

VT988

High speed 16 ADC at 3 GSPS with
Synchronous Capture



VT988

Key Features

- 16 ADC for synchronous capture
- Xilinx Virtex-7 XC7VX485T FPGA
- NVidia Jetson TX2 System on Module
- TI ADC08B3000 8-bit @ 3 GSPS
- Managed Layer 2 GbE Switch

Benefits

- Design utilizes proven VadaTech subcomponents and engineering techniques
- Electrical, mechanical, software, and system-level expertise in house
- AS9100 and ISO9001 certified company



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The VT988 is a 16-channel data acquisition platform capable of synchronous sampling 8-bit ADCs at up to 3 GSPS with typical ENOB of 7.1 bits at 748 MHz. All input data channels pass through a Virtex-7 485T which is user programmable for filtering/DDC. Data can be output through dual front-panel 10 GbE or processed by the on-board Jetson TX2 module, which is ideal for CUDA-based signal processing or AI analysis. Front-panel USB and HDMI are available for user interface, making the VT988 ideal as a base platform for comprehensive signal monitoring systems.

The NVIDIA Jetson TX2 System on Module integrated has HMP Dual Denver 2/2 MB L2, Quad ARM® A57/2 MB L2 CPU, 4K x 2K 60 Hz video encode and decode, and 8 GB 128 bit LPDDR4 memory. The VT988 front panel routes HDMI video and three USB interfaces from the Jetson TX2 module.

The VT988 has a Layer 2 Managed Gigabit Ethernet Switch which provides quad GbE through RJ-45 interface to the front panel and allows interconnection among the subsystems.



