

## Datasheet FMC II CoaXPress 2.0

# FPGA Mezzanine Card II CoaXPress 12G

### Innovative Approach

The **FMC II CoaXPress 2.0** is the industry's first FPGA Mezzanine Card (VITA 57.1) providing a high performance CoaXPress v.2.0 compliant connection. It is capable of capturing video from up to 4 CoaXPress channels (in 4R configuration) or generating up to 4 CoaXPress links (in 4T configuration) and is ideally suited to industrial, defense and aerospace applications.

This mezzanine card may be also used as a camera simulator, emulating up to 4 transmitting channels or as host unit by receiving up to 4 channels. Customer specific data pre-processing or custom protocols are easily accommodated via FPGA carrier card.

### Intelligent Design

The **FMC II CoaXPress** uses a high-pin count connector (HPC) as an interface to the host board, general purpose I/O and can be used in a ruggedized conduction cooled factor for harsher environments.

Up to 4 host/device links can be provided using front panel Micro BNC connectors. Each link supports standard CoaXPress bitrates up to 12.5 Gbps. Each host link is capable of providing up to 13 W of power to compatible devices via Power over CoaXPress (PoCXP).

カメラ側(Tx)とHost側(Rx)の2種類のFMCカード。KayaのIPを使ったカメラやフレームグラバの開発用、または特機装置への組み込みにどうぞ。ボードと共に供給されるリファレンス回路を市販のFPGAボードで動作させて開発を始めることができます。

### Key Features:

- Interfaces
  - 4 CoaXPress links
  - Links can be host or device according to ordered part number
  - External power supply for extended use of Power over CXP, a.k.a. PoCXP (optional)
- VITA 57.1 compliant
- Conduction or air cooled
- 4 x Micro BNC connectors available from the front panel
- Micro-BNC connectors for CoaXPress links
- HPC – High Pin count connector
- 63 mm x 84 mm, single slot FMC
- Power over CoaXPress support
- Support standard CoaXPress data rates up to 12.5 Gbps
- -40 °C to +85 °C operating environment temperature (industrial grade)

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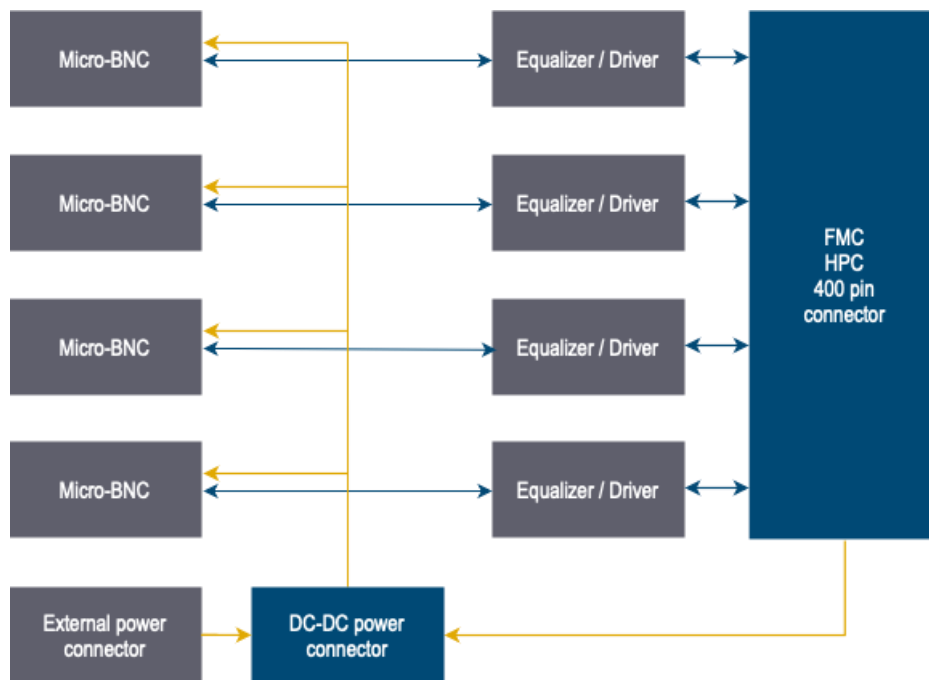
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# TECHNICAL DATA

General	
Interface standard(s)	CoaXPress v2.1 (CoaXPress 1.1 backward compatible)
Connectors	4x Micro-BNC CoaXPress v2.1 connector
Status LEDs	4 link indicator LEDs
Number of links	4
Supported CXP down-connection speeds	<ul style="list-style-type: none"><li>• 1.25 Gbit/s (CXP-1)</li><li>• 2.5 Gbit/s (CXP-2)</li><li>• 3.125 Gbit/s (CXP-3)</li><li>• 5 Gbit/s (CXP-5)</li><li>• 6.25 Gbit/s (CXP-6)</li><li>• 10 Gbit/s (CXP-10)</li><li>• 12.5 Gbit/s (CXP-12)</li></ul>
Supported up-connection speeds	<ul style="list-style-type: none"><li>• Low-speed 20.83 Mbps (CXP-1 to CXP-6)3.125 Gbit/s (CXP-3)</li><li>• Low-speed 41.66 Mbps (CXP-10, CXP-12)6.25 Gbit/s (CXP-6)</li></ul>
Cooling method	Conduction or air cooling
Dimensions	100 mm x 95 mm x 12 mm (3.94" x 3.74" x 0.47")
Weight	53 g (1.87 oz)
PoCXP (Power over CoaXPress)	Yes
Environmental conditions	
Operating case temperature	-40 °C to +85 °C (-40 °F to +185 °F)
Operating ambient air humidity	10% to 90% RH non-condensing
Storage ambient air temperature	-40 °C to +100 °C (-40 °F to +212 °F)
Storage ambient air humidity	10% to 90% RH non-condensing
Certifications	
Flammability	PCB compliant with UL 94 V-0
RoHS	Compliant with the European Union Directive 2011/65/EU (ROHS2)
REACH	Compliant with the European Union Regulation No 1907/2006
WEEE	Must be disposed of separately from normal household waste and must be recycled according to local regulations
Ordering information	
FMC II CoaXPress 12G card with 4 Recieve channels	KY-FMC-II-CXP-4R
FMC II CoaXPress 12G card with 4 Transmit channels	KY-FMC-II-CXP-4T
CoaXPress cable	KY-CCA-X-XX
CoaXPress IP for FPGA	

# BLOCK DIAGRAM



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# COMPATIBILITY

**KAYA Instruments** creates and maintains compatibility and interfaces for the most common and advanced vision image processing libraries and applications. Major support is available for **MVTec Halcon**, **National Instruments' LabVIEW** and **MathWorks' MATLAB**.

Supported vision standards:



Supported vision libraries:



Supported operating systems:



*Please check our website for an up-to-date list of other supported libraries and software package*

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## KAYA Instruments

Please feel free to contact our sales team for pricing, availability, documentation or customization at our e-mails – we will be happy to provide assistance and consultation.

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