

FMC150

FMC IRIG-B Module



FMC150

Key Features

- FPGA Mezzanine Card (FMC) compatible with VITA 57.1
- Single-module
- Input for 1PPS, 10 MHz or IRIG-B
- Module or DC level shift IRIG-B per 200-04
- Encode the year (2 digits) through second of the preceding 1PPS
- On board Dual DPLL/IEEE 1588 1 PPS Synchronize and Jitter Cleaner
- RoHS compliant

Benefits

- Design utilizes proven VadaTech subcomponents and engineering techniques
- Electrical, mechanical, software, and system-level expertise in house
- Full system supply from industry leader
- AS9100 and ISO9001 certified company



vadatech
THE POWER OF VISION



FMC150

The FMC150 is an FPGA Mezzanine Module per VITA 57 specification. The FMC150 has a 1PPS, 10 MHz Sine Wave or IRIG-B input.

The FMC150 provides the signals to the FPGA from which the firmware will decoded the IRIG-B data to set second's year digits only.

The 3 inputs will be used along with front end parts and the FPGA to control a time-decade clock that will have 16 BCD digits: 1 digit of the year of the decade, 3 digits of days, 2 digits of hours, 2 digits of minutes, 2 digits of seconds and 6 digits of microseconds.

The module has on board Dual DPLL/IEEE 1588 with 1PPS Synchronize and Jitter Cleaner. The Dual DPLL synchronizes 1Hz to 750MHz, providing frequency with jitter cleaning of noisy references. Complies with ITU-T G.8286 and Telcordia GR-253. The module has Automatic and manual holdover, and reference switch over providing zero delay and hitless/phase buildout operation.

The Module outputs any clock output frequency thru its on board PLL.



Figure 1: FMC150

Block Diagram

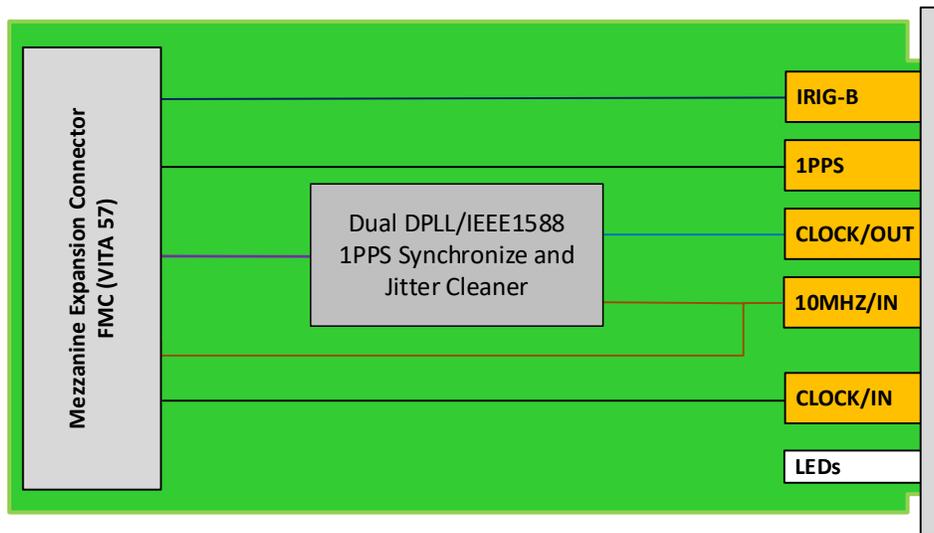


Figure 2: FMC150 Functional Block Diagram

Front Panel



Figure 3: FMC150 Front Panel

Specifications

Architecture	
Physical	Dimensions Single Module Width: 2.71" (69 mm) Depth: 3.01" (76.5 mm)
Type	FMC IRIG-B
Standards	
FMC	Type ANSI/VITA 57.1 – 2008
Configuration	
Power	FMC150 3W
Environmental	Temperature See Ordering Options Storage Temperature: -40° to +85°C Altitude 40,000 ft non-operating Vibration Operating 9.8 m/s ² (1G), 5-500 Hz Shock Operating 30Gs each axis Relative Humidity 5 to 95% non-condensing
Front Panel	Interface Connectors 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 ISO9001:2015 and AS9100D 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

FMC150 – 000-000-0HJ

		H = Operating Temperature 0 = Commercial 1 = Industrial
		J = Conformal Coating 0 = None 1 = Humiseal 1A33 Polyurethane 2 = Humiseal 1B31 Acrylic

Related Products

VPX592



- 3U FPGA carrier for FPGA Mezzanine Card (FMC) per VITA 46 and VITA 57
- Xilinx Kintex UltraScale™ XCKU115 FPGA
- 20 GB of DDR4 Memory (2 banks of 64-bit wide, and single bank of 32-bit wide)

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

AMC585



- Xilinx UltraScale+ XCZU19EG FPGA
- Single FMC+ (VITA 57.4) site
- MPSoC with block RAM and UltraRAM

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 | 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



vadatech
THE POWER OF VISION

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.

© 2019 VadaTech Incorporated. All rights reserved.
DOC NO. 4FM737-12 REV 01 | VERSION 3.0 – MAR/21