



VPX514KEY FEATURES

- VPX (VITA-46) FPGA carrier for FPGA Mezzanine Card (FMC) per VITA-57
- VPX514 only takes power from the VPX chassis (there are no other interfaces going to the back plane)
- Dual 10GbE via SFP+ interfaces
- Xilinx Virtex-6 FPGA in FF1759 package
- On board PLL for buffering/multiplying and jitter cleaner
- Option for up to 4GB of DDR-III memory
- On board Freescale QorIQ PPC1020 with DDR-III
- RoHS compliant

The VPX514 is an VPX FPGA Carrier with an FMC (VITA 57) interface. The VPX514 is compliant to the VPX VITA-46 specification. The FPGA has an interface to four banks of DDR-III memory (32-bit wide). This allows for large buffer sizes to be stored during processing as well as for queuing the data to the host.

The VPX514 has a single FMC connector per VITA-57. This allows having a single Carrier with multiple-different FMC modules in the system.

The on board PPC can run at 800MHz with 512 Mbytes of DDR-III, 8Mbytes of boot flash and 128MBytes of user Flash. The PPC has an x4 PCIe interface to the FPGA in addition to it's local bus. The PPC has it's dual GbE routed to ports 0 and 1 of the VPX.

VadaTech can modify this product to meet special customer requirements without NRE (minimum order placement is required).

VPX FPGA Carrier with FMC Interface

SPECIFICATIONS

Architecture		
Physical	Dimensions	6U VPX
Type	VPX FPGA Carrier	Xilinx FGPA Virtex-6 Devices
		PLL multiplier/divider with jitter cleaner
		Single FMC slot
		Four banks of DDR-III
Standards		
VPX	Type	VITA-46 (FPGA programmable)
Configuration		
Power	VPX514	Carrier is 40W max without the Mezzanine
Environmental	Temperature	Operating Temperature: 0° to 65° C (Air flow requirement is to be greater than 400 LFM) Storage Temperature: -40° to +90° C
	Vibration	1G, 5-500Hz each axis
	Shock	30Gs each axis
	Relative Humidity	5 to 95 percent, non-condensing
Front Panel	Interface Connectors	Front panel FMC
	LEDs	GbE/10GbE Link/Activity 8 user defined LED
	Mechanical	Hot Swap Ejector Handle
Software Support	Operating Systems	Linux, Windows, Solaris and VxWorks
Other		
MTBF	MIL Handbook 217-F > TBD.	
Certifications	Designed to meet FCC, CE and UL certifications where applicable	
Standards	VadaTech is certified to both the ISO9001:2000 and AS9100B:2004 standards	
Compliance	RoHS and NEBS	
Warranty	Two (2) years.	
Trademarks and Logos	The VadaTech logo is a registered trademark of VadaTech, Inc.	

