VPX994

6U VPX I/O Module with six QSFP+ ports

VPX994

Key Features

- 6U VPX Module with six QSFP+
- Clock Data Recovery (CDR) per lane
- Data rates from 1.25 to 10.3125 Gb/s are programmable per port (i.e. 2.5, 3.125 Gb/s etc.)
- Adaptive Equalization up to 34-dB
- Adjustable Transmit from 600 to 1300 mVp-p
- Adjustable Transit De-emphasis to -15dB
- Front panel jacks to measure the +12V and +3.3VAUX

Benefits

- Electrical, mechanical, software, and system-level expertise in house
- Full system supply from industry leader
- AS9100 and ISO9001 certified company

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The VPX994 is a 6U VPX module with 6 QSFP+ transceivers. The module has a CDR per port for better signal integrity. Each CDR is tunable individually for different speed. The module is protocol agnostic.

There are 12 ports that come from the P1 connector to the first three QSFP+. From each P2/P3/P4 ports 0/4/8/12 are routed to each of the QSFP+ transceivers.

The front I/O allows access to the NVMRO, *SYSRESET and DISCRETE1 signal.

Front panel Jacks allows measuring the +12V and +3.3V_AUX. The Module also has Jacks to Chassis Ground as well as the Digital Ground.

The module has one LED per CDR Lock port.

