

FMC110

Dual DisplayPort (DP) Source/Sink,
with USB 3.0 and QSFP28



FMC110

Key Features

- Dual Display port (Source and Sink)
- Support for source DP1.3 and eDP1.4
- Support for sink DP1.4a
- USB 3.0 Type C
- QSFP28
- Onboard Wideband PLL to setup any clock frequency

Benefits

- Single module to provide multiple I/O
- Electrical, mechanical, software, and system-level expertise in house
- Full system supply from industry leader
- AS9100 and ISO9001 certified company



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FMC110

The FMC110 is an FPGA Mezzanine Card (FMC) per VITA 57.1 standard. DisplayPort source, DisplayPort sink, USB +3.0. and a QSFP+ port is all incorporated within the unit's small footprint.

The DisplayPort source has a quad channel linear redrive on the front end that supports data rates of up to 12 Gbps, including DisplayPort RBR, HBR, HBR2 and HBR3.

The DisplayPort sink has a DP1.4a repeater on the front end that supports rates of up to 8.1 Gbps.

The module brings in the AUX Channels of the DP for both the Source and the Sink ports.

The QSFP28 has a Multi-rate retimer and Signal Conditioning on the front end. Each channel locks independently up to 28.4 Gbps with an adaptive Decision Feedback Equalizer (DFE).

The FMC110 has a low jitter PLL (Jitter performance <100fs typical) to provide clocks. The PLL can generate clocks up to 800 MHz. The input clocks to PLL can range from 8 KHz to 750 MHz.



Figure 1: FMC110

Block Diagram

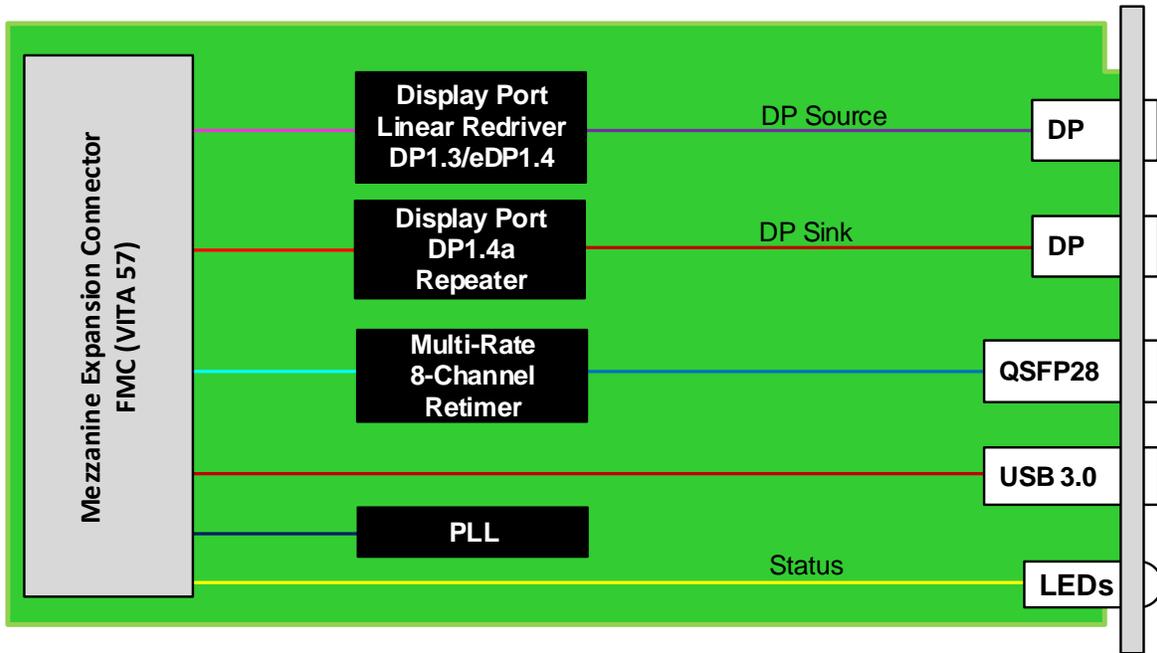


Figure 2: FMC110 Functional Block Diagram

Specifications

Architecture		
Physical	Dimensions	Single Module
		Width: 2.71" (69 mm)
		Depth: 3.01" (76.5 mm)
Type	FMC	Multi high speed I/O
Standards		
FMC	Type	ANSI/VITA 57.1 - 2008
Configuration		
Power	FMC110	6W
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	USB type C, Dual DP, and QSFP28
	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

FMC110 – A00-000-G0J

A = QSFP28		G = FMC Board Spacing
0 = No QSFP28 1 = 40 Gb (SR) 2 = 100 Gb (SR) 3 = 40 Gb WDM (SR) 4 = 100 G WDM (SR) 5 = 40 Gb (LR) 6 = 100 G (LR) 7 = Reserved 8 = Reserved		0 = 10 mm (per VITA 57 specification) 1 = 17.5 mm*
		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: *For use with carriers that require higher mating clearance, such as VadaTech AMC595.

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

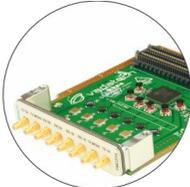
Related Products

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)

Contact

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