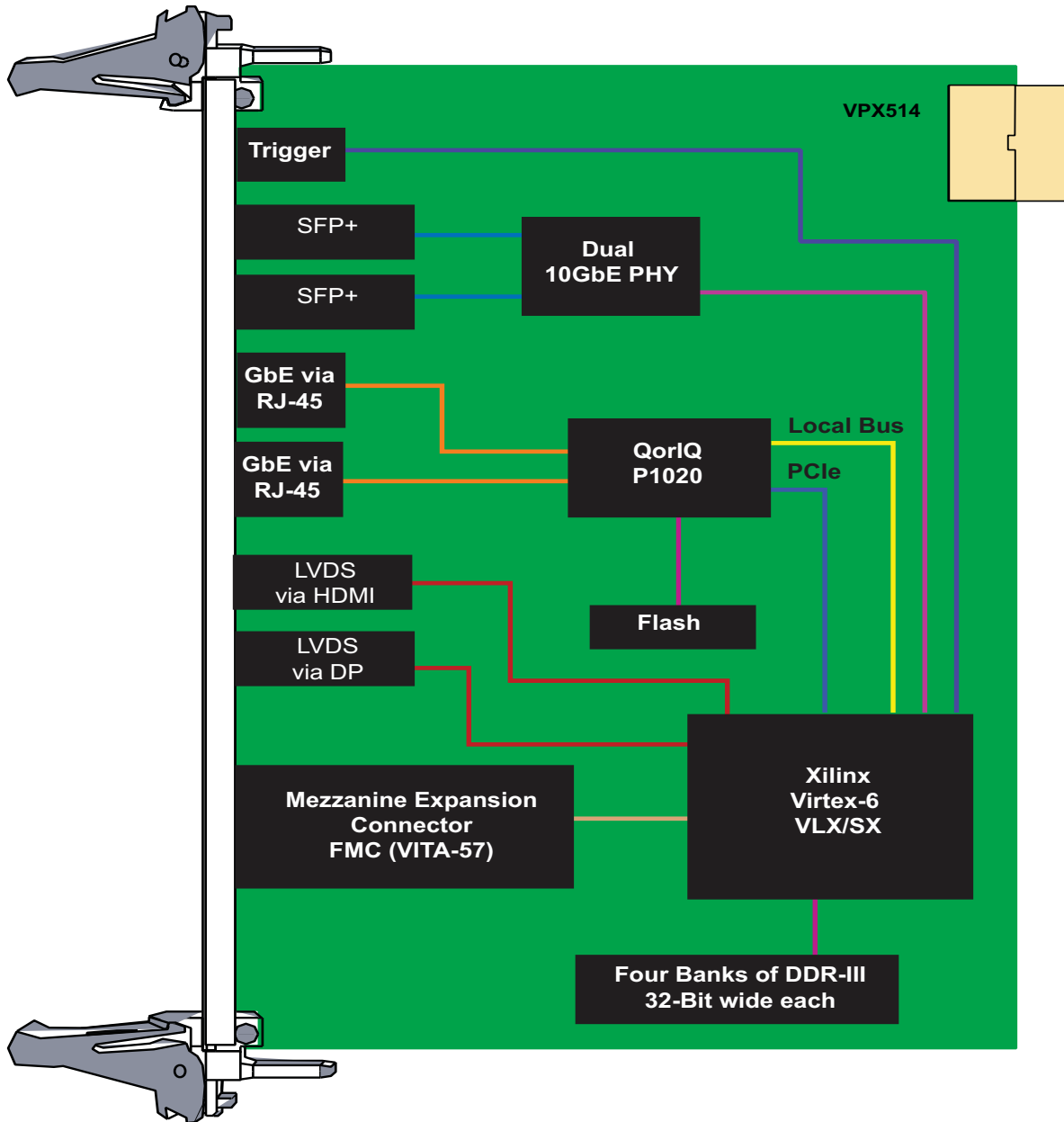


FIGURE 1. VPX514 Functional Block Diagram

ORDERING OPTIONS

VPX514 - ABO - DEO - OHJ

A = DDR-III Memory

- 0 = None
- 1 = 512MB per Bank (total of 2Gbytes)
- 2 = 1GB per Bank (total of 4Gbytes)

D = FPGA

- 1= Reserved
- 2= Reserved
- 3= Reserved
- 4= XC6VLX240T
- 5= XC6VLX365T
- 6= XC6VLX550T
- 7= XC6VSX475T
- 8 = Reserved

B = SFP+ Transceiver for front 10GbE/1GbE Fabric

- 0 = None
- 1 = 10GBASE-SR
- 2 = Reserved
- 3 = 10GBASE-LR
- 4 = 1Gb LC/SX (850nm)
- 5 = 1Gb LC/LX (1310nm)
- 6 = Copper 1000 Mbit
- 7 = Reserved

E = FPGA SPEED

- 1 = Low
- 2 = High

H = Operating Temp

- 0 = Commercial
- 1 = Industrial

J = Conformal Coating

- 0 = None
- 1 = Humiseal 1A33 Polyurethane
- 2 = Humiseal 1B31 Acrylic

