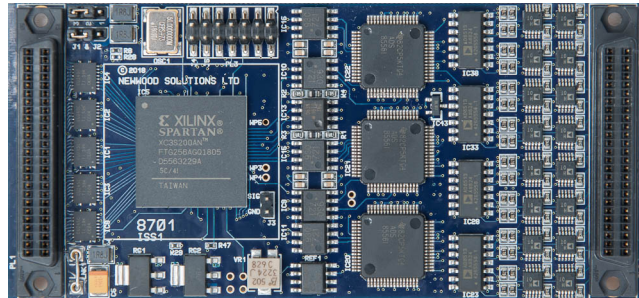


ADC8701 8-Channel 16-Bit ADC IndustryPack®

ADC8714 16-Channel 16-Bit ADC IndustryPack®



Product Description

The Newwood Solutions IP-ADC-8701/8714 is an Industry Pack® module provides 8 (8701) or 16 (8714) channels of simultaneously sampled analogue digitisation and programmable gain ranges with the following characteristics:-

- This module can be supplied with either 8 or 16 independent channels (one ADC per input).
- True full differential inputs.
- High input impedance - 1Gohms.
- Over voltage +/-25V.
- Hytec ADC8401 register superset and connection pin layout.
- The ADC8701 can be supplied as direct plugin replacement for Hytec ADC8401 seen by software as an 8401.
- Ability to set via jumpers the functionality of the unit to give compatibility with ADC8401 and ADC8414 units.
- 16 bits resolution – 16 bits no missing codes.
- 14 bits accuracy.
- Up to 200KHz sampling rate with a conversion time of 5µs
- On-board sample clock programmable to 200kHz.
- On board RAM Memory 1M x 16 bits
- 128K conversions per channel 8 channels (8701).
- 64K conversions per channel 16 channels (8714).
- Programmable full-scale resolution all inputs +/-10V or +/-5V.
- Front-end programmable gain instrumentation amplifiers giving gains of 1, 2, 4 and 8.
- Active low pass filter.
- On-board calibration by FPGA firmware using stored offset and gain data.
- Gain drift - 2ppm per deg C (typ).
- Offset drift - +/-3.5uV/degC (typ).
- +/-10V offset error - +/-3LSBs with firmware calibration (+/- 2.5mV without calibration).
- +/-5V offset error - +/-4LSBs with firmware calibration (+/- 2.5mV without calibration).
- +/-10V gain error - +/-3LSBs with firmware calibration (+/- 0.75% FS without calibration).
- +/-5V gain error - +/-4LSBs with firmware calibration (+/- 0.75% FS without calibration).
- Ext sample clock input.
- Ext trigger input
- Aperture Delay 5 ns typ
- Aperture Delay Matching 250 ps typ
- Aperture Jitter 50 ps typ
- ADC voltage reference drift 1.0ppm/°C (max)
- Identification PROM holds Board type, Serial number, PCB and firmware issues
- 8/32MHz IP system clock operation.
- Field upgradeable firmware via IP bus or JTAG port.
- EPICS and ASYN driver support.
- System to plant isolation to 100V when externally powered by DC/DC converter option.
- PCB temperature measurement via on-board chip.