vadatech
THE POWER OF VISION

AMC 10 or 4 Channel ADC, 250 MSPS, with DAC – AMC522

MicroTCA.4 A/D Converter

Photo Coming Soon

KEY FEATURES

- Ten or four channel ADC with 250 MSPS @ 16-bit resolution (*option for lower sampling rate and 14-bit to reduce cost*)
- Dual channel DAC with 500 MSPS @16-bit resolution
- Compliant to µTCA.4, double module with rear I/O
- Xilinx Virtex-7 FPGA
- Internal clock or precision external clock from either RTM or backplane
- Trig in/out configurable by software
- PCIe x4 on ports 4-7, optional PCIe x8 on ports 4-11
- Aurora/10GbE option on ports 4-11 if PCIe x8 is not utilized

Benefits of Choosing VadaTech

- Double the sampling rate of previous VadaTech MTCA.4 ADC at 250 MSPS (500 MSPS DAC)
- On-board PLL for buffering/multiplying and jitter cleaner
- Design utilizes proven VadaTech subcomponents and engineering techniques
- Electrical, mechanical, software, and system-level expertise in house
- Full ecosystem of front and rear boards, enclosures, specialty modules, and test/dev products from one source
- AS9100 and ISO9001 certified company

The AMC522 is a ten ADC (Analog to Digital Converter) and DAC module compliant to the AMC.1 and AMC.2 specifications. The unit has an on-board, re-configurable FPGA which interfaces directly to ports 0-1 and 4-11.

The AMC522 allows for external clocking as well as internal clocking. The clock goes through an on-board PLL for buffering/multiplying and jitter cleaner. The AMC522 has a Trig In/Out signal that is sourced from RTM, front panel or port 17. Each input/output goes to the Rear Transition Module (RTM) connector that complies to MTCA.4. Each of the ADC single ended inputs are converted to differential pairs.

The FPGA interfaces directly to the AMC, allowing the core to interface to the host with multiple protocols.

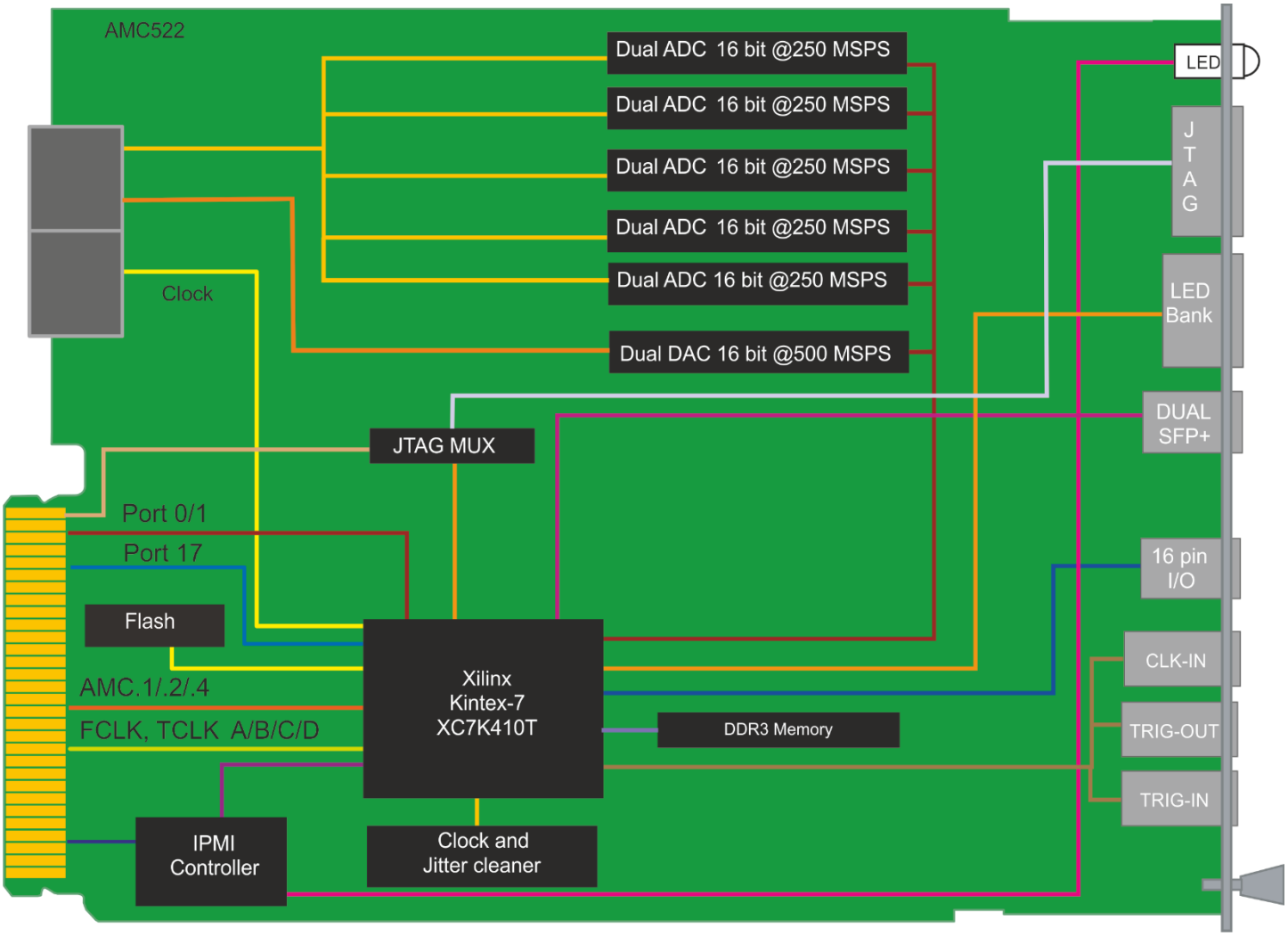
VadaTech can modify this product to meet special customer requirements. Contact us to discuss your application.

