

# FMC 16-channel A-D Converter

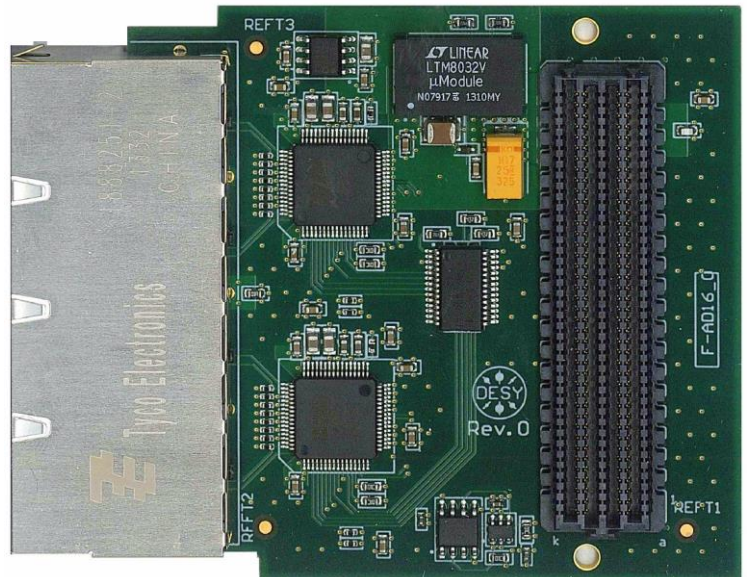
DFMC-AD16

## HIGHLIGHTS

High number of channels

Low-cost connector (RJ-45)

Breakout box with LEMO 00 available



## FEATURES

### FPGA mezzanine card (FMC)

#### Low-Pin-Count Module

Sixteen independent ADC channels with 18 bits resolution; Input over shielded RJ45 connector  
Converter-Chip: AD7608 or AD7609 (optional)

Input Impedance: 1 M $\Omega$ ; Input Voltage: +/-5 V or +/- 10 V (selectable)

Sample Rate: 3.125 kSPS to 200 kSPS

Input Bandwidth (-3 dB): 15 kHz at +/-5 V or 23 kHz at +/-10 V

Single-Ended or Differential mode

Adjustable FMC voltage (Vadj): 1.2 V to 3.3 V

Integrated EEPROM for FRU information and unique serial number

12 Bit Temperature Sensor

RoHS compliant

The DFMC-AD16 is a cost-efficient FPGA mezzanine card (FMC) which is electrically compatible and mechanically close to ANSI/VITA 75.1.

It offers sixteen input channels that can be operated in single-ended mode or in differential mode (mode determined by populated ADC chip). The card can accept +/-5 V or +/-10 V input voltages (selected via software)

The card is designed for low-speed monitoring applications with 23 kHz input bandwidth that can be sampled at up to 200 kSPS.

The board contains digital circuits such as FRU EEPROM, Unique ID serial number and a 12 bit temperature sensor. It contains level translators to accept any FMC Voltage (Vadj) from 1.2 V to 3.3 V so that the board will fit into many different FMC carriers.

DESY offers the DFMC-AD16 for licensing to industry. DESY can modify this product to meet special customer requirements.

DESY

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TECHNOLOGY LAB  
A HELMHOLTZ INNOVATION LAB



# FMC 16-channel A-D Converter DFMC-AD16

## TECHNICAL SPECIFICATIONS

### ARCHITECTURE

Physical		Single-width 10 mm stacking height
		Regions 1 and 2 occupied
		Size: 76.6 x 69 mm
Standards	ANSI/VITA 57.1	FPGA Mezzanine Card (FMC)
	module management	IPMI Version 2.0
Compatibility	FMC classification	Low Pin Count (LPC) FMC connector
	Compatible products	DAMC-FMC20 and others (Standard LPC I/O)

### CONFIGURATION

Type	ADC	Number of channels	16
		Frequency Range	DC - 23kHz
		Input Voltage	+/- 5 V or +/- 10 V (remote selectable)
		Input impedance	1 M $\Omega$
		ADC readout	up to 200 kSPS
Electrical properties		Power consumption	< 1 W

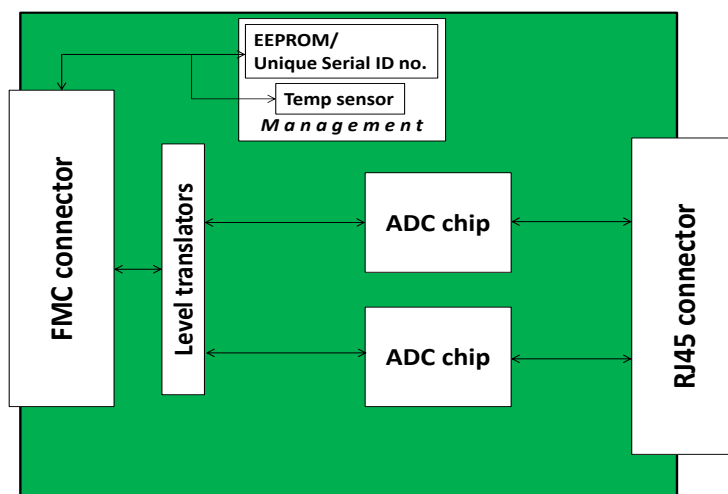
Input	Via connector	Number of channels	4
		Connector type	RJ-45

### OTHER FEATURES

Environmental	Operating temperature	0 °C... 70 °C
	Storage temperature	-40 °C...+ 90 °C
	Relative humidity	5 ... 90 %, non-condensing
	Weight	0.3 kg

Compliance	RoHS
Standards	ANSI/VITA 57.1
Licensing to industry	Yes / Deutsches Elektronen-Synchrotron - Notkestr. 85, 22607 Hamburg - Germany - Email: mtca-techlab@desy.de

## FUNCTIONAL BLOCK DIAGRAM



DOWNLOAD  
FULL DATASHEET

