

The 6005 Mainframe is DC operated and ruggedized for mobile systems and accommodates up to 80 strain gage or bridge transducers, thermocouples, LVDTs, RTDs, voltage or current channels with amplifier per channel architecture. Systems can also be configured with test sequencers, digital inputs and outputs and a DSP control processor that can implement PID control loops and display and record derived measurement parameters.

This mainframe supports all Series 6000 signal conditioning and I/O modules. All connections are made on the front allowing it to be located in the tightest of spaces. It has integral fans that supply cooling air to the modules and power supply.

The 10-slot 6005U has a USB/Ethernet control and data interface that achieves data rates in excess of 4 million samples per second and is compatible with most computers including laptops. Like other 6000 mainframes, it supports systems of up to 4096 channels using slave enclosures.

The 6005 enclosure supports internal data recording. Each mainframe utilizes an 80GB hard drive or 16GB Flash drive on the controller board. In addition to local recording, the 6005 Mainframe will output the data set to the controlling PC. This PC can be used to record, display and export the data.

Each input/output module requires a connector panel when used in the 6005 Mainframe enclosure. These panels provide input and output signal connections on the front of the enclosure to facilitate wiring and cable routing in compact installations.



### FEATURES

- Portable, DC operated, AC power adapter available
- Ruggedized for mobile applications
- 4 Million + samples per second
- Local Recording Available
- Fast, hardware-based alarms with digital outputs
- All front-mounted controls and connectors

### SPECIFICATIONS

#### DATA FORMAT

Data Word .....16-bits, 2's complement binary, formatted in two bytes, low-byte followed by high-byte.  
 Scan Table .....Maximum format length is 65,536 samples.  
 Sample Rate.....Programmable with 1µS resolution.  
 Buffer (FIFO) .....A 1 Million word data buffer insures continuous data to computer or storage.

#### USB CONTROL/DATA INTERFACE (6005U)

Protocol .....USB 2.0  
 Output Rate .....In excess of 4M samples per second. Output rate is computer dependent and the full rate will not be achieved for all computers. Consult Pacific's Application Engineers for selecting computers that will provide the maximum rate.

#### GPIB CONTROL/DATA INTERFACE (6005)

Protocol .....IEEE-488.2 with high speed handshake. Includes 2 Meter Cable.  
 Output Rate .....Up to 800K samples per second.  
 Ring Buffer.....A 2 million sample buffer overwrites the oldest data until triggered. Trigger stores a specified amount of new data then freezes the memory. Any data not overwritten is pre-trigger. The ring buffer may be triggered by software instruction, alarms, digital inputs, or external TTL input.

#### CONTROL INPUTS

Ext. Clock.....TTL input synchronizes acquisition to an external clock.  
 Control .....TTL input starts and stops recording. TTL input triggers ring buffer data storage on systems with the GPIB interface.

#### PCM OUTPUT (Option for GPIB Interface)

Data .....Two independently buffered PCM data outputs. IRIG 106, NRZL-L, Class II.  
 Clock .....Two independently buffered PCM data clocks.  
 Output .....RS422, differential line drivers.

Bit Rate .....Up to 6.85 Mbits/second.  
 Connector .....DB-15 for data and clock.  
**SCRAMNET DATA OUTPUT (Option for GPIB Interface)**  
 Connection .....Any Systran supported physical media.  
 Throughput .....16.7 MB/s maximum.  
 Memory .....1 MB, up to 8 MB is available.  
 Latency.....0.8 µS per node (typical) plus two sample periods of the highest sample rate.  
 Connector .....62.5/125 micron multi-node with ST connector.

#### GENERAL

Power Input .....10 to 20 VDC. (21 to 32 VDC and 21 to 56 VDC available on special order)  
 Temperature .....0°C to +50°C operating.  
 Humidity .....95% without condensation.  
 Size .....13.4 inches wide, 10.5 inches high, 16.7 inches deep exclusive of handles.  
 Weight .....Approximately 30 pounds with all channel modules.

