FMC152

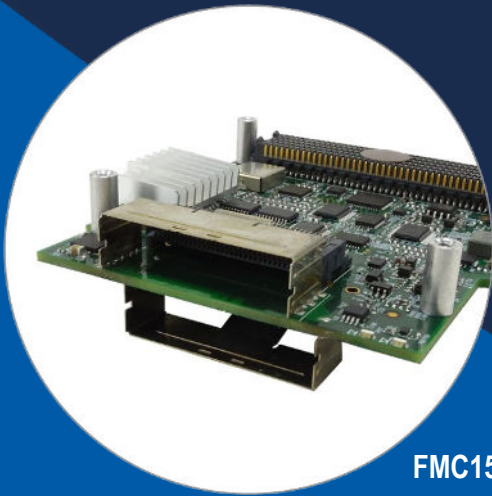## 32x ECL or NECL Input with Clock synchronization and Dual ADC

FMC152

Key Features

- 32 x ECL or NECL Receiver with clock synchronization
- Dual HMCAD1511 ADC to monitor clock input accuracy
- 10MHz Clock Input
- 100Mhz Clock Input
- 1PPS Clock Input
- IRIG-B Clock Input (Digital)
- User LED

Benefits

- Single module to receive ECL/NEC Parallel data
- Utilizing commercially-available, standard high-density connector for ease of cabling
- All I/O types utilize differential signaling between the transceivers on the FMC and the FPGA on the carrier for optimal signal integrity across the FMC connector
- Electrical, mechanical, software, and system-level expertise in house
- Full system supply from industry leader
- AS9100 and ISO9001 certified company

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FMC152

The FMC152 is an FPGA Mezzanine Card (FMC) per VITA 57.1 standard (see comment below) offering a small footprint and allowing for general ECL or NECL 32x parallel data input with synchronization.

There are two HMCAD1511 ADC on board to monitor the clock inputs. The FMC152 has low pass filers on board to clean the 1PPS, the dual 100MHz as well as the 10MHz clock before the input of the ADC.

Clocks and Data are input to the FMC152 via dual high-density connectors.

This Module does not follow the VITA57 height constrain. It has an additional connector on the back of the FMC to accommodate the I/O. For example, on the AMC FPGA FMC Carriers, it requires a full-height AMC panel to accommodate all the I/Os. The Carrier must have a monolithic panel (the FMC152 does not come with an FMC panel) to cover the FMC152 I/O envelope.
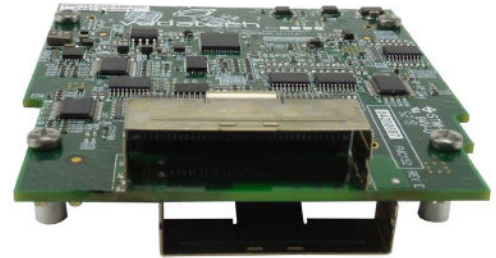

Figure 1: FMC152
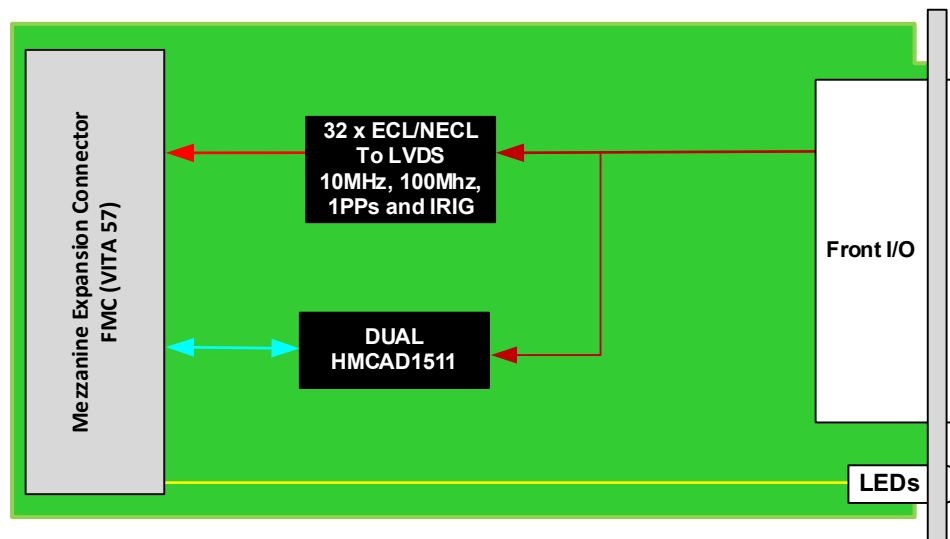

Figure 2: FMC152 Front view

Block Diagram

Figure 3: FMC152 Functional Block Diagram

FMC152 – I/O FMC Module with 32x ECL or NEC input with clock synchronization

Specifications

Architecture		
Physical	**Dimensions**	Single Module
		Width: 2.71" (69 mm)
		Depth: 3.01" (76.5 mm)
Type	**FMC**	Digital I/O
Standards		
FMC	**Type**	ANSI/VITA 57.1 - 2008
Configuration		
Power	**FMC152**	6W
Environmental	**Temperature**	See Ordering Options
		Storage Temperature: –40° to +85°C
	Altitude	40,000 ft non-operating
	Vibration	Operating 9.8 m/s2 (1G), 5-500 Hz
	Shock	Operating 30Gs each axis
	Relative Humidity	5 to 95% non-condensing
Front Panel	**Interface Connectors**	High-density connector (lathing style) for I/O
	LEDs	Status
Software Support	**Operating System**	Agnostic
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

FMC152 – 000-000-00J

		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
		6 = Extended (–40° to +85°C), Humiseal 1A33 Polyurethane**
		7 = Extended (–40° to +85°C), Humiseal 1B31 Acrylic**

Notes:

** Conduction cooled; temperature is at edge of module. Consult factory for availability.

Related Products

VT951

- MicroTCA rugged 1U 19" rackmount chassis platform
- Designed to meet MIL-STD-810F, MIL-STD-901D for shock/vibration
- Designed to meet MIL-STD-461E for EMI

FMC214

- Dual complete transceiver signal chain solution using Analog Devices AD9361 transceiver
- Frequency range 70 MHz to 6 GHz with instantaneous bandwidth from 200 kHz to 56 MHz
- MIMO transceiver is Time Domain Duplex (TDD) and Frequency Domain Duplex (FDD) compatible

AMC599

- Xilinx UltraScale™ XCKU115 FPGA
- Dual ADC 12-bit @ 6.4 GSPS or quad ADC at 3.2 GSPS
- Dual DAC 16-bit @ 12 GSPS (AD9162 or AD9164)

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