

VPX339

Multi-Channel Multi-Protocol Avionics MIL-STD-1553/ARINC429/RINC717

Key Features

- Comprehensive multi-protocol support
- Support for MIL-STD-1553A/B, MIL-STD-1760
- Support for ARINC 429, ARINC 575, ARINC 717, ARINC 825
- IRIG-B and IRIG-106 Chapter 10 MIL-STD-1553 MT
- Full line rate on all channels simultaneously
- Up to 8 programmable RS-232/422/485 channels
- Up to 10 Avionics/Digital discrete I/O
- 48-bit/100 ns Time Stamp
- Health Management through dedicated Processor

Benefits

- Advanced MIL-STD-1553 technology from DDC coupled to VadaTech OpenVPX expertise
- DMA engine reduces CPU load
- Flexible implementation of numerous avionic standard protocols

OpenVPX™



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VPX339

The VPX339 is based on the Data Device Corporation (DDC), BU-67118 multi-channel, multi-protocol avionics product. It utilizes the world's most advanced MIL-STD-1553 technology. The module is low power, high MTBF, and high performance.

The module can output MIL-STD-1553A/B, IRIG106, ARINC 429, CAN bus/ARINC 825 channels, discrete I/O, ARINC-717, etc.

The module has an on-board DMA engine for low CPU utilization. IRIG-106 Chapter 10, Tx inhibit, and ARINC 717 which are ideal for flight data recorders.

The module is ideal for applications such as mission-computers, displays and LRUs, digital data recorders, radar systems/situational awareness, commercial aerospace, flyable avionics/UAVs, data loading and data monitors.

Features of VPX339 are:

- Up to 4 Dual Redundant Mil-STD-1553 channels
- Supports MIL-STD-1553A/B and MIL-STD-1760
- BC disable for RT only applications
- Tx Inhibit for MT only applications
- IRIG-106 Chapter 10 MIL-STD-1553 MT
- Up to 20 Programmable Tx/Rx ARINC 429 channels
- Support ARINC 575 & many other ARINC protocols
- Full line rate on all channels simultaneously
- Tx inhibit for ARINC 429 Rx only applications
- Programmable ARINC 429 speed
- Up to 2 Programmable Tx/Rx ARINC 717 channels
- Up to 2 CAN bus 2.0/ARINC 825 channels
- Up to 8 programmable RS-232/422/485 channels
- Asynchronous communications on all channels
- Synchronous communication on up to 2 channels
- Up to 10 Avionics/Digital discrete I/O
- 48-bit/100 ns Time Stamp
- IRIG-B Input

