
Summary

The **ACP-FX-N2/125** is a high performance data capture and processing board using Xilinx™ Virtex-4 Platform FPGAs. The **ACP-FX-N2/125** is based on the Alpha Data (ADM-XRC-4FX) FPGA board which is a complete FPGA processing system, memory, I/O and Host interface resources. The **ACP-FX-N2/125** board operates in one of two modes depending on the position of the board in the rack. One is master mode in which other **ACP-FX-N2/125** cards synchronise to it or as a slave where it synchronises to another **ACP-FX-N2/125**. It provides 9 ADC channels for capturing external data using either an internal or externally generated clock.

Features
Applications:

Data Logger

Target Devices:

Xilinx Virtex-4 - FX100, FX140 (FF1148)

Memory:
SDRAM - 1GByte in 4 independent banks of DDR-II SDRAM (4x 64M x 32-bits)

FLASH - 32MByte parallel Flash (connected to PCI Bridge FPGA)

FLASH - 4MByte serial Flash (connected to user FPGA)

Front Connector I/O:

9 14-bit ADCs up to 125MHz

External Clock Input

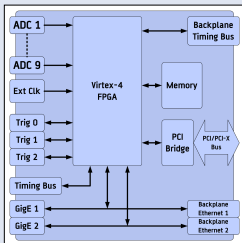
Dual Gigabit Ethernet Interfaces

3 Trigger I/O ports

Timing Bus port

Rear Connector I/O:

26 I/O connections via J3



Specification

Product Name	ACP-FX-N2/125
Target Devices	Xilinx Virtex-4 - FX100, FX140 (FF1148)
Host I/F	PCI/PCI-X
Interface	cPCI, the ACP-FX-N2/125 is not hot-swap capable and is compliant only with 3.3V PCI signalling systems.
Memory	SDRAM - 1GByte in 4 independent banks of DDR-II SDRAM (4x 64M x 32-bits) FLASH - 32MByte parallel Flash (connected to PCI Bridge FPGA) FLASH - 4MByte serial Flash (connected to user FPGA)
Front I/O	ADC Ports - 9 14-bit ADCs up to 125MHz fmax=125MHz bandwidth=-3dB from 30kHz to 125MHz levels=full scale ±1V, protected to ±4V resolution=14-bit impedance=50 , transformer coupled Connector: LEMO External Clock - External Clock Input levels=full scale, ±1V, protected to ±4V fmax=10MHz impedance=50 , transformer coupled comms - Dual Gigabit Ethernet Interfaces connector=RJ45 Connectors Trigger I/O - 3 Trigger I/O ports connector=LEMO Connectors Timing Bus Port - Timing Bus port connector=20way IDC Connector
Rear I/O	26 I/O connections via J3
Special Functions	Provides 9 channels of 14-bit Analog to Digital convertors (14-bits).
Clocks	Local bus clock programmable up to 80MHz Low-jitter user clock, programmable up to 637.5MHz Additional 200MHz reference clock for IOB delay circuits.
Device Configuration	PCI Bus direct to SelectMAP port From Flash direct on power up External JTAG connector
Software	Drivers for Microsoft Windows™, Linux and VxWorks API with template designs in VHDL and Verilog
Environmental	Temperature: Air cooled option (AC0) Operating Temperature 0° to +55°C Air cooled industrial option (AC1) Operating Temperature -20° to +55°C EMC: FCC 47CFR Part 2 EN55022 Equipment Class B

Ordering Codes
ACP-FX-N2/125/z-y(c)

Virtex-4 Device	z	FX100, FX140
Virtex-4 Speed	y	10, 11, 12
Air cooled (comm/ind)	c	blank = air cooled commercial, /AC1 = air cooled industrial