Product Specification

Data Acquisition card for the F2812/335 eZdsp™

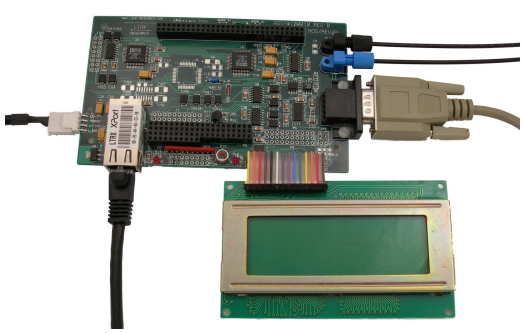
The Link Research models LR-F2812DAQ and LR-F28335DAQ are precision, 14-bit data acquisition daughtercards designed for multi-phase power system applications. These daughtercards mate with the F2812 and F28335 eZdsp™ DSP development systems, respectively. The board contains four 14-bit A/D channels and eight 14-bit D/A channels. The A/Ds can operate at up to 100 kHz sampling rate. The board is designed to support a maximum of 8 A/D and 8 D/A channels. In addition, by using the models LR-F2812DAQ8x8 and LR-F28335DAQ8x8 piggy-back boards, a total of 16 A/D and 16 D/A channels can be achieved.

Features

- Simultaneous sampling on all A/D input channels
- Simultaneous updating on all D/A output channels
- ± 10 Volt input/output range
- RS-232 (UART) port for connection to a PC or other HMI device (921.6 kbps, max.)
- 8 digital, general purpose inputs pins
- Ethernet and Fiber Optic Interfaces available as options
- Character LCD optional interface (Hitachi 44780 compatible, LR-F2812DAQ only)

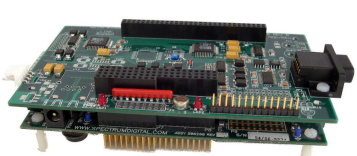
Applications

- 3 phase motor control
- 3 phase power inverter designs
- Precision 3 phase sine wave generation
- Remote power system monitoring



The model LR-F2812DAQ shown with all available options

Included with the standard version



The model LR-F2812DAQ shown mounted on the F2812 eZdsp board

The model LR-F28335DAQ and model LR-F28335DAQ8x8 shown mounted to the F28335 eZdsp board

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LINKResearch
Signal Processing Technologies

Specifications (abbreviated)

(for full specifications, please visit our website: www.link-research.com)

Analog to Digital Conversion	
Total number of channels	4 (optionally 8)
Resolution	14 bits
Maximum Conversion Rate	100 kbps for all 4 channels, 350 kbps for a single channel
Input Voltage Range	± 10 Volts
Sampling Mode	Simultaneously across all channels
Aperture Jitter	50 ps typ.
SNDR	78 dB min. @ 25˚ C
Gain Error (positive and negative)	± 8 LSB max. ±2 LSB typical
Bipolar Zero Error	± 10 LSB max. ±2 LSB typical
Integral Nonlinearity	± 1.5 LSB max., ±0.6 typical
Differential Nonlinearity	± 1.0 LSB max, No missing codes
Digital to Analog Conversion	
Total number of channels	8
Resolution	14 bits
Input Voltage Range	± 10 Volts
Update Mode	Simultaneously updates for all channels
Settling Time	31 µsec to ½ LSB, for full scale swing
Relative Accuracy	±2 LSB max
Zero-Scale Error	±8 LSB max, ±2 LSB typical
Full-scale Error	±8 LSB max, ±2 LSB typical
Gain Error	±2 LSB typical
Differential Nonlinearity	±1 LSB max. Guaranteed Monotonic
Character LCD Interface (Optional)	
Interface Type	Hitachi 77480 compatible
Contrast Voltage	Adjustable between 0 and 5 Volts
Ethernet Interface (optional)	
Type	10/100 Mbps, EIA 802.3 compatible
Interface to DSP	Serial, Asynchronous, using SCI
Maximum Data Transfer (DSP Interface)	921,600 bps

Ordering Information

Model Number	Description
LR-F2812DAQ	Data acquisition daughtercard for the F2812 eZdsp development system
Available Options	
LR-F2812DAQ-1	4 additional A/D channels
LR-F2812DAQ-2	Fiber optic serial interface
LR-F2812DAQ-3	10/100 Mbps Ethernet interface
LR-F2812DAQ-4	LCD Display interface
LR-F2812DAQ-6	Piggy-back data acquisition board (adds 8 additional A/D/A channels)
LR-F28335DAQ	Data acquisition daughtercard for the F28335 eZdsp development system
Available Options	
LR-F28335DAQ-1	4 additional A/D channels
LR-F28335DAQ-2	Fiber optic serial interface
LR-F28335DAQ-3	10/100 Mbps Ethernet interface
LR-F28335DAQ-6	Piggy-back data acquisition board (adds 8 additional A/D/A channels)
LR-F2812DAQ8x8	Retro upgrade data acquisition board for the F2812 eZdsp board (adds 8 additional A/D/A channels)
LR-F28335DAQ8x8	Retro upgrade data acquisition board for the F28335 eZdsp board (adds 8 additional A/D/A channels)

To order online, visit www.link-research.com

or call us at 401-270-4445