

VITA 46 Compliant FMC carrier

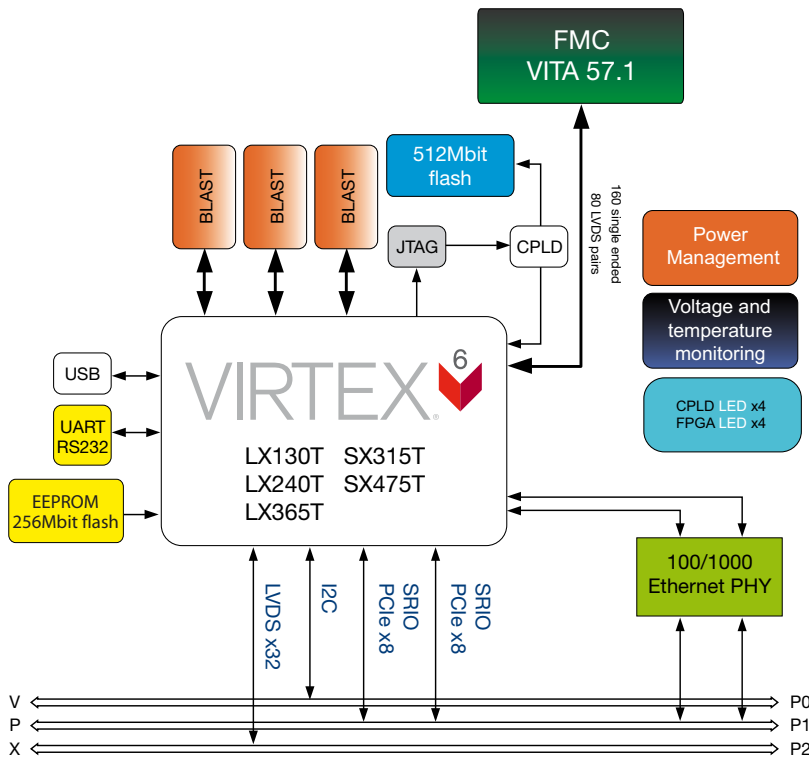
VP680 Virtex™ 6 3U VPX

PRELIMINARY, SUBJECT TO CHANGE WITHOUT NOTICE

Description

The VP680 is a high performance VITA 46 (VPX) standard compliant card with advanced digital signal processing capabilities. The design has been targeted for customer programmable implementations of complex FPGA algorithms for Digital Signal Processing (DSP) applications. The VP680 product is in the 3U VPX form factor, offering various direct on-board interface options that are closely coupled to large - fast on-board memory resources of the Xilinx Virtex™-6 FPGA.

The VP680 is an excellent choice for high performance applications that require the use of accelerated frequency-domain algorithms such as with FFTs. 4DSP offers many off-the-shelf Intellectual Property (IP) cores for applications that require the highest level of performance.



www.4dsp.com/VP680

Features

- Virtex-6 LX130T, LX240T, LX365T, SX315T, SX315T, SX475T
- High density Memory Options using BLAST sites: DDR2 and DDR3 SDRAM, QDR2 SRAM, NAND FLASH.
- VPX VITA 46 Compliant
- Front Panel FPGA Mezzanine Card (FMC)
- Mini USB x2 (optional)
- Gigabit Ethernet x2 (optional)

Applications examples

- Software Defined Radio (SDR)
- RADAR/SONAR Image Processor
- Satellite communication systems
- RADAR & Radio Jamming
- JPEG2000 Video Image Processors
- Baseband Communication Transceivers
- Multi-Channel digital receivers
- 1M-point floating-point FFT processing
- Event Processor & Recorder