Block Diagram

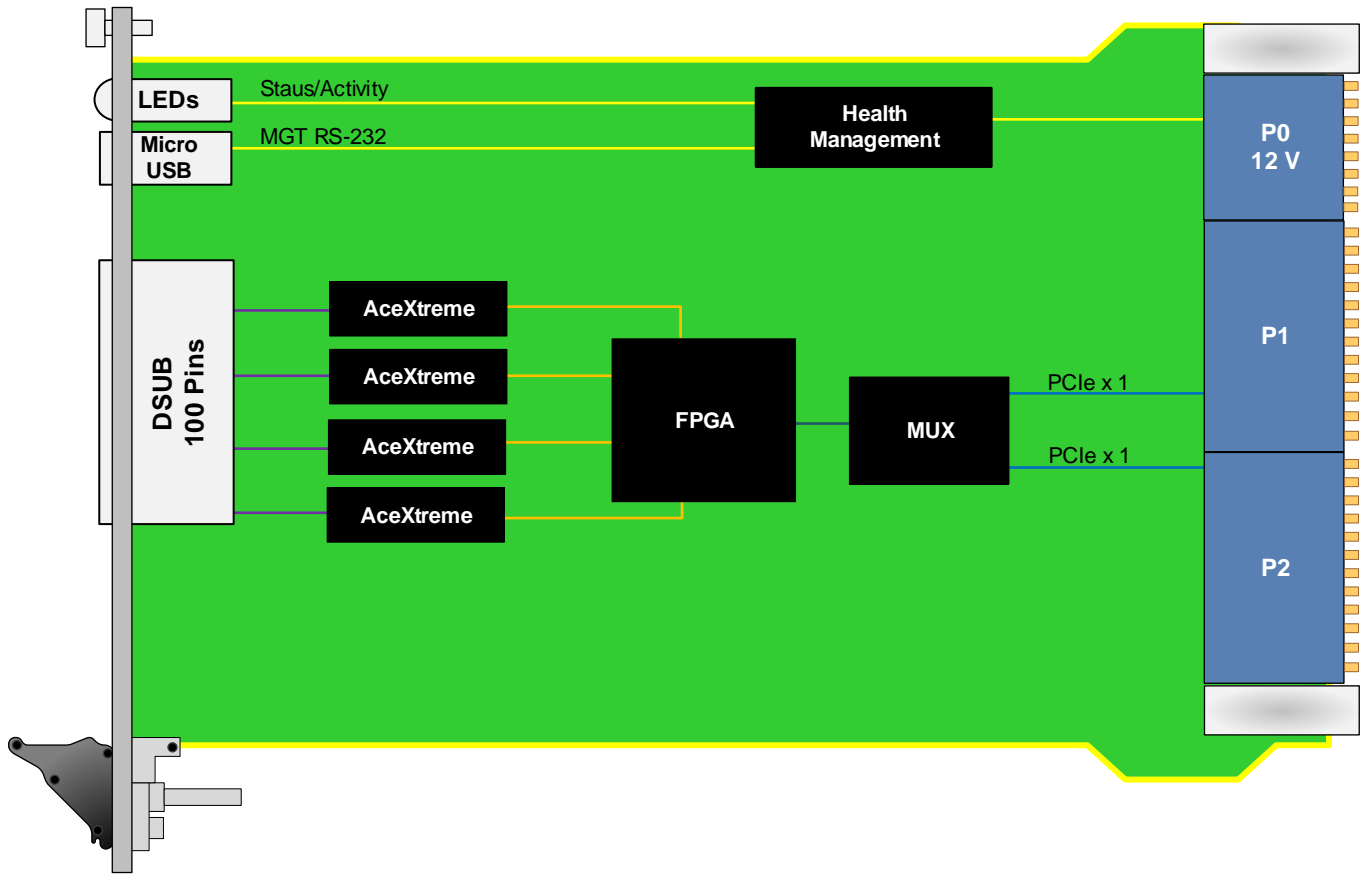


Figure 1: VPX339 Functional Block Diagram

Front Panel

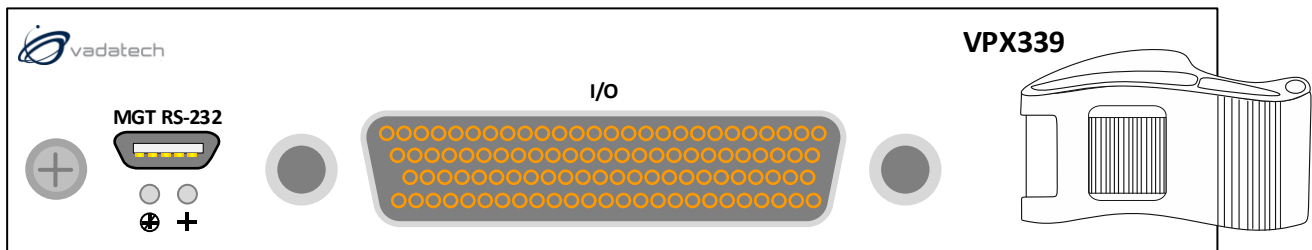


Figure 2: VPX339 Front Panel

Specifications

Architecture	
Physical	Dimensions 3U, 1" pitch
Type	Multiprotocol Avionics MIL-STD-1553, ARINC 429, ARINC 717, Discrete and CAN bus
	Multi-Channel 4x 1553, 20x 429, 2x 717, 8x serial, 2x CAN, 10x discrete (not all combinations are valid)
	OpenVPX Health Management
Standards	
VPX	Type VITA 46.x
VPX	Type VITA 65 OpenVPX
Module Management	IPMI IPMI v2.0
PCIe	Lanes 2x1
Configuration	
Power	8 W
Front Panel	Interface Connectors 100 pin Micro DSUB
	Micro USB RS-232 from Health Management
	LEDs User defined by Health Management
Software Support	Operating System Linux and Windows
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 ISO9001:2000 and AS9100B:2004 standards
Warranty	Two (2) years

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

VPX339 – A00-000-GHJ

A = I/O Options		G = Applicable Slot Profiles
0 = See Table 1 1 = See Table 1 2 = See Table 1 3 = See Table 1 4 = See Table 1 5 = See Table 1		0 = 5HP
		H = Environmental
		See Environmental Specification Table below
		J = Conformal Coating
		0 = No coating 1 = Humiseal 1A33 polyurethane 2 = Humiseal 1B31 acrylic

I/O Options

Table 1: I/O Description for Option A:

Option A	Number of channels						IRIG-B Input
	1553 (RT Boot)	429	717	Serial (sync)	CAN bus	Discrete	
0	0	10	2	4 (1)	2	10	1
1	0	20	2	2	2	6	1
2	2 (1)	0	0	8 (2)	1	6	1
3	4 (1)	0	0	8 (2)	1	6	1
4	2 (1)	10	2	4 (1)	1	6	1
5	4 (1)	18	2	0	0	6	1

Environmental Specification

Option H	Air Cooled		Conduction Cooled		
	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)

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