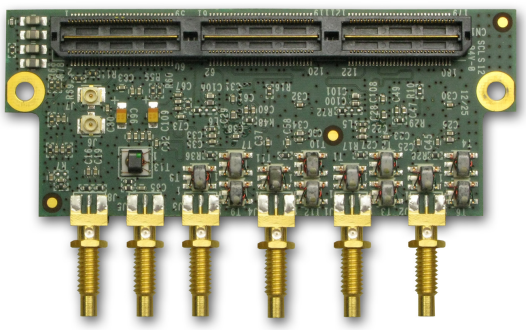
XRM-ADC-Q8

ALPHA DATA

3rd September 2013 **Datasheet Revision: 1.0**



Summary

The **XRM-ADC-Q8** is an I/O Module which provides four Analog to Digital convertors with 14-bit resolution at sampling rates up to 250MHz. The XRM is aimed at IF/ Baseband Signal Sampling. An external clock source may be used or an internally generated clock can be used to provide the sampling clock. An Auxiliary I/O port is provided for use as a trigger input and general purpose signaling. An additional two ports are available for use as high-speed interconnect between boards for synchronisation.
The 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.

Features

Applications:

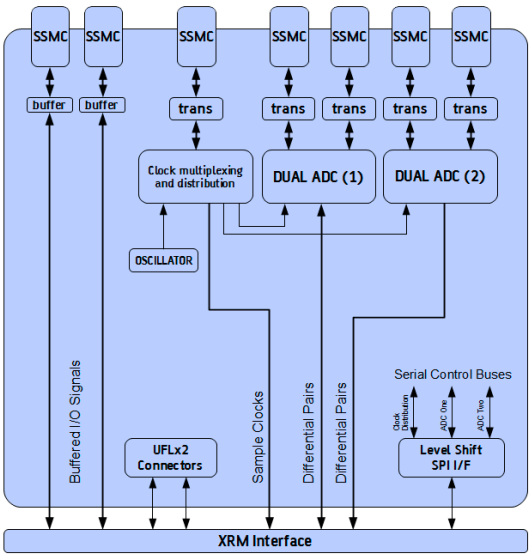
IF/Baseband Signal Sampling

Front Connector I/O:

Quad ADC Input

Clock In

Auxiliary I/O port



XRM-ADC-Q8

Specification	
Product Name	XRM-ADC-Q8
Front I/O	**Signal Input:** Quad ADC Input fmax = 250Msps resolution = 14-Bit bandwidth = 4.5MHz to 700MHz levels = +10dBm impedance = 50 Ohm connector = SSMC **Note:** exceeding the maximum signal limit may result in permanent degradation of converter performance. **Clock In:** Clock In fclock = Fmax levels = 3v3 impedance = Impedance? **Note:** Exceeding the maximum voltage limit may result in permanent degradation of converter **Aux IO Port:** Auxiliary I/O port levels = 2V5 Logic (dc coupled) connector = UFL User configurable as inputs or outputs, signals direct to FPGA pins. **Note:** signals on these connectors must be restricted to 2V5 logic otherwise damage may result.
XRM2	The XRM-ADC-Q8 is also available for XRM2 based FPGA products.
Special Functions	The XRM has built-in thermal monitoring of the ADC
Software	Example UCF, HDL files and Application software are provided with the board.
Environmental	**Temperature:** Air cooled option Operating Temperature 0° to +55°C† † - It is essential that sufficient air-cooling is provided, if thermal monitoring is provided on board then this should be used to shut the device down if it starts to overheat in order to reduce the possibilty of damaging the devices. **EMC:** FCC 47CFR Part 2 EN55022 Equipment Class B

Ordering Codes		
XRM(xver)-ADC-Q8(io)(h)		
XRM Version	xver	blank=Original XRM (FPGA products up to Virtex-5), 2=XRM Version 2 (FPGA products Virtex-6 and later)
Voltage Option	io	blank = LVTTL I/O levels, /5V = TTL I/O Levels
Heatsink	h	blank = No Heastink, /HTSK-XRM-ADC-HS-1 = Heatsink Fitted

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