DIGITEXX
DATA SYSTEMS, INC.

Structural Response Monitoring

RTMS-2001RN – Real-Time Monitoring System

This high performance COTS (Commercially Off The Shelf) system is a multi-channel (32) real-time data acquisition and analysis system, with manual and event driven (on any 10 channels) triggering.   With 24-bit resolution, the system has a sampling rate of up to 500 samples per second per channel. Standard features include delta-sigma A/D, pre-event, post-event, and signal filtering. The system also offers an extensive set of remote tools for real-time monitoring, broadcasting streaming data (Internet, TCP, FTP), data retrieval, remote tele-control, and event driven notification.

APPLICATIONS:

Data Acquisition & Analysis for

Structural Response Monitoring
- Earthquakes
- Dynamic Wind Effects
- Temperature Effects
- Blasts

Structural Element Monitoring
- Stress
- Temperature
- Relative Displacement
- Differential Foundation Settling
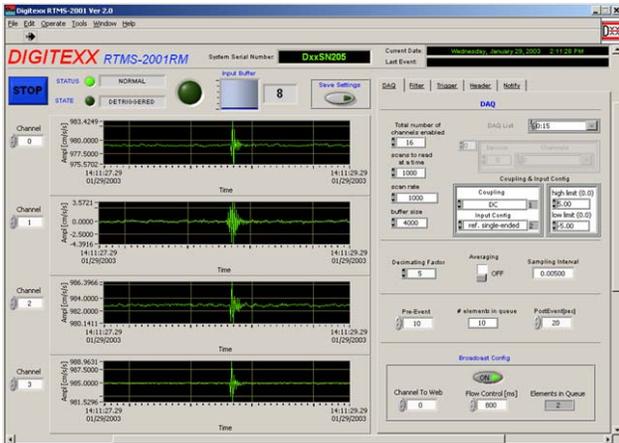- Pressure on Contact
- Acceleration

TECHNICAL SPECIFICATIONS:

INPUT CHANNELS

No. of Channels	32
Type	Differential
Full Scale	±10 V
Input Type	Volts

DIGITIZER

Type	Delta-Sigma A/D
Resolution	24-bit
Dynamic Range	120dB
Sampling Rate	Up to 500 SPS (user settable)
Filters	Multiple Configurations

POWER

AC	110 VAC or 220 VAC w/UPS
Sensors	$\pm$ 12 V, 30 mA/Channel Max

ACQUISITION

On/Off	User Trigger
Programmable	Trigger Threshold
Trigger Type	Channel Voting Mechanism on any 10 (user selected) channels

CONNECTORS

Type	SOURIAU 851 Series
Shell	12
Number of Pins	10
Input	Diff. Or SE

USER INTERFACE

PC	Industrial grade - 850 MHz (min) 512 Mb RAM, 40Gb HD
Operating System	Windows 2000 ®
Server Software	Digitexx Server
Remote Software	Digitexx Client

ENVIRONMENTAL

Operating Temp	0-50 ° C
Humidity	90% max non-condensing
Packaging	19" Horiz. Opening Cabinet
Dimensions	Configuration dependable
Weight	Configuration dependable

Instrumentation Powered By:

NATIONAL INSTRUMENTS

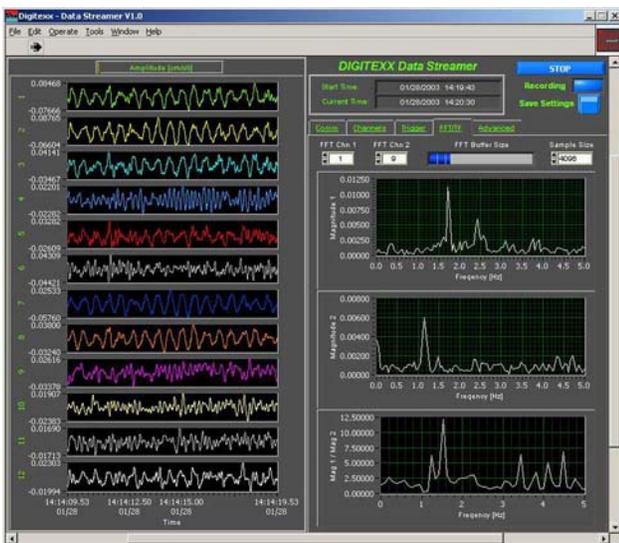# RTMS-2001RN – Real-Time Monitoring System

Server Software

Dxx Custom Real-Time Data Acquisition and Processing Options

- High performance scalable data acquisition software with multiple filtering and data recording and broadcasting options.
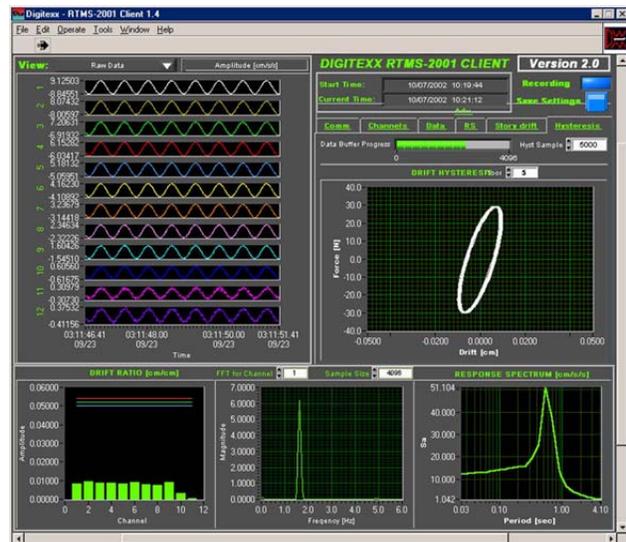
Features

- Distributed multi-client architecture based on a publish/subscribe interface
- Data management subsystem
- Suitable for upgrading existing analog/digital multi-channel recorders to a real-time state-of-the-art system

Data Streamer Client Software

SOFTWARE	
Data Acquisition	Digitexx
Data Monitoring	Digitexx
Data Analysis	Digitexx
Data Format	Dxx or ASCII

Client Software

End-User Oriented Features

- Real-time inter-story drift hysteresis loops
- Real-time Inter-story drift ratio
- Real-time response spectrum
- Real-time transfer function
- Real-time FFT
- On-demand and scheduled remote recording for statistical analysis studies
- Remote event-driven triggering mechanism

RTMS-2001RN