Hallux3 DAQ12 PCIe or cPCI/PXI

12 Channel Data Acquisition / PCM Encoder / Modulator Calibrator

Programmable Input Gains & Offset / Wide Range Sampling Rates up to 512 kHz / License Option for Digital Filtering / PCM Encoder Output / IRIG Time Stamping

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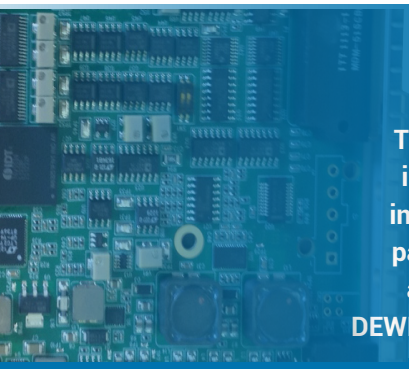
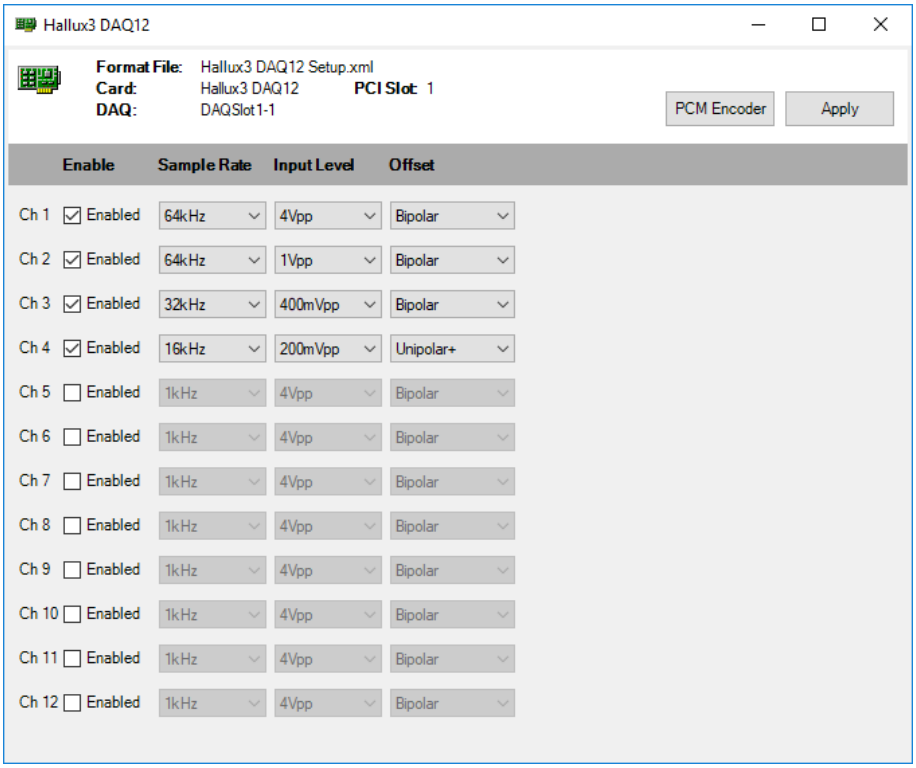


Hallux3 DAQ12

The Hallux3 DAQ12 is a twelve channel data acquisition card that contains user selectable gain inputs from 1 mVpp to 4 Vpp full scale inputs with user selectable bipolar or unipolar full scale input. Each input channel is user selected sampled between 1 Hz and 512 kHz. Digitized data is passed to the computer by direct memory access and available for storage, graphical displayed and Ethernet transported for final analysis using either the Ulyssix Altair software or using the DEWESoft software suite. Each data point is time tagged using the internal IRIG Time Code Reader. Other features include output in an IRIG106 Chapter 4 PCM formatted serial output stream.



