

# ATC138

ATCA 8 channel ADC, 10-bit @ 2  
GSPS, Virtex-7



ATC138

## Key Features

- Eight channel EV10AS150B ADC, 10-bit @ 2 GSPS
- Single AD9129 DAC, 14-bit @ 2.8 GSPS
- Xilinx Virtex-7 FPGA
- Four core QorIQ P2040 Power PC
- 4 GB DDR3 memory to the PPC
- 4 GB DDR3 memory to the FPGA
- 16 GB MicroSD card (removable)
- JTAG port
- CLK sync output via SSMC

## Benefits

- 8 channel high-speed digitizer with powerful Virtex-7 FPGA
- Vast ecosystem of ATCA chassis platforms, switches, processors, RTMs, and specialty boards
- Full system supply from industry leader
- AS9100 and ISO9001 certified company

**Advanced TCA®**



**vadatech**  
THE POWER OF VISION

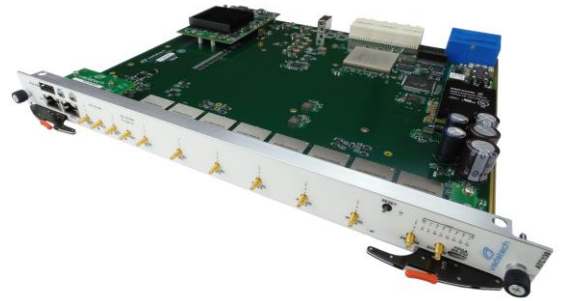


# ATC138

The ATC138 is an ATCA A/D converter based on the EV10AS150B ADC, with eight channels at 10-bit resolution up to 2 GSPS. There is also single channel AD9129 DAC at 14-bit up to 2.8 GSPS, two Reference Clock inputs and dual GbE via RJ-45. The carrier has a Xilinx Virtex-7 FPGA with an on-board QorIQ P2040 PowerPC for efficient performance and ease of configuration.

There is 64-bit DDR3 memory on the FPGA (4 GB) and the PPC (4 GB). The analog inputs are routed directly to the ADCs from the front panel.

The ATC138 provides a JTAG header on the front panel and three micro USB.