VadaTech Incorporated • 198 N. Gibson Road, Henderson, NV 89014• Tel: (702) 896-3337 • Fax (702) 896-0332
Email: info@vadatech.com • www.vadatech.com

INTEGRATION SERVICES AND APPLICATION-READY PLATFORMS

VadaTech has a full ecosystem of ATCA and µTCA 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.

BLOCK DIAGRAM



SPECIFICATIONS

Architecture		
Physical	Dimensions	Double module, mid-size with full-size option
		Width 5.85" (148.5 mm)
		Depth 7.11" (180.6 mm)
Type	AMC ADC/DAC	10 or 4 ADC, dual DAC
		16-bit resolution per port on ADC
		External clock with TRIG In/Out
Standards		
µTCA	Type	µTCA.4 with RTM with two differential bi-directional LVDS lines from FPGA to RTM
AMC	Type	AMC.0, AMC.1, AMC.2 and AMC.4
Module Management	IPMI	IPMI Version 2.0
PCIe	Lanes	x4 or x8
Aurora/SRIO/10GbE	Lanes	x4 (if the x8 PCIe is not utilized)
Ethernet	GbE	1000-BaseBX
Configuration		
Power	AMC522	Estimated 15 W, application specific (up to 30 W)
Environmental	Temperature	Operating Temperature: -5° to 55° C (air flow requirements >400 LFM))
		Storage Temperature: –40° to +85° C
	Vibration	1G, 5 to 500 Hz on each axis
	Shock	30Gs each axis
	Relative Humidity	5 to 95 percent, non-condensing
Front Panel	Interface Connectors	FPGA JTAG port
		Debug LED
		16 I/O pins
		MMCX Trig in/out, clock
		IPMI RS-232
	LEDs	IPMI Management Control
		Eight user defined LED
	Mechanical	Hot Swap Ejector Handle
Software Support	Operating Systems	Linux, Windows, Solaris and VxWorks
Other		
MTFB	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	
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ORDERING OPTIONS

AMC522 – A0C – DE0 – GHJ

A = A/D Converters and Sampling Rate
0 = Four ADC with 160 MSPS 14-Bit
1 = Four ADC with 250 MSPS 16-Bit
2 = Ten ADC with 160 MSPS 14-Bit
3 = Four ADC with 250 MSPS 16-Bit

C = Front Panel Size
1 = Reserved
2 = Mid-size
3 = Full-size

D = FPGA PCIe Option
0 = PCIe on ports 4-7 only
1 = PCIe on ports 4-11

E = FPGA, Virtex-7
0= XC7VX415T
1= XC7VX550T
2= XC7VX690T

G = SFP+ Transceiver
0 = None
1 = 1Gb LC/SX (850 nm)
2 = 1Gb LC/LX (1310 nm)
3 = Copper 1000 Mbit
4 = Reserved

H = Temperature Range
0 = Commercial
1 = Industrial

J = Conformal Coating
0 = None
1 = Humiseal 1A33 Polyurethane
2 = Humiseal 1B31 Acrylic

RELATED PRODUCTS

AMC520 250 MSPS DAC Converter

VT811 MTCA.4 Chassis

UTC018 1000W Power Module

CONTACT US

VadaTech Corporate Office

198 N. Gibson Rd.
Henderson, NV 89014
Email: info@vadatech.com
Telephone: +1 702 896-3337
Fax: +1 702 896-0332

Asia Pacific Sales Office

7 Floor, No. 2, Wenhu Street, Neihu District,
Taipei 114,Taiwan
Email: info@vadatech.com
Telephone: +886-2-2627-7655
Fax: +886-2-2627-7792

VadaTech European Sales Office

Ocean Village Innovation Centre, Ocean Way,
Ocean Village, Southampton, SO14 3JZ
Email: info@vadatech.com
Telephone: +44 2380 381982
Fax: +44 2380 381983