Panel



Figure 1: VT988 Front View



Figure 2: VT988 Rear View

Block Diagram

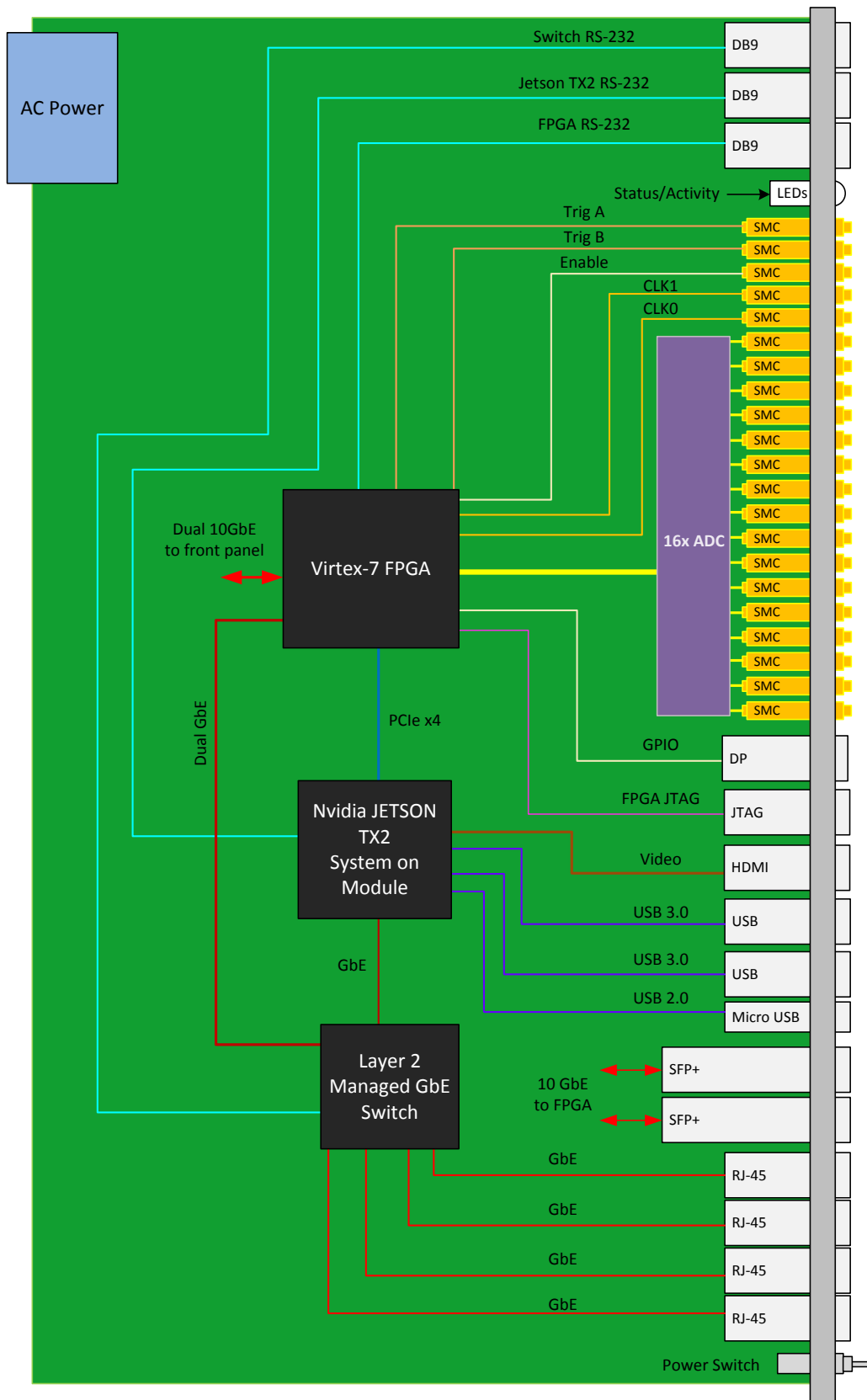


Figure 3: VT988 Functional Block Diagram

Specifications

Architecture		
Physical	Dimensions	Width: 18.98" (482.12 mm) including handles
		Depth: 10.04" (255.16 mm)
		Height: 1U
Type	Chassis	16 ADC Data Acquisition
Standards		
Configuration		
Power	VT988	100 W (Universal AC power input)
Environmental	Temperature	Operating temperature: -5° to 45° C (55°C for limited time, performance restrictions may apply), industrial versions also available (See environmental spec sheet)
		Storage Temperature: -40° to +90°C
	Vibration	Operating 9.8 m/s ² (1G), 5 to 500Hz on each axis
	Shock	Operating 325G / 2 ms, 160G / 1 ms
	Relative Humidity	5 to 95 per cent, non-condensing
Front Panel	Interface Connectors	21 SMC interface for 16 ADC, 2 Clocks, 2 Triggers, and 1 Enable
		3x DB-9 for RS-232
		2x SFP+ for 10 GbE
		4x RJ-45 for GbE
		2x USB 3.0 and 1x USB 2.0
		HDMI, Display Port and JTAG
	Mechanical	Switch
Software Support	Operating System	Linux
Conformal Coating		Humiseal 1A33 Polyurethane (Optional)
		Humiseal 1B31 Acrylic (Optional)
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 ATCA and μ TCA products including chassis platforms, shelf managers, AMC modules, Switch and Payload Boards, Rear Transition Modules (RTM), 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.

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Ordering Options

VT988 – 000-000-00J

		<p>J = Temperature Range and Coating</p> <p>0 = Commercial (–5° to +55° C), No coating</p> <p>1 = Commercial (–5° to +55° C), Humiseal 1A33 Polyurethane</p> <p>2 = Commercial (–5° to +55° C), Humiseal 1B31 Acrylic</p> <p>3 = Industrial (–20° to +70° C), No coating</p> <p>4 = Industrial (–20° to +70° C), Humiseal 1A33 Polyurethane</p> <p>5 = Industrial (–20° to +70° C), Humiseal 1B31 Acrylic</p>

Related Products

AMC521



- Sixteen channel of TI ADS42JB69 ADC 16-bit @ 250MSPS
- Eight channel SAR TI ADS8568 ADC 16-bit @ 650 KSPS simultaneous
- Interface to the FPGA is via JESD204B

AMC524



- Quad ADC 16-bit @ 125 MSPS (AD9653)
- Dual DAC 12-bit @ 2.5 GSPS (DDS AD9915)
- Artix-7 FPGA with dual banks of DDR-3, 2 GB total

AMC526



- Dual AD9625 ADC, 12-Bit @ 2.6 GSPS in single module, mid-size
- Xilinx Virtex-7 690T FPGA in FFG-1761 package
- Quad bank QDR-II+ memory (576 Mb total) and 1Gb DDR3

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