FPGA Mezzanine card options

- FMC103: 4-ch A/D 210 Msps @ 12-bits
- FMC104: 4-ch A/D 250 Msps @ 14-bits
- FMC107: 8-ch A/D 65 Msps @ 12-bits
- FMC108: 8-ch A/D 250 Msps @ 14-bits
- FMC110: Quad Channel
 - 2-ch A/D 1 Gsps @ 12-bits
 - 2-ch D/A 1 Gsps @ 16-bits
- FMC122: Dual / Single Channel A/D
 - 1-ch A/D 2.50 Gsps @ 8-bits
 - 2-ch A/D 1.25 Gsps @ 8-bits
- FMC126: Quad-Dual-Single Channel A/D
 - 1-ch A/D 5.00 Gsps @ 10-bits
 - 2-ch A/D 2.50 Gsps @ 10-bits
 - 4-ch A/D 1.25 Gsps @ 10-bits

Ordering information

VP680 240-1-C-QBC-AC-608-01

<p>Virtex-6™ Device XC6VLX130T = 130 XC6VLX240T = 240 XC6VLX365T = 365 XC6VXS315T = 315 XC6VXS475T = 475</p> <p>Virtex™ Speed Grade Speed Grade = 1 Speed Grade = 2 Speed Grade = 3 * NOTE: Speed Grade-3 only available in C=Commercial</p> <p>Temperature Range Commercial (0°C to + 85°C) = C Industrial (-40°C to + 100°C) = I</p> <p>Blast Options QDRII SRAM memory device: 1 x 2M x 32-bit (8MBytes) = Q DDR2 SDRAM memory device: 1 x 32M x 32-bit (128MBytes) = A DDR3 SDRAM memory device: 2 x 64M x 16-bit (256MBytes) = B ADV212 JPEG2000 compression devices: 2 CODECs = C 32GB NAND Flash (Solid State Drive) = E Blank - No BLAST = N Factory Configurable BLAST Site 1 to 3. More options may be available, consult factory.</p>	<p>RESERVED:</p> <p>FMC Front Panel Options 600 = No FMC BLANK Front Panel 603 = FMC103 LPC 4-ch A/D 210 Msps @ 12-bits 604 = FMC104 LPC 4-ch A/D 250 Msps @ 14-bits 607 = FMC107 LPC 8-ch A/D 65 Msps @ 12-bits 608 = FMC108 HPC 8-ch A/D 250 Msps @ 14-bits 610 = FMC110 HPC DUAL-DUAL Channel A/D & D/A 2-ch A/D 1 Gsps @ 12-bits 2-ch D/A 1 Gsps @ 16-bits 622 = FMC122 LPC Single-Dual Channel A/D 1-ch A/D 2.50 Gsps @ 8-bits 2-ch A/D 1.25 Gsps @ 8-bits 625 = FMC125 HPC Quad-Dual-Single Channel A/D 1-ch A/D 5.00 Gsps @ 8-bits 2-ch A/D 2.50 Gsps @ 8-bits 4-ch A/D 1.25 Gsps @ 8-bits 626 = FMC126 HPC Quad-Dual-Single Channel A/D 1-ch A/D 5.00 Gsps @ 10-bits 2-ch A/D 2.50 Gsps @ 10-bits 4-ch A/D 1.25 Gsps @ 10-bits</p> <p>FMC Cooling CC = Conduction Cooled AC = Convection (Air) Cooled</p>
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User selectable build options

- Configure the VP680 board to meet your requirements
- Please observe notes relative to BLAST & FMC Card Options
- Your board will be built to the specifications you select in the above part number options
- Custom BLAST modules are available upon request

Software support

- 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

Environmental	Level A	Level B
Operating Temperature	0°C to 70°C	-40°C to 85°C
Storage Temperature	-50°C to 125°C	-50°C to 125°C
Humidity-Operating	0 to 100% non condensing	0 to 100% non condensing
Storage Humidity	0 to 100%	0 to 100%
Vibration Random	0.1 g ² /Hz 10 - 3kHz	0.1 g ² /Hz 10 - 3kHz
Shock	30g peak	30g peak
Coating	none	Conformal

Talk to us about your algorithmic requirements, 4DSP is a full-service firmware and software development house. We are 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.