Figure 1: VPX994

Figure 2: VPX994 Front View

Figure 3: VPX994 No Flash

Figure 4: VPX994 Top View

Block Diagram

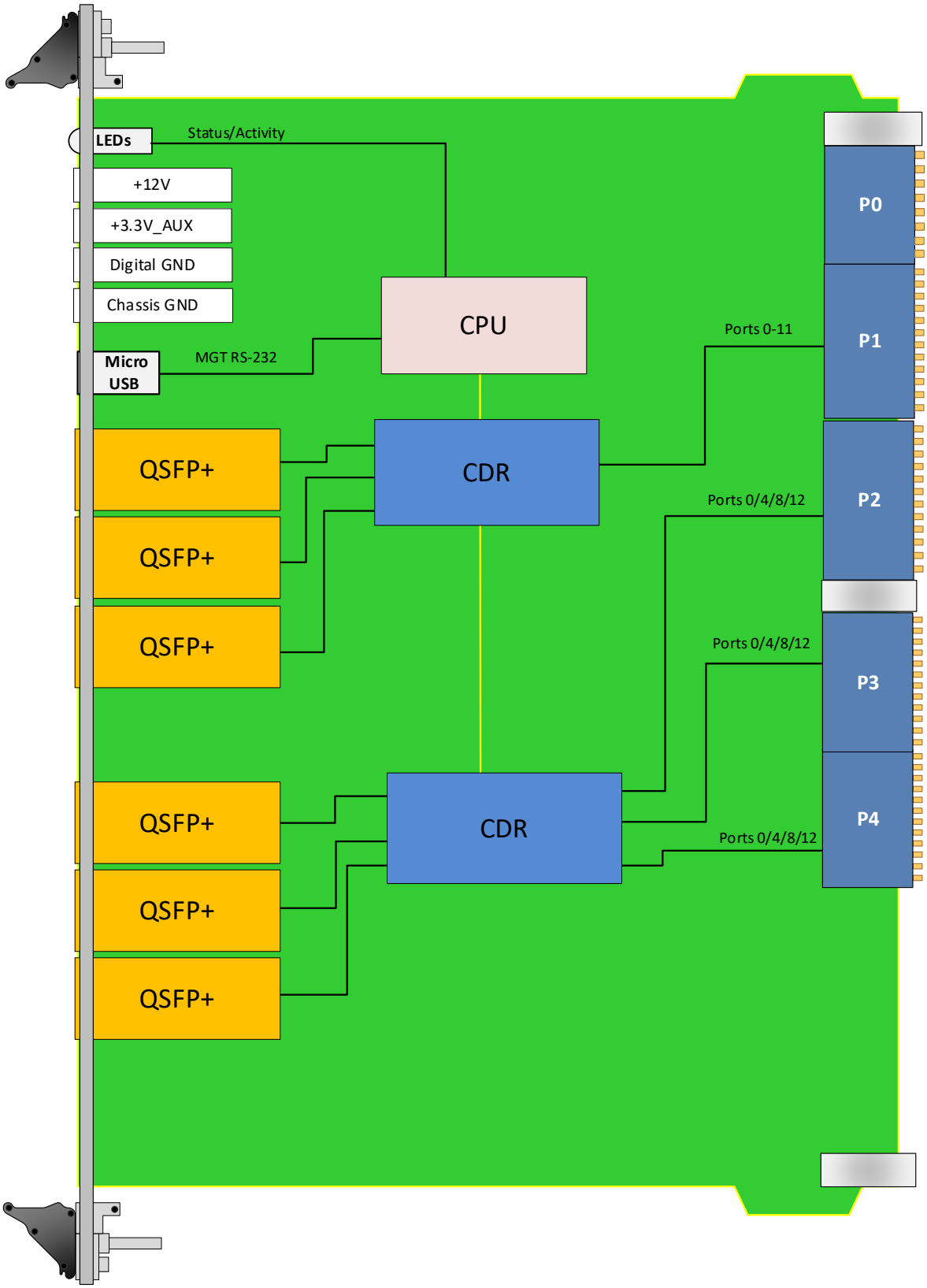

Figure 5: VPX994 Functional Block Diagram

Pinout Block Diagram

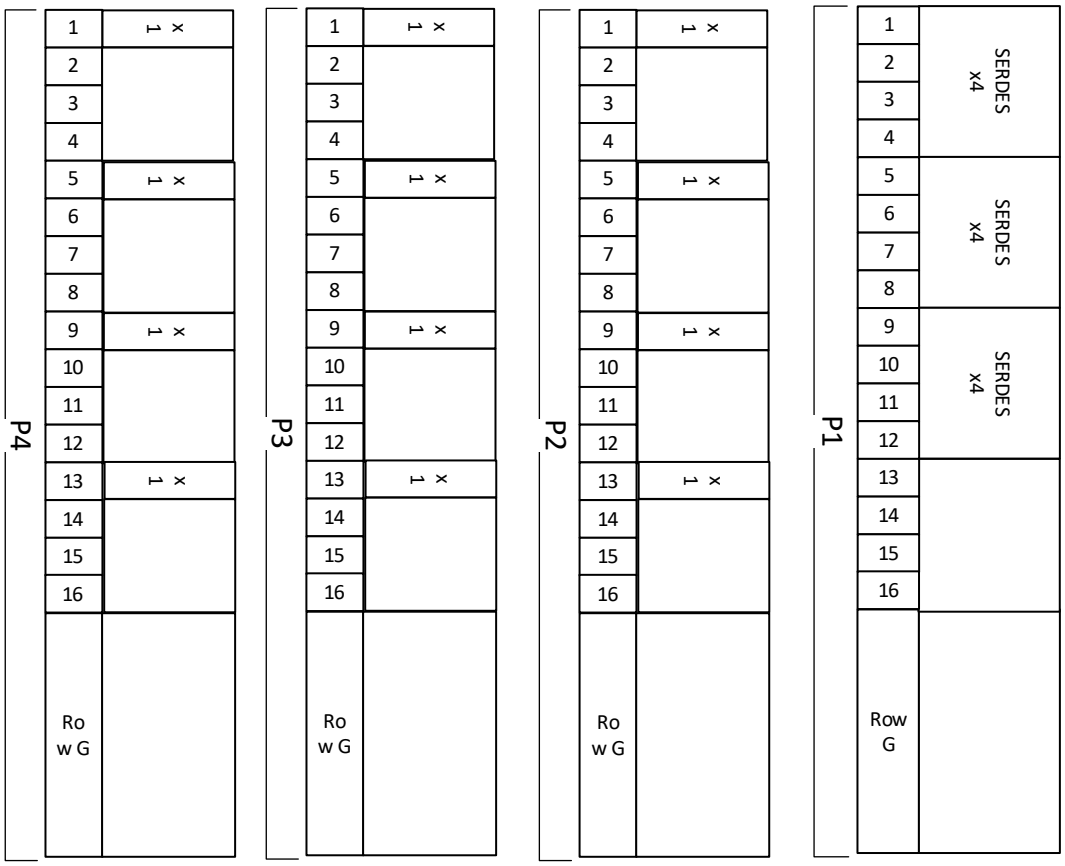

Figure 6: VPX994 P1/P2/P3/P4 SERDES

Specifications

Architecture		
Physical	**Dimensions**	6U, 1” pitch
Type	**I/O**	Six QSFP+ Ports
Configuration		
Power	**VPX994**	15W
Front Panel	**Interface Connectors**	QSFP+
	Micro USB	RS-232 from on board CPU
		NVMRO, *SYSRESET and DISCRETE1 front I/O access
		Jacks to +12V, +3.3V_AUX, Chassis Ground and Digital Ground
	LEDs	CDR Lock LED per port
VPX Interfaces	**Slot Profiles**	See Ordering Options
	Rear IO	P0: NVMRO, SYSRESET
		P1: First 12 ports to QSFP+
		P2/P3/P4 ports 0/4/8/12 routed to the QSFP+
Software Support	**Operating System**	Agnostic
Other		
MTBF	MIL Hand book 217-F@ TBD hrs	
Certifications	Designed to meet FCC, CE and UL certifications, where applicable	
Standards	VadaTech is certified to both the ISO9001:2015 and AS9100D standards	
Warranty	Two (2) years, see VadaTech Terms and Conditions	

INTEGRATION SERVICES AND APPLICATION-READY PLATFORMS

VadaTech has a full ecosystem of OpenVPX, ATCA and MTCA products including chassis platforms, shelf managers, AMC modules, Switch and Payload Boards, Rear Transition Modules (RTMs), Power Modules, and more. The company also offers integration services as well as pre-configured Application-Ready Platforms. Please contact VadaTech Sales for more information.

Ordering Options

VPX994 – A0C-D00-GHJ