#### ORDERING INFORMATION

6005 .....Mainframe, 12 VDC, 9-slot, IEEE-488 data and control interface.  
 6005U .....Mainframe, 12 VDC, 10-slot, USB 2.0 data and control interface.  
 6085 .....Connector Panel, specify input/output module type, example 6085-6013.

#### OPTIONS

6000-S.....SCRAMNet Rehostable Adapter module with 1M memory. Requires one enclosure slot. GPIB interface required.  
 6010-P.....IRIG 106, Chapter 4 PCM data output. GPIB interface required.  
 9000-154 .....PCMCIA IEEE-488 Interface, Windows 2000/XP.  
 9000-156 .....PCI IEEE-488 Interface, Windows 2000/XP.

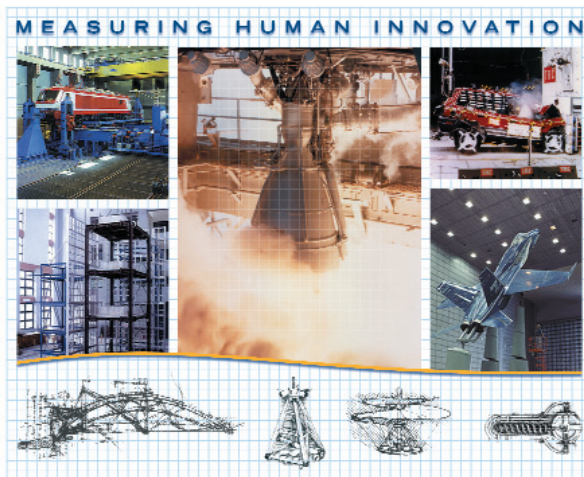
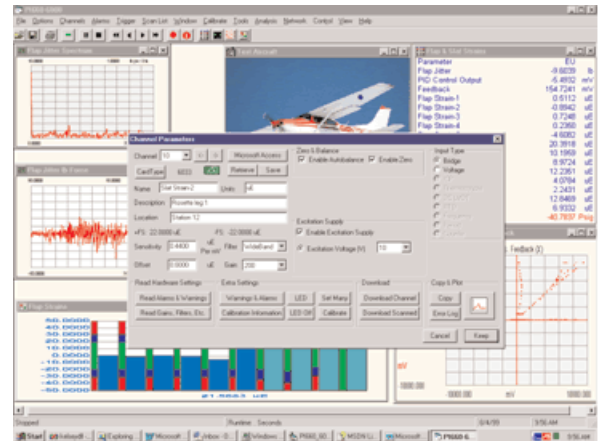


### SYSTEM FEATURES

- Turnkey, single vendor hardware and software solution
- Strain gage, bridge, thermocouple, LVDT, RTD, potentiometer, voltage, current, event, frequency, counts, period and time
- High performance amplifier-per-channel signal conditioning with 16-bit analog to digital conversion
- Programmable excitation, calibration, gain, filter and sample rate
- Automatic calibration using voltage, shunt and substitution
- Automatic zero and balance
- DSP Control Processor with DAC and digital control outputs

### SOFTWARE FEATURES

- Ready to run software that can be modified into a custom application using Visual Basic or other Windows programming language
- System setup using database, spreadsheet or dropdown hardware specific menus
- Real-time graphical displays including oscilloscope, spectrum and annotated bitmap
- Distribute real-time data to networked display workstations
- Export in multiple binary and ASCII formats compatible with most post processing applications



### APPLICATIONS

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|------------------------|-----------------------|
| Structural Testing     | Vibration Monitoring  |
| Automotive Testing     | Nuclear Propulsion    |
| Earthquake Engineering | Ship Hull & Equipment |
| Wind Tunnels           | Power Generation      |
| Engine Testing         | Power Distribution    |
| Mine Safety            | Truck & Bus Chassis   |
| Locomotive & Rail Car  | Flight Testing        |
| Rocket Motor           | Military Vehicles     |
| Launch Monitoring      | Stress Analysis       |
| Explosive Effects      | Materials Testing     |