Main System Features

Twelve input digitizers with sampling rates from 1 Hz to 512 kHz

Input levels from 5 mVpp to 5 Vpp with full Bipolar capability

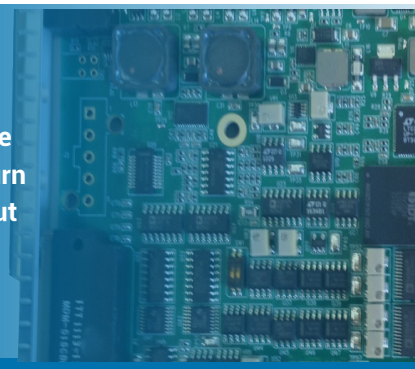
Special Features

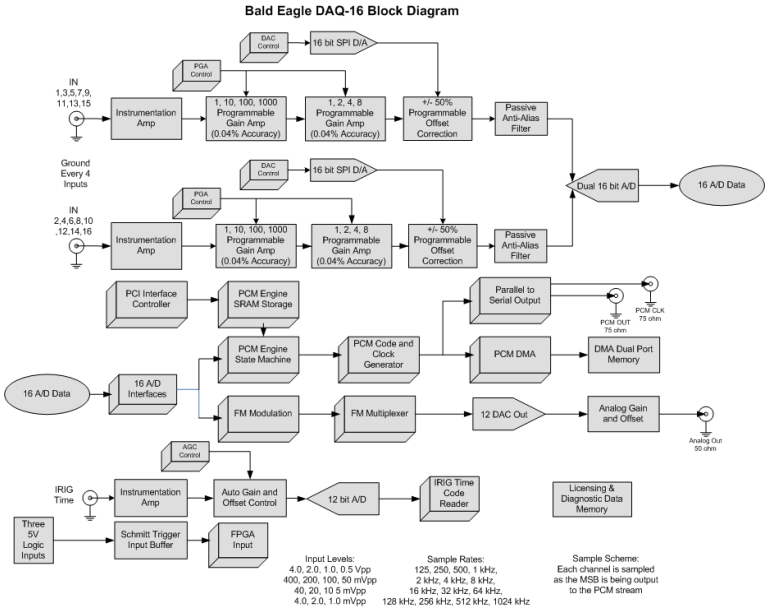
IRIG TimeCode input time stamping capability

PCM Encoder output with auto PCM frame generation by sample rate

Hallux3 DAQ12

The Hallux3 DAQ12 card is powered by the latest INTEL/Altera ARRIA V GZ field programmable gate array (FPGA) with the firmware being user reconfigurable using Ulyssix supplied FlashBurn software. Optional features include output in a IRIG106 Chapter 4 PCM formatted serial output stream as well as a full PCM Encoder.





Software Capabilities

Hallux3 DAQ12 can be setup and output parameters displayed in Ulyssix Altair or DEWESoft software suites

Optional Ethernet interface for remote control and digitized data transfer

Optional Capabilities

FM VCO generation and multiplexing for use with legacy FM demodulation systems

FM Calibrator with programmable dwell and step count.

Digital FIR Low Pass filtering for each channel.

Hallux3 DAQ12 PCIe or cPCI/PXI Specifications

Channel Specifications

Digitizing Sample Rate	Channel digitizing rates from 1 Hz to 512 kHz. Dual digitizers are usd with max sampling rate of 512 kHz.
Digitizing Resolution	16 bit sampling A/D with better than -80 dB SINAD
Input Impedance	Hi-Z, single ended input
Maximum Safe Input	±35 VDC
Input Signal Level	5 mVpp to 5 Vpp
Input Gain Accuracy	Total accuracy is 0.08% of input selected level
DC Input Level	Bipolar only

PCM Generator Specifications

PCM Output Format	NRZ-L or RNRZ-L PCM data and clock with 0º or 180º bit clock, program selectable
Word Size	16 bits per word, 32 bit FE6B2840 Sync Pattern
Output Bit Rate	Auto generated by the sample rates of the selected channels in powers of 2 based on fastest sample rate

Time Code Reader Specifications

IRIG Code Types	IRIG A, B, G, and NASA-36

Physical Specifications

Dimensions	cPCI 3U form factor, 100mm 160mm PCIe short card configuration
Interface Connectors	MDM-31 connector to individual BNC breakout cables (other configurations, consult factory)
Manufacturing	The design utilizes Surface Mount Technology (SMT), manufactured with robotic assembly techniques to IPC-610B Class 2 manufacturing standards
Temperature Range	Operating: 0°C to 50°C Storage: -20°C to 60°C
Power Consumption:	Less than 25 Watts total, for all supplies +5V 3 Amps +12V 0.5 Amps

Ordering Options

Hallux3 DAQ12-cPCI Hallux3 DAQ12-PCIe	12 Channel 16-Bit Data acquisition card, 1 channel of programmable sampling up to 512 kHz or 12 channels of programmable sampling up to 256 kHz with programmable input level from 5.0 mVpp to 5 Vpp per channel. The Hallux3 DAQ12 card is delivered with BNC bulkhead mounted panel, ALTAIR PCM Software and as a plugin into the optional DEWESoft Software Suite for no additional charge
Hallux3 FM Mod/Cal-cPCI Hallux3 FM Mod/Cal-PCIe	Digital Modulator / Calibrator, 12 Channels, FM/FSK
OPT-Hallux3-FIR	User programmable digital FIR filtering ON or OFF. If ON, cutoff frequency can be set from 0.2 to 0.001 of the selected sample rate. The filter output is flat to within 0.1 dB in the programmed passband and -60 dB or more at 2 times the programmed cutoff frequency.

Specifications are subject to change without notice.

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