VPX018

3U VPX Electronic Load Module for Test and Validation with Loopback Option on P1 and P2 Connectors

VPX018

Key Features

- 3U VPX Electronic Load Module
- +12V up to 120W
- +5V up to 70W
- +3.3V up to 50W
- +12V_AUX up to 10W
- -12V_AUX up to 5W
- +3.3_AUX up to 3W
- GbE and RS-232 Interface for Monitoring and Configuration
    - Graphical User Interface (GUI) thru GbE
- Option for loopback on high-speed TX/RX pairs
    - P1 and P2 Connectors
- Available in Conduction Cooled
- Health Management

Benefits

- Most comprehensive VPX products in the market
- 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 VPX018 is an Electronic Load module in a 3U VPX form factor and can draw power from +12V, +5V, +3.3V, +12_AUX, -12_AUX as well as the +3.3V_AUX. Module can load each of the input rails with 1W resolution per rail on +12V, +5V, +3.3V, +12V_AUX and -12V_AUX. The +3.3V_AUX has a resolution of 100mW. The maximum power draw on each rail is as follows:

- +12V 120W
- +5V 70W
- +3.3V 50W
- +12V_AUX 10W
- -12V_AUX 5W
- +3.3_AUX 3W

Figure 1: VPX018

The VPX018 has a GbE and an RS-232 for external interface. The module can simulate any dynamic load based on the user requirement on any of the rails. The GUI interface thru the GbE allows ease of operation as well as the user uploading of predefined dynamic load (Time vs. watts per voltage rail and/or time vs. current per voltage rail).

The VPX018 has an option to allow loop back on the high-speed TX/RX on the P1 and P2 connector for test and validation. The VPX018 P1 and P2 connectors utilizes high speed >25Gbaud rugged VPX connectors.

The on-board CPU draws power from the +3.3V_AUX only. The VPX018 supports health management per VITA 46.11 Tier Two support.

