

## High Performance Data Acquisition Systems



### *Description*

**DAQStream™** is a family of high performance data acquisition systems that combine Delphi Engineering Group's industry leading wideband digitizers and **ADCView™**, real-time signal acquisition software for unparalleled data acquisition performance.

**DAQStream™** systems are designed for applications that require high-speed data acquisition (up to 3.6 Gsps per channel) high-speed streaming (3GBytes/sec) to RAID, multi-channel synchronization, an easy to use graphical user interface for capture control, and the ability to display multiple waveforms and FFTs in real-time.

### *Features*

- Up to 5 GHz analog signal input.
- Up to 3.6 Gsps real-time sampling rates.
- Multi-channel, high-speed sample rate applications that need to support large capture snapshots & high-rate streaming.
- Delphi's FPGA Design Kit for powerful signal processing customization
- Powerful Graphical User Interface: Enables quick set-up, data visualization, Analysis & Capture.
- Multi-Terabyte Storage Option

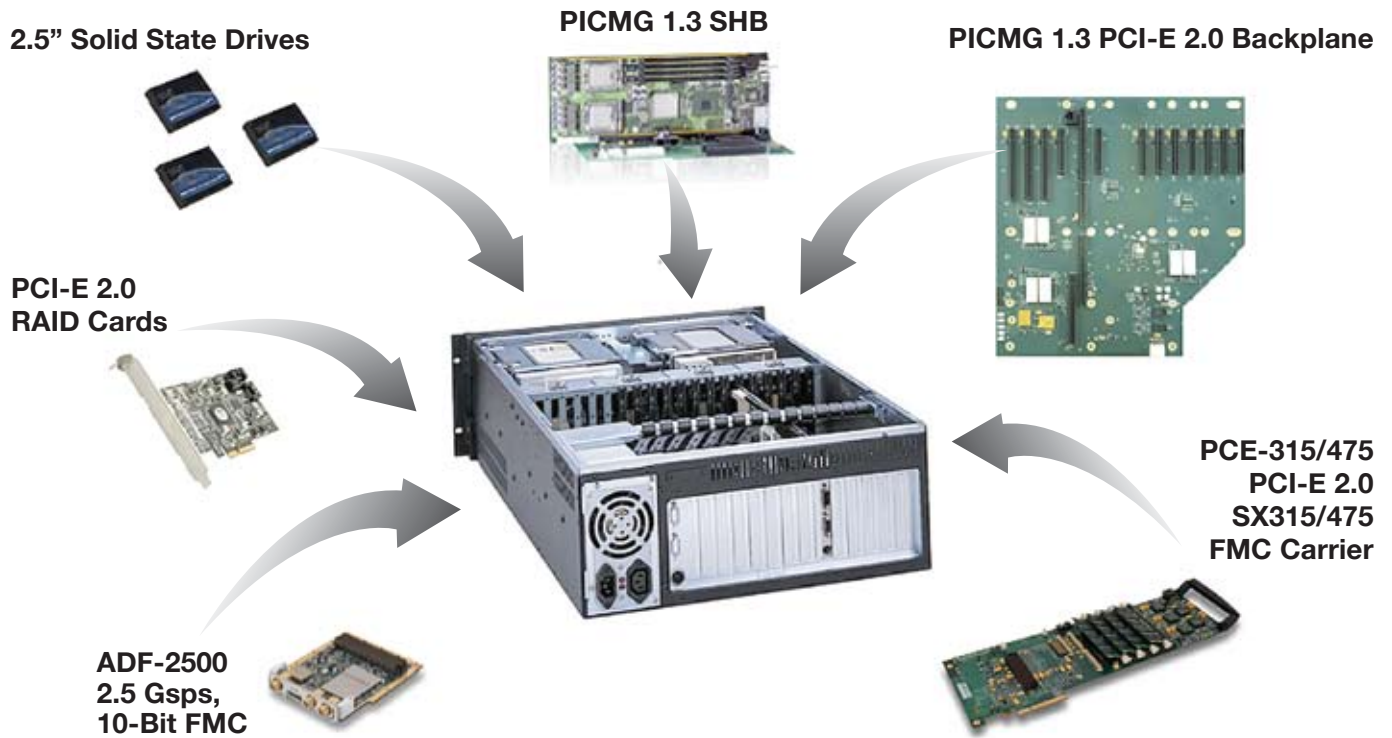
# High Performance Data Acquisition Systems

## DAQStream

Delphi developed the **DAQStream** system to allow for maximum experiment flexibility, configuration options, and high rate streaming of sample data to system memory and RAID. The **DAQStream** product line is described below:

### DAQStream

Channels	5	4	1	1
Sample Rate	400 MSPS	550 MSPS	1.8 GSPS	2.5 GSPS
Resolution	14	12	12	10
Streaming Performance	3.5 GBytes/sec	3.3 GBytes/sec	2.7 GBytes/sec	3.125 GBytes/sec
RAID Storage	2TB Internal or up to 96TB External			

