



IF/Baseband Signal Sampling

Board Features

- Dual 8-bit 1.5Gsp/s ADCs
- External Clock Input
- Thermal monitoring of the ADCs

Summary

The **XRM2-ADC-D3/1G5** is an XRM2 I/O Module, providing two Analog to Digital converters with 8-bit resolution and sampling rates up to 1.5Gsp/s.

Aimed at IF/Baseband Signal Sampling, the sampling clock can be sourced from either an external clock source or from a clock generated within the attached FPGA board. An Auxiliary I/O port is provided for use as a trigger control or for general purpose signaling. An additional two ports are available for use as high-speed interconnect between boards for synchronisation.

The XRM2-ADC-D3/1G5 is based around the ADC08D1500 by National Semiconductors. A built-in thermal monitor allows the user to check the operating temperature of the ADC. Provided as part of the sample design is the functionality to read the temperature of the device, and software to monitor this and recalibrate the ADC if the thermal drift is sufficient. The software will also shut the ADC down if the device starts to go over the maximum operating temperature.

Deliverables

XRM2-ADC-D3/1G5 Board
 One Year Warranty
 One Year Technical Support

Input/Output Interfaces

2x Dual Analog to Digital Converters

Resolution: 8-bit
 Max Sample Freq: 1.5Gsp/s
 Bandwidth: 30MHz to 1700MHz
 Impedance: 50Ω
 Connector: SMA

1x External clock input

Impedance: 50Ω (AC coupled)
 Levels: $\pm 200\text{mV}$ to $\pm 1\text{V}$ - $\pm 500\text{mV}$ nominal
 Connector: SMA

1x External clock out

Impedance: 50Ω (AC Coupled)
 Levels: $\pm 400\text{mV}$ nominal
 Connector: SMA

1x Auxiliary I/O

Impedance: Input: 4kΩ (DC Coupled)
 Levels: $\pm 3\text{V3}$ LVTTTL
 Connector: SMA

2x Synchronisation I/O

Levels: 2V5 Logic (DC coupled)
 Connector: U.FL - Limited Access in assembled system



Support

Example UCF, HDL files and Application software are provided with the board.

Environmental Specification
Temperature Ranges

Cooling Option	Operating Temperatures		Storage Temperatures	
	Min	Max	Min	Max
AC0	0°C	55°C	-40°C	85°C

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

EMC Standards

FCC 47CFR Part 2

EN55022:2010 Equipment ClassB

Ordering Information

Order Code: XRM2-ADC-D3/1G5(h)(v)

Option	Code	Description of Options
Heatsink	h	blank = No Heatsink, /HTSK-XRM-ADC-HS-1 = Heatsink Fitted
I/O Voltage	v	blank = +3.3V - LVTTTL I/O levels, /5V = +5V - TTL I/O Levels

Address: 160 Dundee Street, Suite 4A,
Edinburgh, EH11 1DQ, UK
Telephone: +44 131 558 2600
Fax: +44 131 558 2700
email: sales@alpha-data.com
website: http://www.alpha-data.com

Address: 611 Corporate Circle Suite H
Golden, CO 80401
Telephone: (303) 954 8768
Fax: (866) 820 9956 - toll free
email: sales@alpha-data.com
website: http://www.alpha-data.com