A = QSFP+ Transceiver	D = VPX P2 Connector	G = Applicable Slot Profiles
0 = None 1 = 40Gb (SR) 2 = 40Gb WDM (SR) 3 = 40Gb (LR) 4 = Reserved 5 = Reserved	0 = Loaded 1 = Not Loaded 2 = P2A loaded (no P2B) 3 = Reserved	0 = 5 HP, VITA 48.1
		H = Environmental
		See Environmental Specification
C = VPX Connector Type		**J = Conformal Coating**
0 = Standard 50u Gold Rugged 1 = KVPX Connectors		0 = No coating 1 = Humiseal 1A33 Polyurethane 2 = Humiseal 1B31 Acrylic

Environmental Specification

	Air Cooled		Conduction Cooled		
Option H	**H = 0**	**H = 1**	**H = 2**	**H = 3**	**H = 4**
Operating Temperature	AC1* (0°C to +55°C)	AC3* (-40°C to +70°C)	CC1* (0°C to +55°C)	CC3* (-40°C to +70°C)	CC4* (-40°C to +85°C)
Storage Temperature	C1* (-40°C to +85°C)	C3* (-50°C to +100°C)	C1* (-40°C to +85°C)	C3* (-50°C to +100°C)	C3* (-50°C to +100°C)
Operating Vibration	V2* (0.04 g2/Hz max)	V2* (0.04 g2/Hz max)	V3* (0.1 g2/Hz max)	V3* (0.1 g2/Hz max)	V3 (0.1 g2/Hz max)
Storage Vibration	OS1* (20g)	OS1* (20g)	OS2* (40g)	OS2* (40g)	OS2* (40g)
Humidity	95% non-condensing	95% non-condensing	95% non-condensing	95% non-condensing	95% non-condensing

Notes: *Nomenclature per ANSI/VITA 47. Contact local sales office for conduction cooled (H = 2, 3, 4).

Related Products

VPX592

- 3U FPGA carrier for FPGA Mezzanine Card (FMC) per VITA 46 and VITA 57
- Xilinx Kintex UltraScale™ XCKU115 FPGA
- High-performance clock jitter cleaner

VPX599

- Xilinx Kintex UltraScale™ XCKU115 FPGA
- Dual ADC 12-bit @ 6.4 GSPS
- Dual DAC 16-bit @ 12 GSPS (AD9162 or AD9164)

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