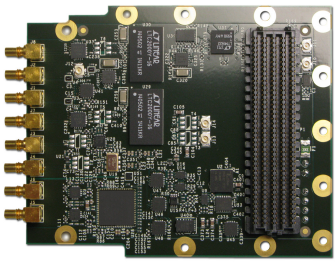
FMC-DA4

Datasheet Revision: 1.2
27th September 2022

AD01336



Applications

- RF/IF Signal Sampling/Generation
- High-speed Analog Data Capture
- High-speed Analog Signal Generation

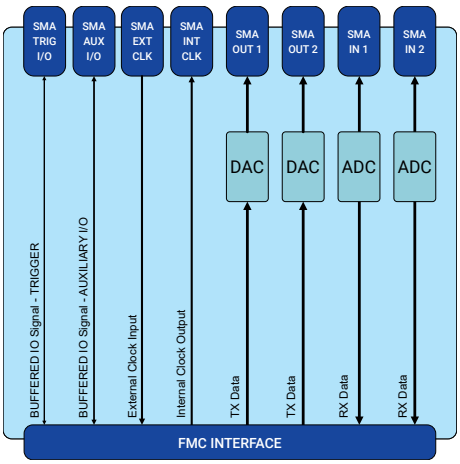
Board Features

- Dual 14-bit 3Gsps ADCs
- Dual 16-bit 2.7Gsps DACs
- External Clock Input

Summary

The **FMC-DA4** is an FMC I/O Module, providing two Analog to Digital converters with 14-bit resolution and sampling rates up to 3Gsps, and two Digital to Analog converters with 16-bit resolution and sampling rates up to 2.7Gsps.

The FMC-DA4 is a VITA 57.1 compliant single width HPC FMC module, designed for use with Alpha Data's VITA 57.1 compliant carrier cards. It provides the user with dual high speed Analog to Digital Converters at 14bits/3GHz and dual high speed Digital to Analog converters at 16bits/2.7GHz along with an external clock input and clock output and a number of bidirectionl trigger/synchronisation signals.
Power Consumption (3GHz sampling, both ADC channels, 2GHz sampling both DAC channels) 25W, conduction cooled
On-board temperature monitoring
Requires FPGA speed grades of -2 or better to support 12.5 Gbps operation of serial links.



Deliverables

FMC-DA4 Board
One Year Warranty
One Year Technical Support

Input/Output Interfaces

ADC
Dual Analog to Digital Converters

Resolution: 14-bit
Max Sample Freq: 330Msps to 3Gsps
Bandwidth: 2 MHz to 3000 MHz
Impedance: 50Ω (AC Coupled)
Connector: SSMC or MCX

DAC
Dual Digital to Analog Converters

Resolution: 16-bit
Max Sample Freq: 2.7Gsps
Bandwidth: 4.5 MHz to 3000 MHz
Impedance: 50Ω (AC Coupled)
Connector: SSMC or MCX

External clock input
External clock input

External clock output
External clock output

Trigger I/O
Trigger I/O

Auxiliary I/O
Auxiliary I/O

Synchronisation IO
ADC Sync Signal

Synchronisation I/O
Bidirectional Fast IO Signals direct from FPGA.

ALPHA DATA
www.alpha-data.com

UK Office
Address: Suite L4A, 160 Dundee Street, Edinburgh, EH11 1DQ, UK
Telephone: +44 131 558 2600
Fax: +44 131 558 2700
email: sales@alpha-data.com

Support

FMC Pinout available in User Manual

Board Format

VITA 57.1 FPGA Mezzanine Card (FMC)

Environmental Specification

Cooling Option	Operating Temperatures		Storage Temperatures	
	Min	Max	Min	Max
CC1	-40°C	+70°C	-55°C	+100°C

Operating Humidity : Up to 95% (non-condensing)

EMC Standards

FCC 47CFR Part 2
EN55022:2010 Equipment ClassB

Ordering Information

Order Code: FMC-DA4

www.alpha-data.com

UK Office
Address: Suite L4A, 160 Dundee Street, Edinburgh, EH11 1DQ, UK
Telephone: +44 131 558 2600
Fax: +44 131 558 2700
email: sales@alpha-data.com

USA Office
10822 West Toller Drive, Suite 250
Littleton, CO 80127
(303) 954 8768
(866) 820 9956 - toll free
sales@alpha-data.com