

# VT976

## Conduction Cooled ATR Style Chassis with FPGA, ADC and DAC



VT976

### Key Features

- Hardened ATR (Air Transport Rack)
- Conduction cooling, fan less operation
- XCZU04CG FPGA
- ADC TI ADS42LB69
- DAC TI DAC81402
- 3PH AC input Power

### Benefits

- Conduction cooled four slots in an ATR style chassis for fan less operation
- Electrical, mechanical, software, and system-level expertise in house
- Full system supply from industry leader
- AS9100 and ISO9001 certified company

**Hardened  $\mu$ TCA<sup>®</sup>**



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# VT976

The VT976 is an ATR Hardened Chassis with a customer module. The module has a Xilinx XCZU04CG FPGA with on board ADC/DAC. The VT976 provides conduction cooling for fan less operation in environments requiring very low acoustic and electrical emission. The module requires a cold wall to dissipate the power or airflow over the ATR.

The ADC is 16-bit @ 250MSPS (TI ADS42LB69) and the Dual DAC (TI DAC81402) update rate of 400KHz. The module has several I/O (RS-422, Digital I/O, etc.).

## Power Supply

The VT976 takes has an internal power supply which takes 3PH AC input.

## Cooling

The VT976 chassis is conduction cooled for fan less operation and is designed as an ATR Chassis.

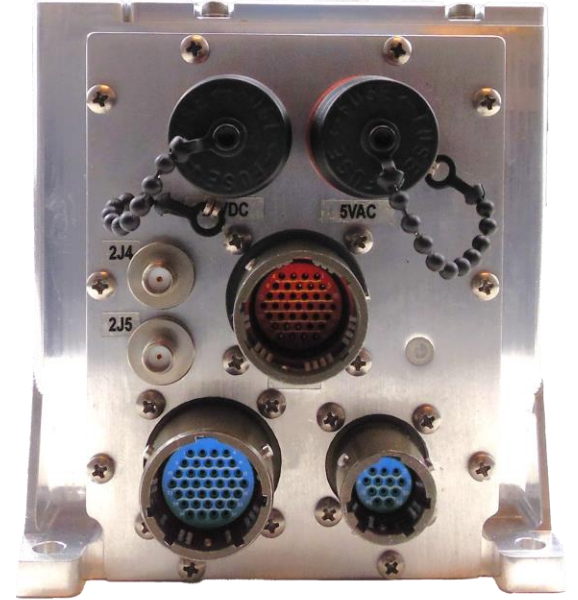


Figure 1: VT976 Front View



Figure 2: VT976 Heatsink View



Figure 3: VT976 Secondary Side View

# Board Level Architecture

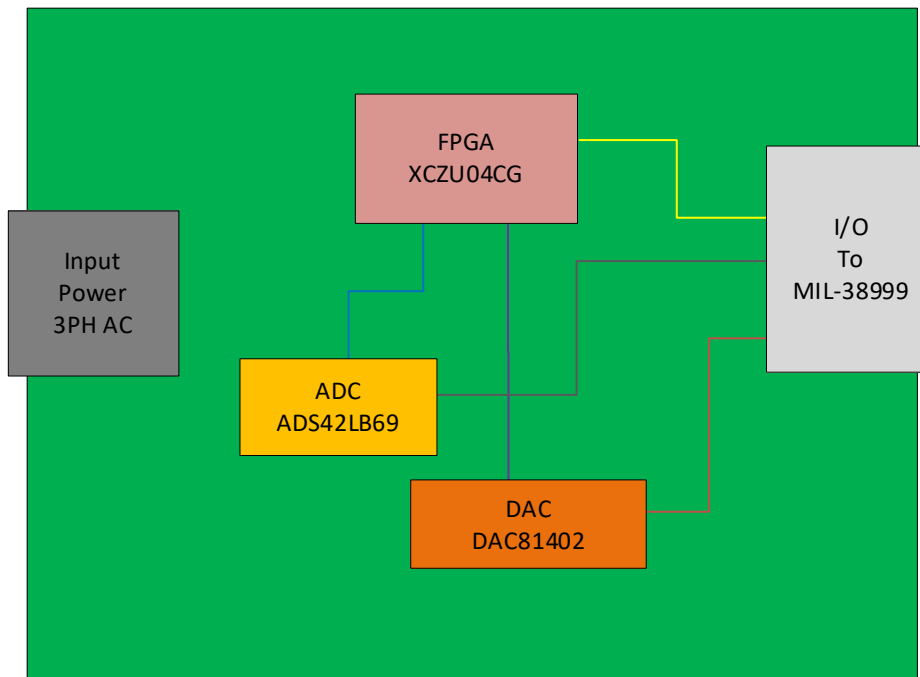


Figure 4: Functional Block Diagram

# Specifications

Architecture	
<b>Physical</b>	<b>Dimensions</b> Height: 4.43" Width: 4.14" Depth: 10.25"
<b>Type</b>	<b>ATR Chassis</b> Custom module
Standards	
<b>Custom</b>	<b>Type</b> ATR Style
Configuration	
<b>Power</b>	<b>VT976</b> Custom FPGA design with ADC/DAC in the ATR style chassis Power Entry as 3PH AC input
	<b>Backplane</b> None
<b>Environmental</b>	<b>Temperature</b> See table in ordering option See table in the ordering option
	<b>Vibration</b> See table in the ordering option
	<b>Shock</b> See table in the ordering option
	<b>Relative Humidity</b> See table in the ordering option
Other	
<b>MTBF</b>	MIL Hand book 217-F@ TBD hrs
<b>Certifications</b>	Designed to meet FCC, CE and UL certifications, where applicable
<b>Standards</b>	VadaTech is certified to both the ISO9001:2000 and AS9100B:2004 standards
<b>Warranty</b>	One (1) year, see <a href="#">VadaTech Terms and Conditions</a>

## 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

VT976 – 000-000-0HJ

		<b>H = Environmental</b>
		See <a href="#">Environmental Specification</a>
		<b>J = Conformal Coating</b>
		0 = No coating 1 = Humiseal 1A33 Polyurethane 2 = Humiseal 1B31 Acrylic 3 = Parylene

## Environmental Specification

Air Cooled		Conduction Cooled		
Option H				<b>H = 4</b>
Operating Temperature				CC4* (-40°C to +85°C)
Storage Temperature				C3* (-50°C to +100°C)
Operating Vibration				V3 (0.1 g2/Hz max)
Storage Vibration				OS2* (40g)
Humidity				95% non-condensing

## Related Products

VT878



- Two-module chassis
- Compact and robust design
- Designed for bulkhead mount in ground or air vehicle

AMC524C



- 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

AMC710C



- Single module, mid-size per AMC.0
- Conduction cooled version available
- Freescale QorIQ P4040/P4080 processor

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- System management
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