*Figure 1: ATC138 Front View*

# Block Diagram

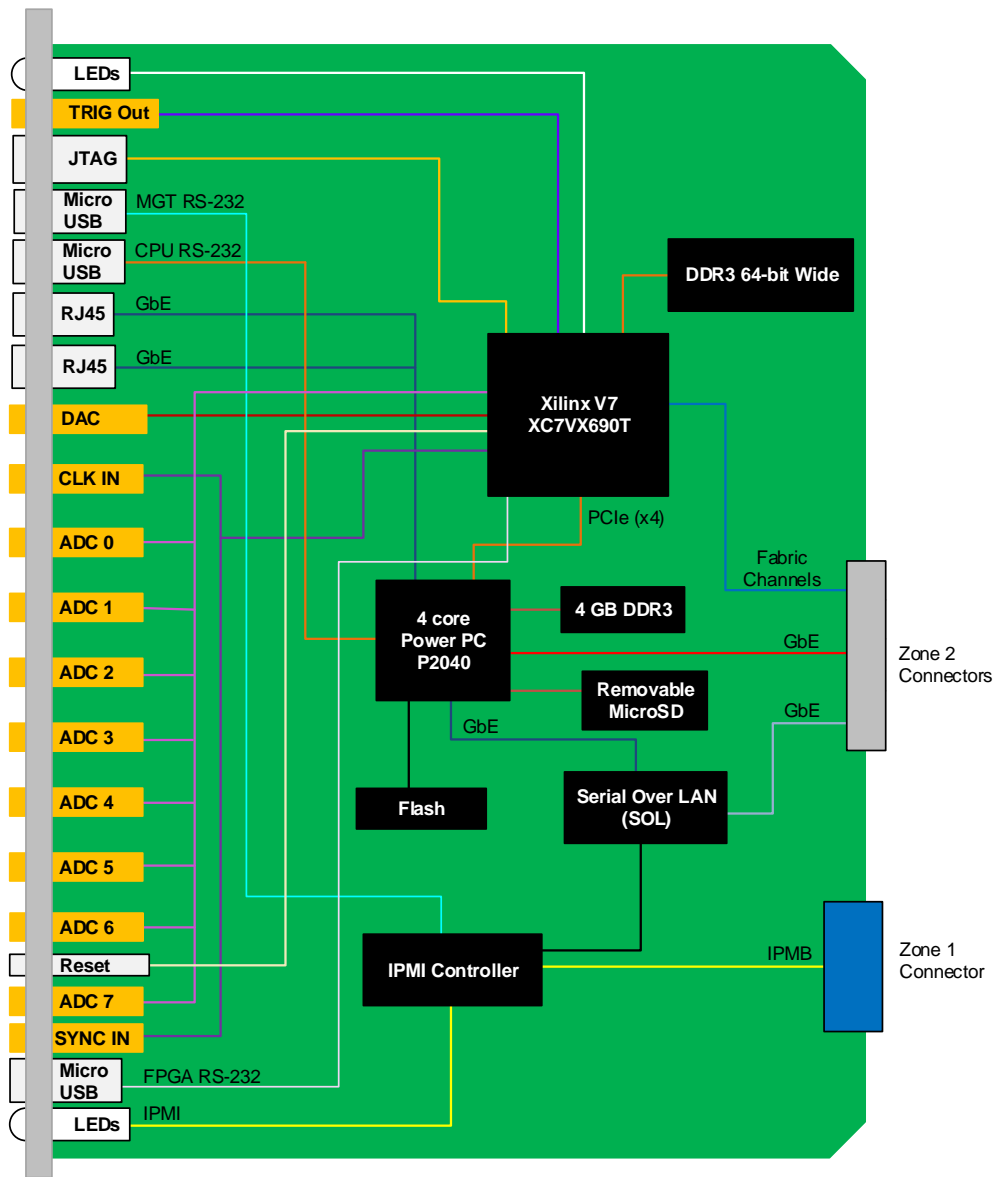


Figure 2: ATC138 Functional Block Diagram

# Front Panel

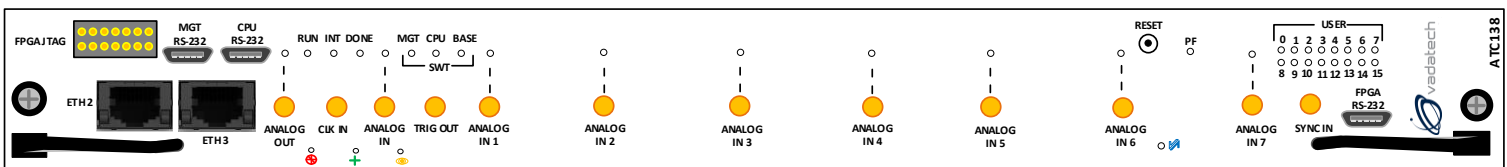


Figure 3: ATC138 Front Panel

# Specifications

Architecture		
<b>Physical</b>	<b>Dimensions</b>	Width: 12.687" (322.25 mm) Depth: 11.024" (280 mm)
<b>Type</b>	<b>ATCA FPGA Carrier</b>	8 ADCs 10-bit @ 2 GSPS and Single DAC 14-bit @ 2.8 GSPS Xilinx XC7VX690T FPGA
Standards		
<b>ATCA</b>	<b>Type</b>	PICMG 3.0 Revision 2.0
<b>Module Management</b>	<b>IPMI</b>	v2.0
Configuration		
<b>Power</b>	<b>ATC138</b>	100 W
<b>Environmental</b>	<b>Temperature</b>	See ordering options and <a href="#">environmental spec sheet</a> Storage Temperature: -40° to +85°C
	<b>Vibration</b>	Operating 0.5 G RMS, 20 to 20000 Hz random 6 G RMS non-operating
	<b>Shock</b>	Operating 30 Gs on each axis
	<b>Relative Humidity</b>	5 to 95% non-condensing
<b>Front Panel</b>	<b>Interface Connectors</b>	SSMC for 8x ADC, DAC, CLK In, Sync In and Trig Out Dual RJ-45 for GbE 3x Micro USB for MGT RS-232, CPU RS-232 and FPGA RS-232 JTAG header RESET switch
	<b>LEDs</b>	IPMI, Activity, Status and User defined
<b>Software Support</b>	<b>Operating System</b>	Linux
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>		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

## ATC138 – 000-DE0-00J

	<b>D = FPGA</b> 0 = XC7VX690T 1 = Reserved	
	<b>E = FPGA Speed</b> 0 = Reserved 1 = High 2 = Highest (MOQ required)	
		<b>J = Temperature Range and Coating</b> 0 = Commercial (–5° to +55° C), No coating 1 = Commercial (–5° to +55° C), Humiseal 1A33 Polyurethane 2 = Commercial (–5° to +55° C), Humiseal 1B31 Acrylic 3 = Industrial (–20° to +70° C), No coating 4 = Industrial (–20° to +70° C), Humiseal 1A33 Polyurethane 5 = Industrial (–20° to +70° C), Humiseal 1B31 Acrylic

## Related Products

ATC126



- Dual 14-core Intel® Xeon® E5-2658, 2680 or 2648L v4 processors
- Eight banks of DDR4 for up to 256 GB memory
- 10/40GbE Fabric channels

VT830



- 19" rackmount 6U ATCA Chassis with integrated Switch and Shelf Manager
- 10GbE/GbE Managed Layer 2
- 40GbE/10GbE/GbE Managed Layer 3

VT030



- 10GbE Switching Shelf Manager
- Compliant to PICMG 3.0 base specs
- Compliant to PICMG 3.1 fabric specs

# Contact

## VadaTech Corporate Office

198 N. Gibson Road, Henderson, NV 89014

Phone: +1 702 896-3337 | Fax: +1 702 896-0332

## Asia Pacific Sales Office

7 Floor, No. 2, Wenhua Street, Neihu District, Taipei 114, Taiwan

Phone: +886-2-2627-7655 | Fax: +886-2-2627-7792

## VadaTech European Sales Office

VadaTech House, Bulls Copse Road, Southampton, SO40 9LR

Phone: +44 2380 016403

[info@vadatech.com](mailto:info@vadatech.com) | [www.vadatech.com](http://www.vadatech.com)

# Choose VadaTech

## We are technology leaders

- First-to-market silicon
- Constant innovation
- Open systems expertise

## We commit to our customers

- Partnerships power innovation
- Collaborative approach
- Mutual success

## We deliver complexity

- Complete signal chain
- System management
- Configurable solutions

## We manufacture in-house

- Agile production
- Accelerated deployment
- AS9100 accredited



### Trademarks and Disclaimer

The VadaTech logo is a registered trademark of VadaTech, Inc. Other registered trademarks are the property of their respective owners. AdvancedTCA™ and the AdvancedMC™ logo are trademarks of the PCI Industrial Computers Manufacturers Group. All rights reserved. Specification subject to change without notice.

© 2018 VadaTech Incorporated. All rights reserved.

DOC NO. 4FM737-12 REV 01 | VERSION 1.2 – AUG/18



**vadatech**  
THE POWER OF VISION