ATC138

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

ATC138

Key Features

- Eight channel ADC 10-bit @ 2 GSPS (EV10AS150B)
- Single DAC 14-bit @ 2.8 GSPS (AD9129)
- 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

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ATC138

The ATC138 provides eight channel ADC with sampling rates of up to 2 GSPS at a 10-bit resolution (EV10AS150B). Also, single channel DAC delivers update rates of up to 2.8 GSPS at a14-bit resolution (AD9129).

The carrier has a Xilinx Virtex-7 FPGA with an onboard QorIQ P2040 PowerPC for efficient performance and ease of configuration. The FPGA directly interfaces with 64-bit DDR3 memory. The analog inputs are routed directly to the ADCs from the front panel.

The ATC138 front panel provides a JTAG header, three Micro USBs, two Reference Clock inputs and dual GbE via RJ-45 connectors.
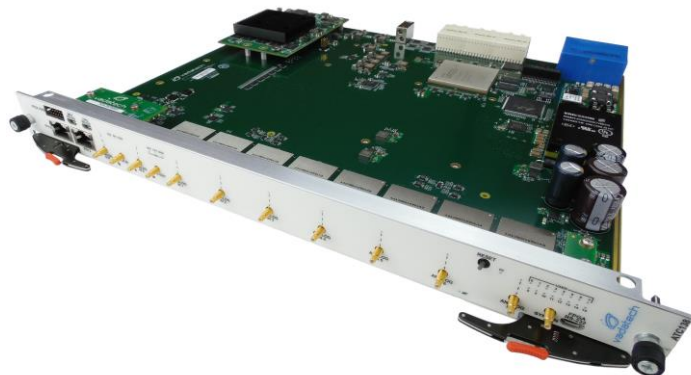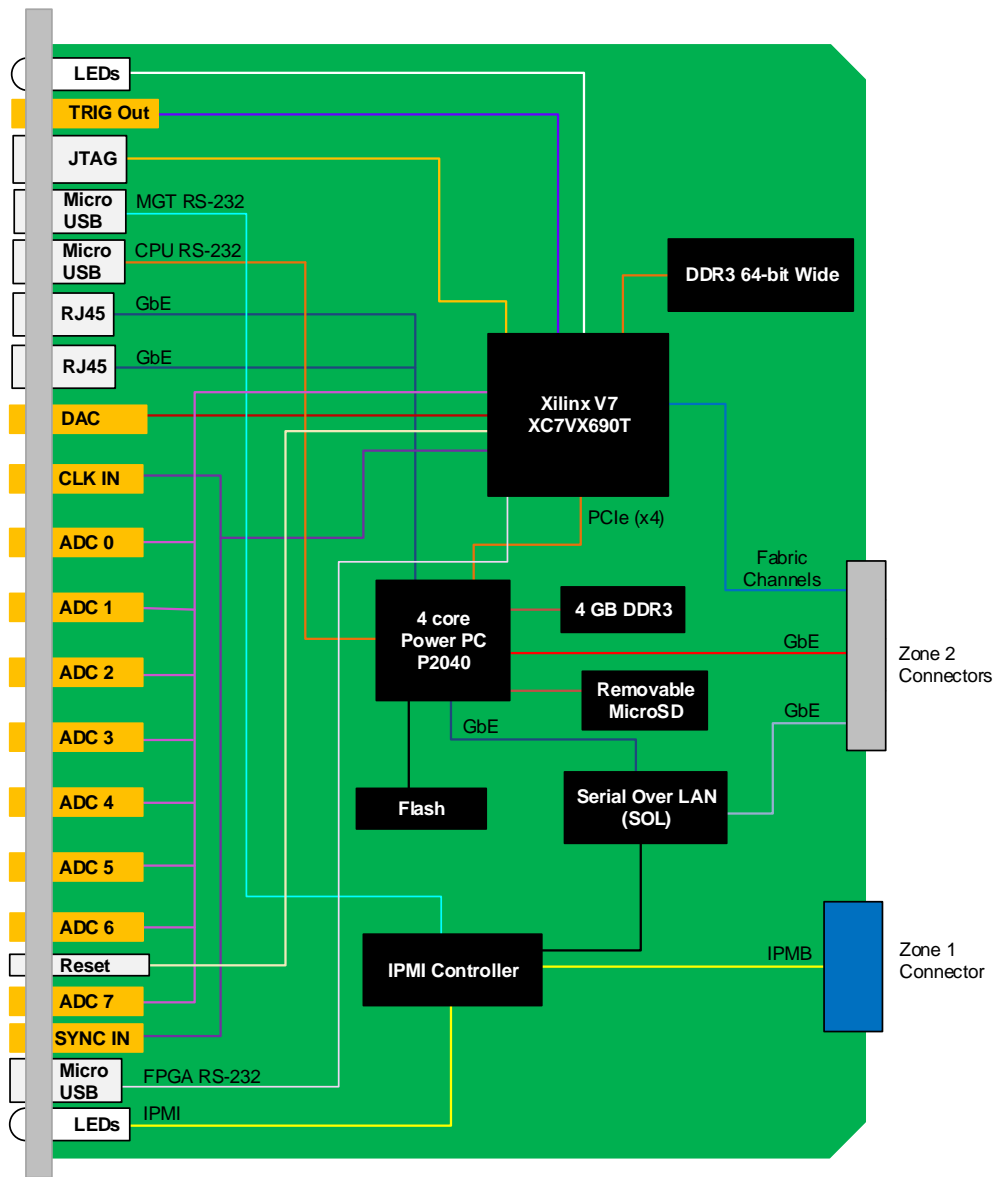

