FMC164

Local Oscillator (LO) with Input Reference, FMC

Key Features

- Sync to front panel external clock
- Sync to carrier clock
- Input sync clock down to 1PPS
- Hitless failover
- OCXO and XO for low jitter and stability
- Programmable Local Oscillator up to 6.5GHz
- 10Mhz Sinewave output
- Dual single ended output clock
- FPGA Mezzanine Card (FMC) per VITA-57
- Status LED
- RoHS compliant

Benefits

- FMC form factor programmable LO for commercial applications or radar and EW
- All FMC carriers provided with a reference design with VHDL source code and configuration binaries
- Electrical, mechanical, software, and system-level expertise in house
- Full system supply from industry leader
- AS9100 and ISO9001 certified company

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FMC164

The FMC164 is an FPGA Mezzanine Module per VITA 57 specification that can be mounted on air or conduction-cooled carriers.

The FMC164 can provide an LO output of up to 6.5 GHz via a wideband PLL, locked to either an external source or a reference from the FMC carrier. The sync clock can go down to 1PPS. The PLL RF clock output is via a user-programmable band-pass filter. The onboard OCXO and the XO assure excellent Jitter and stability.

The module also outputs a 10MHz sinewave sync in addition to the LO output.

Further the FMC164 PLL outputs dual clock as LVDS and outputs as single ended via SMCC which is synced with the LO. The clocks are programmable with fractional PLL.

Figure 1: FMC164

Figure 2: FMC164 with Heat Sink

Figure 3: FMC164 without Heat Sink
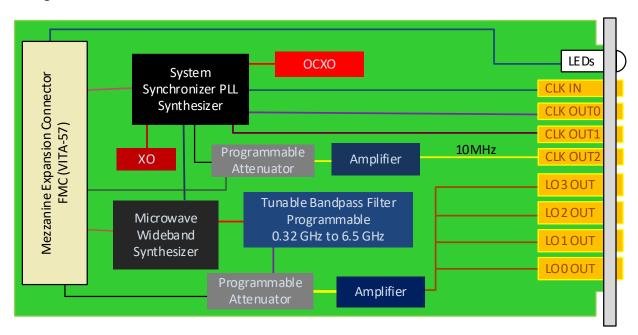
FMC164 – Local Oscillator (LO) with Input Reference, FMC

Block Diagram

Figure 4: FMC164 Functional Block Diagram

Front Panel

Figure 5: FMC164 Front Panel

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Specifications

Architecture		
Physical	Dimensions	Single module
		Width: 2.71" (69 mm)
		Depth 3.01" (76.5 mm)
Type	FMC	Clock Generation, Single FMC
Standards		
FMC	VITA-57	ANSI/VITA 57
Configuration		
Power	FMC164	5 W
Environmental	Temperature	Operating temperature: -5° to 55° C
		Storage Temperature: –40° to +85°C
	Vibration	1G, 5 to 500 Hz on each axis
	Shock	30Gs each axis
	Relative Humidity	5 to 95 per cent, non-condensing
Front Panel	Interface Connectors	8x SSMC
	LEDs	Status and User defined
Software Support	Operating System	Agnostic
Conformal Coating		Humiseal 1A33 Polyurethane (Optional)
		Humiseal 1B31 Acrylic (Optional)
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

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.

Trademarks and Disclaimer

Ordering Options

FMC164 – 000 – 000 – 00J

		J = Conformal 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 = Reserved 7 = Reserved

Related Products

FMC210

- FPGA Mezzanine Card (FMC) per VITA-57
- Single ADC EV10AS150B @2.5 GSPS
- 5 GHz Full Power Input Bandwidth (-3dB)

FMC229

- FPGA Mezzanine Card (FMC) per VITA 57
- Wideband Digital Quadrature Modulator
- Quad DAC16-bit @ 2.8 GSPS

AMC516

- AMC FPGA carrier for FMC per VITA-57
- Xilinx Virtex-7 690T FPGA in FFG-1761 package with optional P2040
- Supported by DAQ Series™ data acquisition software

Contact

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