PDAQ
(Portable Data Acquisition Systems)
Product Family

The PDAQ family of products offers an affordable and flexible solution for field/remote acquisition and structural data analysis. Specifically engineered to be rugged and fully portable, the PDAQ can record up to 1000-samples-per-second or a standard 200-samples-per-second in continuous mode.

The PDAQ product family comes in three different models—PDAQ Basic, Plus and Premium. Each model is light (Premium weighs 35 lbs) and is accepted as a carry-on by most airlines. Power is versatile with an internal battery, external battery and/or AC connection.

Included in some of the PDAQ models is our proprietary Digitexx Client Software. This specialized software package provides a vehicle to both visualize and analyze data in ***real-time***. Special software features include various filter topologies and type combinations. In our Premium model, you can even view information remotely and in ***real-time***.

Whether in the lab or out in the field, consider the Digitexx PDAQ as your ***real-time*** data acquisition system solution.

DIGITEXX
DATA SYSTEMS, INC

PDAQ

Whether looking for a quality, low-cost data acquisition unit or a more robust unit for semi-permanent installation and remote structural monitoring and analysis, the Digitexx PDAQ family of products offer a wide array of options to meet your needs.

PDAQ FAMILY TECHNICAL SPECIFICATIONS

Software

Proprietary Digitexx Software included with the PDAQ Plus and Premium Models

Data Recording	
Recording	On-Demand, Scheduled or Event-Triggered
Trigger Thresholds	User Programmable
No. of Trigger Thresholds	Server Software: Any 10 User-Selectable Channels Client Software: Any 12 User-Selectable Channels
Trigger Type (Digitexx Server)	Channel Weight Mechanism

Real-Time Analysis	
Analysis Performed	FFT, Transfer Function, Acceleration, Velocity and Displacement Premium: Inter-Story Drift and Drift Hysteresis

Independent Filters	
Type**	• Global • Trigger • Integration

Data Conversion	
Original Data File Type	Binary data (for data integrity)
Converted Data File Type***	ASCII

**Prices are in US Dollars and do not include shipping and handling fees. Prices are subject to change.*

***Various Types and Topologies included in software suite.*

****Converted data easily imported into Excel and Matlab. Contact us for other file format needs.*

† Inter-Story Drift is based on FEMA standards (351 & 274) for seismic safety of the buildings.

†† Real-Time Drift Hysteresis algorithm is developed and joint patent-pending with Dr. Wilfred D. Iwan, California Institute of Technology and Digitexx Data Systems.

Hardware

Input Channels	
No. of Channels	16
Configuration	Differential
Full Scale [V]	+/-10, +/-5, +/-1, +/-0.2
Input Type	Voltage

Connectors	
Type	MIL-C-26482
Shell size	12
No. of Pins	10

Environmental	
Operating Temperature	-22 to 55˚C / 7 to 131˚F
Humidity	90% non-condensing

Physical	
Packaging	Rugged composite case
Weight	Basic: 25 lbs Plus: 28 lbs (including laptop) Premium: 35 lbs
Dimensions	10” x 13” x 4.5” 457 x 330 x 170mm

Digitizer	
Type	Basic: 16-bit SAR Plus/Premium: 24-bit $\Delta\Sigma$
Sampling Rate	Up to 1,000 Sps, 200 samples-per-second typical

Power	
Internal Battery	12 VDC Basic/Plus: 7 AH Premium: 14 AH
External Battery	12 VDC (User supplied)
AC Input	110 or 220 VAC, 50/60Hz
Sensor Power	+/-12 VDC, 30 mA/channel max

PDAQ Basic

Perfect for research projects, construction and soft structure monitoring, the PDAQ Basic provides a low-cost data acquisition solution.

Key Features of the PDAQ Basic:

- 16 Channels
- 16-Bit SAR Digitizer
- Weighs 25 lbs

8 Channel Models Available for PLUS or PREMIUM

PDAQ Plus

The PDAQ Plus expands your capabilities by providing a complete software suite that includes: Digitexx Server and Digitexx Client Software for local data recording and analysis.

Key Features of the PDAQ Plus:

- 16 Channels
- Upgraded 24-bit Digitizer for greater resolution
- Built in scheduled and trigger-based recording capabilities
- Laptop with pre-loaded Digitexx Server and Client Software for ***real-time*** data analysis

PDAQ Premium

A complete portable data acquisition and ***real-time*** data streaming solution, the PDAQ Premium is perfect for temporary installations. In addition to the PDAQ Plus features, this model also provides a streamer for gathering structural data remotely.

Key Features of the PDAQ Premium:

- 16 Channels
- 24-Bit Digitizer
- Embedded computer for local data viewing
- Both local and remote real-time analysis: FFT, Transfer Function, Inter-Story Drift†, Drift Hysteresis Loop††, Acceleration, Velocity and Displacement.
- Three (3) Client Software licenses for viewing ***real-time*** data and analysis of your structure remotely from your PC/laptop
- Easy sensor compatibility and software integration:
  - Accelerometers
  - Wind Speed and Direction
  - Displacement (String Pots, LDVTs)
  - Strain (Traditional)
  - Temperature
  - Pressure

About Digitexx

Headquarters
Scottsdale, AZ, U.S.A.

Founded in 2000, and based on many years of experience in earthquake engineering and real-time communications software, Digitexx pioneered the concept of ***real-time structural health monitoring***. Digitexx has since developed ***real-time*** monitoring systems for a variety of industries and applications including bridges, buildings, corporate campuses, wind turbines, oil rigs and more. Our mission is to provide accurate, low-cost ***real-time*** structural health information and analysis immediately to empower structural engineers to make confident, efficient and instantaneous decisions.

Whether on location or managing from a remote office a continent away, Digitexx solutions provide you with the tools to monitor your structures 24 hours a day, 7 days a week, 365 days a year.

DIGITEXX ACCELEROMETERS

Digitexx also provides D110-U and D110-T Force-balanced Micro electro-mechanical (MEMS) Capacitive accelerometers. They feature wide dynamic range, excellent bandwidth and an ultra-low noise floor. For more information go to www.Digitexx.com/Accelerometers.

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