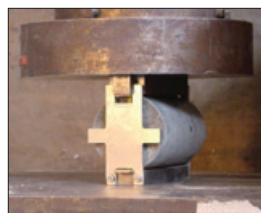


Applications

Signal Surveillance

In signal surveillance applications, users continuously acquire different kinds of signals (analog or digital) and need to store the signals to disk for off-line processing. A typical application is airborne remote sensing, which uses different sensors to sense visible light, infrared or ultraviolet, and processes the acquired data to generate terrain/weather images. In the past, airborne remote sensing facilities can only generate discrete images because there is no proper solution to continuously capture and store such large volumes of data. The introduction of DAQStreaming is breakthrough for continuous image acquisition. In airborne remote sensing applications, the analog output of each infrared sensor is converted to an 8-bit digital signal and is fed to the input of DAQStreaming system. With the 40MB/s data recording capability, all information along the flight course can be recorded, and continuous images can be generated during off-line processing.



Vibration and Shock Testing

Vibration and shock testing is crucial for many products-motor vehicles, aerospace structures, military electronics, railway equipment and so on. During vibration and shock testing, users apply vibrations or impacts to a UUT (Unit Under Test), and sense the generated signals for a long period of time. All signals should be recorded in real-time for further analysis. DAQStreaming-S1 provides 8 simultaneous analog input channels, which is ideal for the phase-related vibration or shock signals. With its 40MB/s recording rate, all generated signals from the UUT can be faithfully recorded during the whole process.

Destructive Testing

In destructive testing, tests are carried out until the specimen fails. During the testing process, loads/stresses/shocks are applied to the specimen and the reactions of specimen are recorded. Under critical situations, a breakdown of specimen occurs. A breakdown is usually a "burst" signal, an abrupt wave of abundant data. A high-speed data acquisition is needed to capture this data. DAQStreaming-A1 is equipped with a 20MS/s, 12-bit DAQ module and is suitable for recording burst signals during the destructive testing procedure.

Specifications

Model	A1-Portable	A1-IPC	S1-PXI	S1-Portable	S1-IPC
Data Acquisition Device					
Input Channel	4-CH analog inputs		8-CH simultaneous analog inputs		
Maximum Sampling Rate	1-CH @ 20MS/s 2-CH @ 10MS/s 4-CH @ 5MS/s		8-CH @ 2MS/s simultaneously		
A/D Resolution	12-bit		14-bit		
Input Range	±1V or ±5V		±10V, ±5V, ±2.5V, ±1.25V0-10V, 0-5V, 0-2.5V, 0-1.25V		
Storage Device					
Data Throughput	40MB/s		32MB/s		
Default Capacity			Seagate Cheetah 36.7GB 15000RPM Ultra-320 SCSI HDD *		
Recording Duration	15 minutes **		19 minutes **		
System Configuration					
Chassis	Robust portable chassis	19" 2U industrial chassis	3U, 8 slots PXI chassis	Robust portable chassis	19" 2U industrial chassis
CPU	Pentium-4 2.4GHz		Pentium-3 1.26GHz	Pentium-4 2.4GHz	
Memory	512MB DDR	512MB DDR	512MB SDRAM	512MB DDR	512MB DDR
System Drive	80GB	80GB	40GB	80GB	80GB
Display	Built-in 14.1" TFT	N/A	N/A	Built-in 14.1" TFT	N/A
CD-ROM	5.25" 52X CD-RW	Slim-type CD-ROM	N/A	5.2" 52X CD-RW	Slim-type CD-ROM
Power	ATX 400W	ATX 250W	Hot-swappable cPCI 250W	ATX 400W	ATX 250W
OS			Windows 2000		

* Optional capacity extension is available (internal or external)

** Recording Duration = Capacity / Data Throughput

Ordering Information

- **DAQStreaming-A1-IPC** 40MB/s Data recorder for high-speed analog signals in IPC platform
- **DAQStreaming-A1-Portable** 40MB/s Data recorder for high-speed analog signals in portable platform
- **DAQStreaming-A1-Toolkit** DAQStreaming-A1 software + DAQ module (No platform and storage device included)
- **DAQStreaming-S1-PXI** 40MB/s Data recorder for simultaneous analog signals in PXI platform
- **DAQStreaming-S1-IPC** 40MB/s Data recorder for simultaneous analog signals in IPC platform
- **DAQStreaming-S1-Portable** 40MB/s Data recorder for simultaneous analog signals in portable platform
- **DAQStreaming-S1-Toolkit** DAQStreaming-S1 software + DAQ module (No platform and storage device included)
- **DAQStreaming Capacity Extension Option** Internal or external capacity extension to extend recording duration