

FMC-2SFP+ FMC-4SFP+

Dual- and Quad- Channel SFP/SFP+
FMC Adapter



FMC – FPGA Mezzanine Card

These FPGA Mezzanine Cards are compatible with standard VITA 57.1 and can be mounted on carrier boards – e.g. DAMC-FMC25 – for high speed communication.

The FMC-2SFP+ and FMC-4SFP+ boards have a configurable oscillator and a wide I/O operating range (1.5V to 3.3V on V_{ADJ}).

Available in 2-channel or 4-channel SFP/SFP+ versions.

Features

- FPGA Mezzanine Card
- High-Pin-Count FMC Module (Vita 57.1 compliant) with LPC compatibility for SFP/SFP+ applications
- Wide I/O operating voltage range: V_{ADJ} can vary from 1.2V to 3.3V
- True level conversion of all SFP+ module pins including I2C bus lines
- I2C-Controlled oscillator (10-280MHz)
- Available as 4-channel or 2-channel version
- Fits on any FMC carrier without front panel modification
- Individual module status via LEDs
- Compatibility with the DAMC-FMC25 Board
- Autonomous Mode: Clock speed setting and transmitter activation via DIP switches

Applications

- Photon Beam Position Monitors
- Multi-Channel Fast Current Acquisition
- Detector Readout

The FMC-SFP4 is a cost-efficient FPGA mezzanine card (FMC) designed according to ANSI/VITA 57.1.

It offers four SFP/SFP+ module slots. All module pins are translated to the FMC Carrier Voltage V_{ADJ} that can be in the range of 1.2V to 3.3V.

With this low operating voltage it can be used on almost all carriers. The module is designed as an HPC module but can also be operated on an LPC carrier (one channel + clock).

The components are placed to be compatible with carriers that have components under the FMC module.

The SFP+ cage is placed to fit to all carriers without front panel modification (card is only 16mm longer than described by FMC standard).

The module features an I2C-controlled LVDS oscillator chip that operates in the range from 10 to 280 MHz.





Automatic configuration of clock oscillator and module pins for stand-alone operation is selectable via on-board jumpers.

Commercially available versions are the dual channel FMC-2SFP+ with standard VITA 57.1 bezel and the quad-channel FMC-4SFP+.

Please check the MTCA.4 section on the website www.caenels.com in order to check for news, updates and additional information on the FMC-Pico-1M4 cards and other MTCA.4 products.

About CAENels

CAEN ELS is a leading company in the design of power supplies and state-of-the-art complete electronic systems for the Physics research world, having its main focus on dedicated solutions for the particle accelerator community.

-  Magnet Power Supply Systems
-  Beamline Electronic Instrumentation
-  Precision Current Transducers
-  MTCA.4 – MicroTCA for Physics

CAEN ELS d.o.o.

Kraška ulica, 2
6210 – Sežana
Slovenija
Phone +386 (0)5 7313 585
Fax +386 (0)5 7313 587
info@caenels.com

 www.caenels.com



Designed & Licensed
by DES Y

Deutsches Elektronen-Synchrotron
Ein Forschungszentrum der Helmholtz-Gemeinschaft

Technical Specifications

FMC-2SFP+ / FMC-4SFP+

Board Type	FPGA Mezzanine Card - FMC VITA 57.1
FMC Connector Type	High Pin Count - HPC
Number of SFP+ channels	2 on FMC-2SFP+ 4 on FMC-4SFP+
V _{ADJ} Range	1.5 V – 3.3V
On-board Oscillator Range	10 MHz – 280 MHz
On-board Oscillator Configuration Protocol	I2C
Other Features	Link Status indication via front panel or bottom-emitting LEDs Autonomous Mode: Clock speed setting and transmitter activation via DIP switches



FMC-2SFP+ board

Ordering Options

FMC4SFP2XAAA	FMC-SFP2	Dual-channel SFP/SFP+ Adapter FMC
FMC4SFP4XAAA	FMC-SFP4	Quad-channel SFP/SFP+ Adapter FMC