Description

This module provides a 40 channel A to D converter for the Fylde FE-MM40 system. 40 x 16 bit channels are converted and buffered in a local static RAM ready to be moved to the host computer by USB block transfer. The local memory prevents loss of data if the host cannot maintain a continuous block transfer rate.

The USB device is the FTDI 2232H and a windows DLL is provided for developers. Also provided are a LabView driver with example programs, a console program with a example C++ program, and an application (Madaq40) which provides data acquisition for Windows computers.

The module comprises a main card and a separate power supply card. The power supply accepts +12 V from a system power supply and produces +6V for the converter card. The cards are connected by two short 26 way ribbon cables. Power and signal inputs are carried by the ribbon cables.

Digital inputs and outputs intended to control system functions are provided. In an FE-MM40 system one input and one output are spare.

Specification

Analogue Inputs	Quantity	40 channels from up to 20 dual channel signal conditioning modules.
	Range	±10 V
	SNR	> 90 dB
	THD	<102 dB
	Offset	< ±3 mV
	Gain Error	< 0.1%
	Noise	< 2 mV pk-pk
	Crosstalk	-95 dB at 10 kS/s with 1 kHz sine wave input.
Digital Outputs	Quantity	4
	Level	0V / +5V
	Type	Push Pull , 10 mA capable
Digital Inputs	Quantity	4
	Level	0V / +5V
Sample Rate	Maximum	40 channels at 10 kS/s
	Selectable	1 ,2,5,10, kS/s
Input	Impedance	> 1 MΩ single ended
Environment	Temp. Range	-40°C to +85°C operating
Physical	Card size	2 Cards : 7.1" x 2.65". 2u high format (183mm x 67mm).
Electrical	Power	12 V 100 mA
Standards	USB	USB Serial Bus Specification 2.0
	EMC	EN61326
	Safety	EN61010-1
Compatibility	Windows 7.1 and later versions.	
USB Driver	FTDI D2XX see https://www.ftdichip.com/FTDrivers.htm	