
- Micro SD Flash (32GB)

The PC720 is a high-performance, half-size PCI Express card with advanced Digital Signal Processing (DSP) capabilities and multiple I/O options. The PC720 offers various direct on-board interface options (2x FMC sites) that are closely coupled to the Kintex-7 and 1GB of DDR3 SDRAM. With on board fans, available to dissipate heat from the FMC sites and the Kintex-7, this product remains cool in any enclosure.

It is an excellent choice for high performance applications that require large band signals digitization or generation through the use of accelerated frequencydomain algorithms or video applications that are bandwidth hungry.

### FPGA Mezzanine Card Options

The PC720 offers two FMC sites connected to the Kintex-7 FPGA. The first FMC site (HPC) is located on the primary side of the board and when populated it remains within the envelope of a single slot half size PCIe card. Optionally a second FMC site

(LPC) is made available on the back side of the PC720 and the FMC I/Os occupy the front panel of the PCIe adjacent slot. The secondary FMC site can also accommodate an FMC404 with four SFP for fast optical communication.

When mounting a high-performance FMC on the primary side and the FMC404 on the secondary side a complete data acquisition, signal processing, and optical platform is made available to designers for the most demanding applications.

For more information about the Abaco Systems FMCs that can be used on the PC720, please visit the FMC portal. We offer a wide range of ADC, DAC and DSP modules.

### Standalone operation

For a lab test environment or custom system the PC720 can be run in a standalone mode. In this set-up the power is supplied through the industry standard PCIe power connector.

ANSI/VITA 47	Air-cooled	Conduction-cooled
	EAC4	EAC6
Operating temperature	0C to +55C	-40C to +70C
Storage temperature	-40C to +85C	-50C to +100C
Humidity	95%	95%
Operating vibration	5Hz to 100Hz PSD = 0.04g2/Hz 100 Hz to 1000 Hz PSD = 0.04 gs^2/Hz 1000 Hz to 2000 Hz PSD decreasing at 6 dB/octave	5Hz to 100H PSD = 0.04g2/Hz 100 Hz to 1000 Hz PSD = 0.04 gs^2/Hz 1000 Hz to 2000 Hz PSD decreasing at 6 dB/octave
Operating shock	20g, 11 millisecond, half-sine or 20g, 11 millisecond, terminal sawtooth shock pulses in all three axes	20g, 11 millisecond, half-sine or 20g, 11 millisecond, terminal sawtooth shock pulses in all three axes
Operating altitude	-1500 ft to 60,000 ft (with airflow)	-1500 ft to 60,000 ft (with airflow)
Conformal coating	Optional	Optional

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## Specifications

### Applications examples

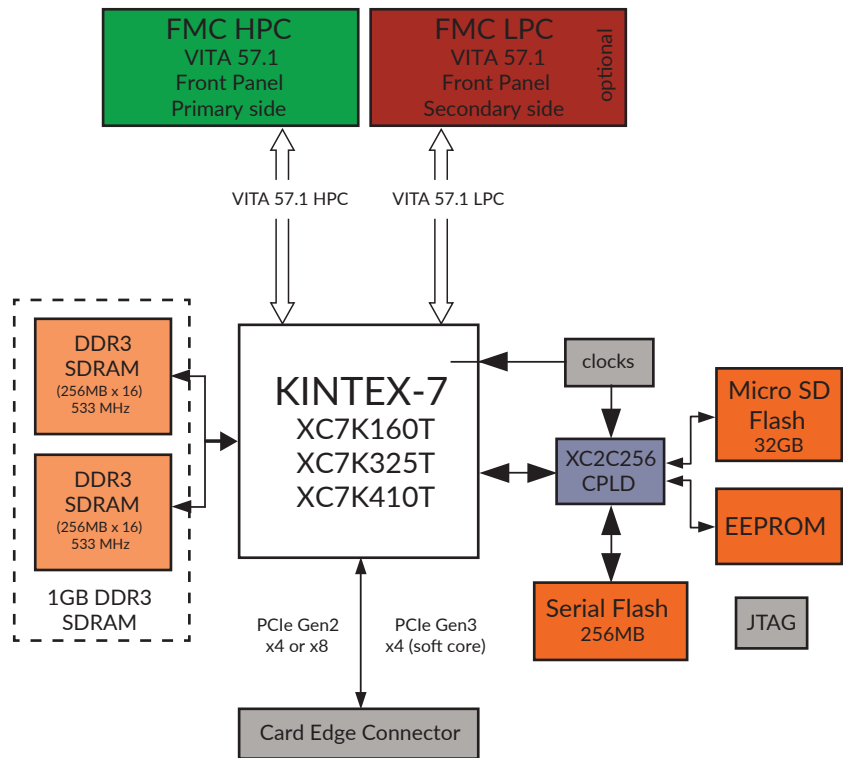
- Software Defined Radio (SDR)
- RADAR/SONAR Image Processor
- Satellite communication systems
- RADAR & Radio Jamming
- Baseband Communication Transceivers
- Multi-Channel digital receivers
- Event Processor & Recorder
- A/D, D/A Signal Processing

### Software Support

- Stellar IP available for this product. A simple way to design FPGA firmware with automated code and bitstream generation
- Board control and monitoring tools
- Flash programming utility
- Confidence tests
- Host side API
- Software program example
- Xilinx ISE project
- Test firmware and VHDL source code
- Drivers for Windows, Linux, VxWorks

AS9100 Certified

## Block diagram



## Ordering information

Talk to us about your algorithmic requirements, Abaco Systems is a full-service firmware and software development house. We are a specialist at high performance FFT and Video Processing. Check with us, we may have IP Cores that meet requirements for your application, right off the shelf.



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