Figure 1: ATC138

Block Diagram
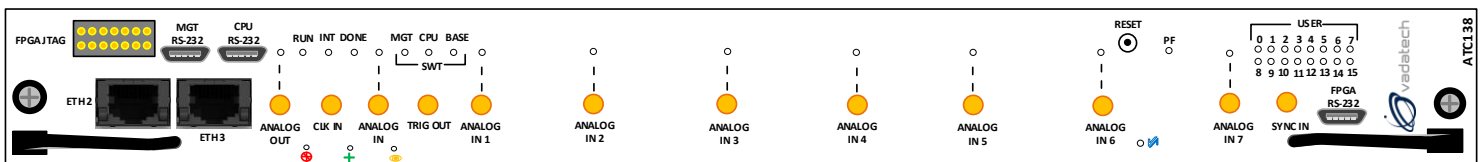

Figure 2: ATC138 Functional Block Diagram

Front Panel

Figure 3: ATC138 Front Panel

ATC138 – ATCA 8 channel ADC, 10-bit @ 2 GSPS, Virtex-7

Specifications

Architecture		
Physical	**Dimensions**	Width: 12.687" (322.25 mm)
		Depth: 11.024" (280 mm)
Type	**ATCA FPGA Carrier**	8 ADCs 10-bit @ 2 GSPS and Single DAC 14-bit @ 2.8 GSPS
		Xilinx XC7VX690T FPGA

Standards		
ATCA	**Type**	PICMG 3.0 Revision 2.0
Module Management	**IPMI**	v2.0

Configuration		
Power	**ATC138**	100W
Environmental	**Temperature**	See Ordering Options
		Storage Temperature: –40° to +85°C
	Vibration	Operating 0.5G RMS, 20 to 20000 Hz random
		6G RMS non-operating
	Shock	Operating 30Gs on each axis
	Relative Humidity	5 to 95% non-condensing
Front Panel	**Interface Connectors**	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
	LEDs	IPMI, Activity, Status and User defined
Software Support	**Operating System**	Linux

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, 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

ATC138 – 000-DE0-00J

	D = FPGA	
	0 = XC7VX690T 1 = Reserved	
	E = FPGA Speed	
	0 = Reserved 1 = High 2 = Highest (MOQ required)	
		J = Temperature Range and Coating
		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

For operational reasons VadaTech reserves the right to supply a higher speed FPGA device than specified on any particular order/delivery at no additional cost, unless the customer has entered into a Revision Lock agreement with respect to this product.

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

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