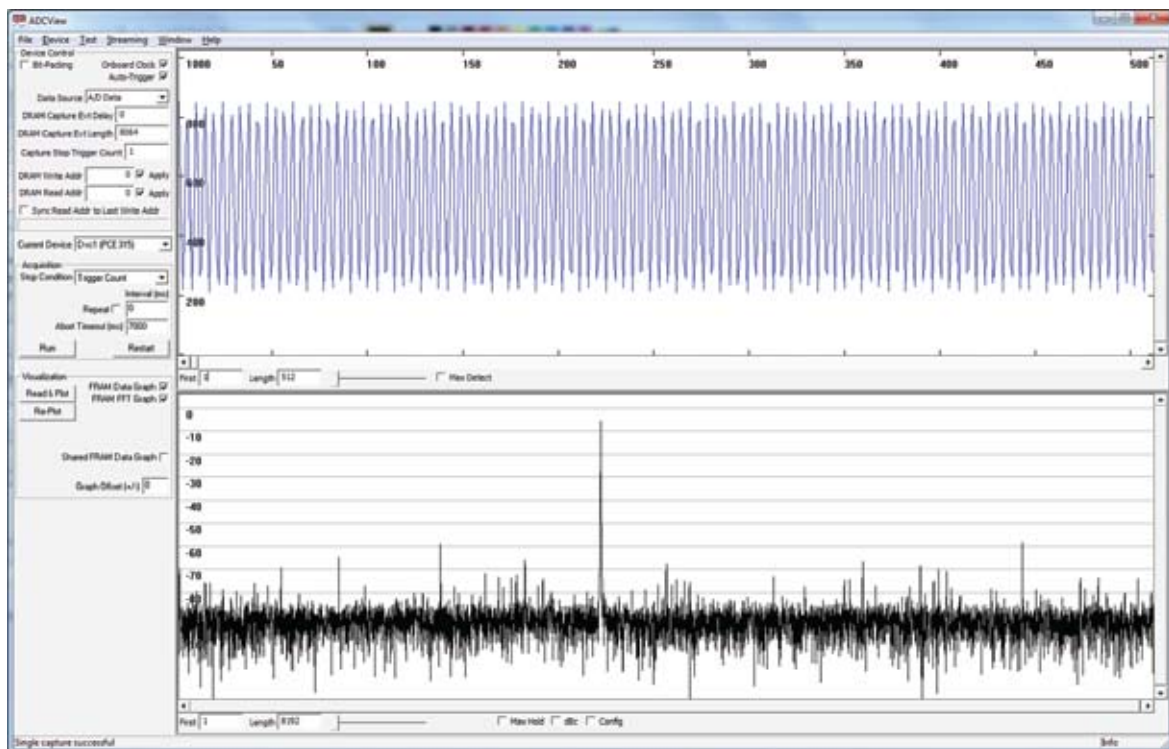


### Software

Delphi's **ADCView** is a powerful user interface that enables organized configuration, control and monitoring of the **DAQStream** system. **ADCView** enables users to implement new application configurations, visualize signals in real-time, control capture modes, trigger and analyze acquired data by exporting saved data files into other software applications such as **MATLAB™** and **LabView™**.

#### Other Advanced Features Include:

- Multichannel acquisition software
- Data streaming to RAID
- Access digitizer service registers and memory space
- Easy to use device and channel configuration
- Multiple waveform display
- Frequency spectrum with user defined FFT Window
- Data timestamping
- File output and ASCII and binary



**ADCView display of raw data and FFTs. Time and Y-axis are easily defined and resized, and gridlines added and removed. Offset and magnification of particular areas of interest can be highlighted. Multiple options can be configured, such as: Persistence trace, FFT windowing, windowing routines and FPGA algorithms.**

## DAQStream Hardware Specifications

### System Host/Controller

- Intel® Quad-Core Xeon® Processor
- 8 GBytes of Memory (Expandable to 48 GBytes)
- Compatible with SHB Express™ (PICMG® 1.3) specification
- Supports three Ethernet Interfaces for use with 10/100/1000 Base-T networks
- Six Serial ATA ports support independent SATA I and SATA II storage devices

### Analog-Digital Converter Boards

- PCI-E and FMC Form Factor Acquisition Cards.
- 100 Msps to 3.6 Gsps
- Resolutions from 8 bit to 16 bit

- 100KHz to 5GHz Analog Input Bandwidth
- Xilinx Virtex 6 SX Family of FPGAs.

### DAQStream Software

- ADCView for Windows™
- Windows 7
- Sample Data Exportable to 3rd Party Analysis Software; MATLAB™ and Labview™

### Optional Items

- Up to 48 TB High Speed External RAID
- FPGA Design Kit
- DAQSync Module
- High-performance graphics card

## ADC Boards Available Now!



**ADF-2500**  
2.5 Gsps, 10 Bit



**ADX-3500**  
3 Gsps, 8 Bit



**ADF-Q40/Q55**  
400/550 msp, 12/14 Bit



**ADF-D1800**  
1.8 Gsps Dual, 3.6 Gsps Single 12 Bit

## Optional Items

### FPGA Design Kit

DEG's FPGA Design Kit enables developers to customize board operations and add DSP functionality such as: FIR Filters, Digital Down-Conversion/Demodulation, I/Q Generation, and FFTs. Combined with **DAQStream**, the FPGA Design Kit gives users a powerful data acquisition and FPGA development platform.

**DAQSync™** Clock and Trigger Module:

**DAQSync** is used to create synchronous clocks, triggers and BIT signal. This device enables alignment of several ADCs with the on-board ADC gain, clock and trigger delays.

**For Details contact Delphi Engineering Group at: 949-515-1490 x 466**