CoaXPress 2.0 Quad/Octo Connection Device FMC

FMC-CXP-12G Device Microchip
FPGA Mezzanine Card

The EASii-IC CoaXPress Device FMC Board is a 4-connection, stackable to 8-connection, single-width board, compatible with the ANSI/VITA 57.1 FPGA Mezzanine Card (FMC) standard. Each board pro-vides 4 device connections compliant with the CoaXPress 2.0 and 1.1.1 standards operating at up to 12.5 Gbps. Two boards can be stacked to provide up to 8 connections.

ABOUT COAXPRESS

CoaXPress standard defines a cost effective and easy interfacing between video devices and acquisition hardware over RG59 and RG6 coaxial cables. It enables hot-plug of devices and 24V power-over-cable with up to 13 Watts per cable.

A device can support multiple cameras of many video stream formats. Video streams are sent to a host at a selectable high-speed downlink connection rate from 1.25 Gbps to 12.5 Gbps per cable, with up to 8 cables per device to increase the total bandwidth to 100 Gbps.

Device and cameras can be controlled from a host through the uplink connection at 41.66 Mbps. The standard also provides a low latency, accurate trigger interface between device and host.

CoaXPress supports GenICam international standard, providing a generic programming interface for all kinds of cameras regardless of the interface technology.

EASII-IC CXP 2.0 DEVICE FMC USAGE

- Prototyping
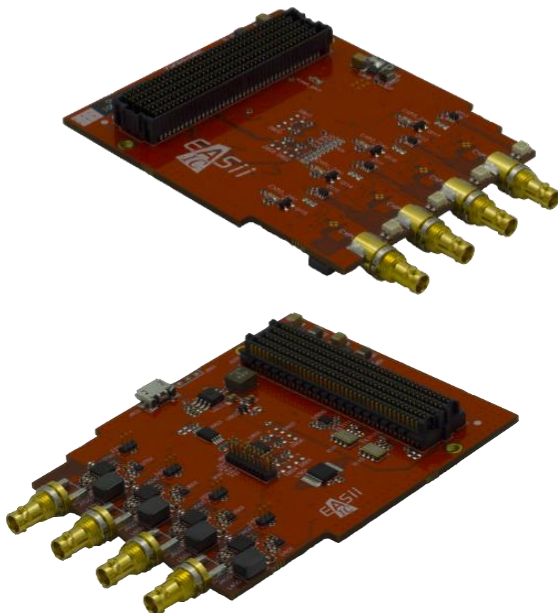
EASii-IC CXP 2.0 DEVICE FMC FEATURES

- JIAA CXP-001-2018 CoaXPress 2.0 compliant
- Selectable downlink connection rates, from 1.25 Gbps to 12.5 Gbps, up to 8 coaxial connections per Device IP
- Supports multiple video-streams, up to 256 independent stream IDs
- Supports all GenICam compliant image formats: rectangular and arbitrary shaped, area and line scan, single and multi tap, multiple regions of interest, all standard pixel formats
- Trigger in/out level type and pulse type interfaces with maximum jitter of 8 ns and constant uplink latency of 1.7 µs or 3.4 µs
- Event messages from device to host
- Heartbeat for time clock transmission from device to host
- AXI4-lite slave processor interface for application specific control between host and cameras (optional)
- Up to 4 AXI4-stream slave interfaces for video streams, 32/64/128/256-bit data bus
- Xilinx 7-Series/UltraScale compatible, Intel 10-Series
- compatible, IP-XACT support

PRODUCT DETAILS

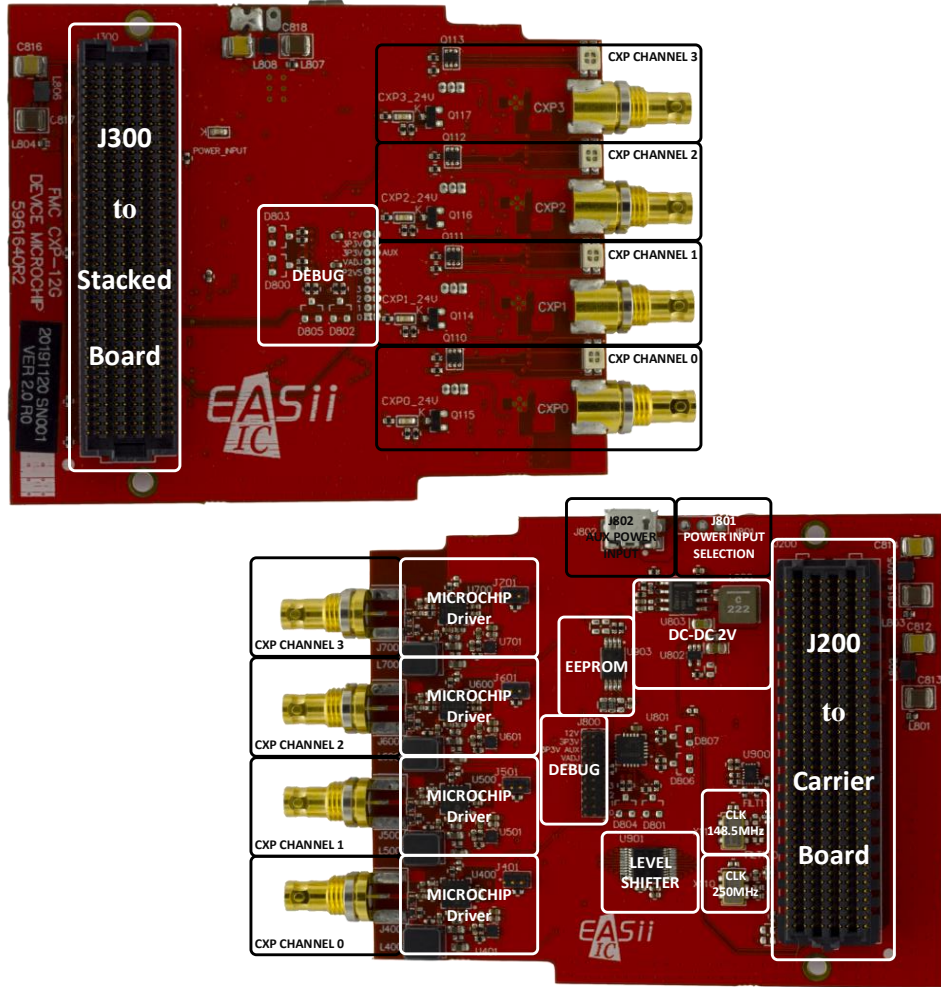|	
Dimensions:	84.00 mm x 69.00 mm
Number of layers:	8 layers
Board thickness:	1.6 mm
Coaxial cable driver:	MICROCHIP EQCO125X40
Coaxial connectors:	HD-BNC
	Amphenol 034-1018-12G
FMC main connector:	Samtec ASP-134488-01
FMC extender connector:	Samtec ASP-134486-01
LEDs:	red/green bicolor Power,
	Connections, PoCXP
Input power source:	12V from carrier or
	5-12V from USB connector

EASII-IC CXP 2.0 DEVICE FMC DELIVERABLES

- FMC Board
- Reference Designs based on EASii-IC CXP 2.0 Device IP
- User Manual

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FPGA Mezzanine Card

For more information on EASii-IC CoaXPress products, technical support or ordering:

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