Figure 2: VPX018 Top View

Block Diagram

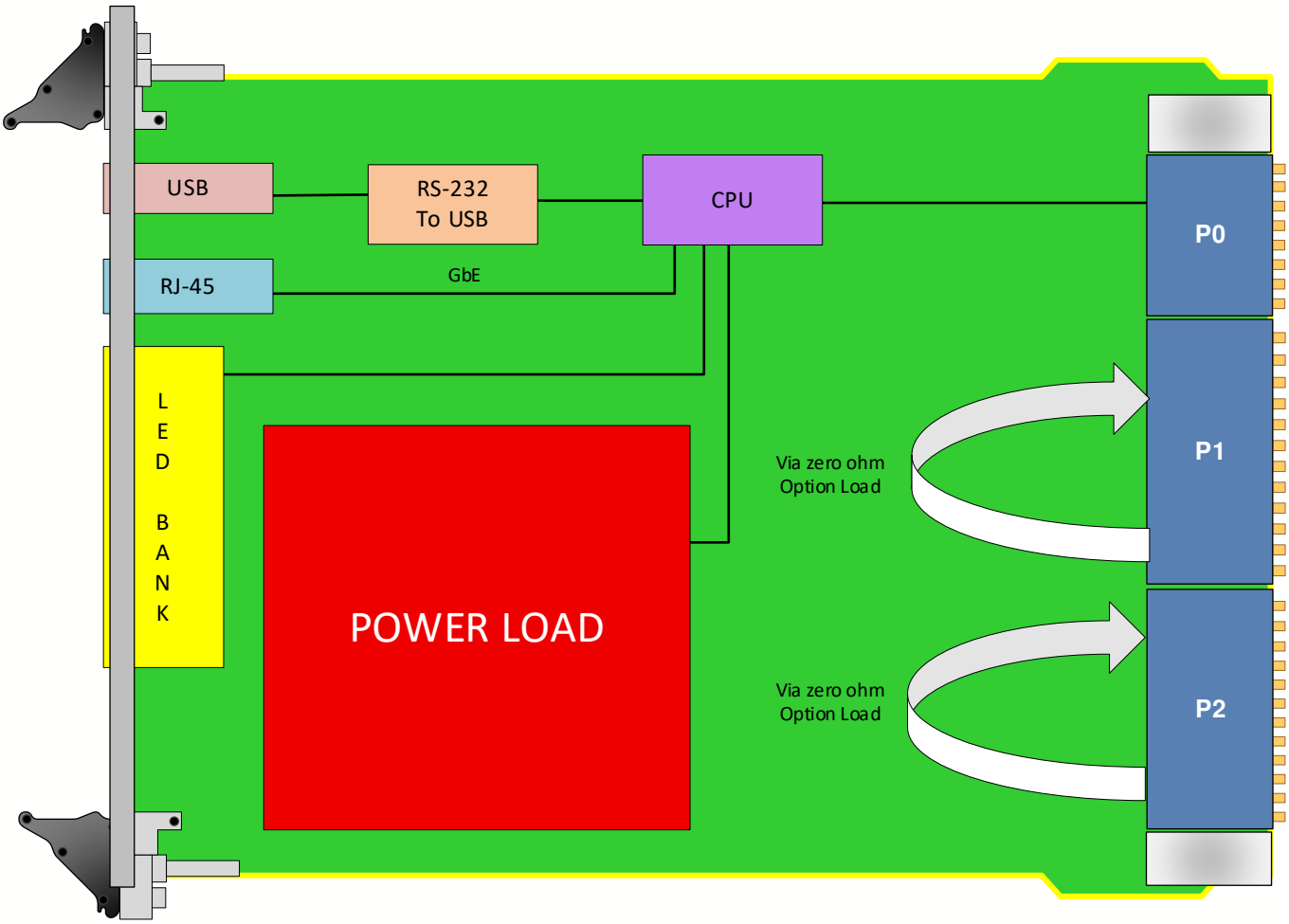

Figure 4: VPX018 Functional Block Diagram

Specifications

Architecture		
Physical	**Dimensions**	3U, 1” pitch (5 HP panel)
Standards		
VPX	**Type**	VITA 46.0
VPX	**Type**	VITA 65 OpenVPX and VITA 46.11
Module Management	**IPMI**	IPMI v2.0
Configuration		
Power	**VPX018**	Electronic Load Module, CPU draws only from the +3.3V_AUX rail
		+12V, +5V, +3.3V, +12V_AUX, -12V_AUX and +3.3V_AUX rails
Front Panel	**Micro USB and RJ-45**	RS-232 for Health Management for configuration as well as GbE for GUI interface
	LEDs	User defined by Health Management and indicators for power load
Onboard Interfaces		Dual IPMI Buses for Health Management
VPX Interfaces	**Slot Profiles**	See Ordering Options
	Rear IO	None
	Backplane	Connector per VITA 46.0 High Speed >25Gbaud
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

VPX018–A00-000-GHJ

A = P1 and P2 Connectors		G = Applicable Slot Profile
0 = P1/2 no load 1 = P1/P2 with the loopback 2 = P1 *without* the loopback 3 = P1 with the loopback 4 = P2 *without* the loopback 5 = P2 with the loopback		0 = 5 HP, VITA 48.1 1 = Reserved
		H = Environmental
		See Environmental Specification
		J = Conformal Coating
		0 = No coating 1 = Humiseal 1A33 Polyurethane 2 = Humiseal 1B31 Acrylic 3 = Parylene

Notes:

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

VPX021

- Power Module for Open VPX VITA 62
- 3U VPX Systems
- 600W Output Power

VPX029

- Power Module for Open VPX VITA 62
- 3U VPX Systems
- 600W Output Power

VPX028

- Power Module for Open VPX VITA 62
- 6U VPX Systems
- 500W Output Power

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DOC NO. 4FM737-12 REV 01 | VERSION 1.6 – SEP/25