

# RTR-12-03-G (Real-Time Data Acquisition System)

## Overview:

**Digitexx Real Time Embedded System** is a reconfigurable embedded control and acquisition system, which offers an affordable and flexible solution for field/remote acquisition and structural data analysis. Specifically engineered to be rugged and fully portable, the Digitexx RT Embedded System can record up to 1000 samples-per-second or a standard 200 samples-per-second in continuous mode. The system is designed for applications in harsh environments and small places. Size, weight, and I/O channel density are critical design requirements in many such embedded applications. By taking advantage of the extreme performance and small size, Digitexx RT Embedded system is able to deliver unprecedented control and acquisition capabilities in a compact, rugged package with extreme industrial certifications and ratings for operation in harsh industrial environments. Temperature ranges of -40° to 55° C (-40° to 131° F) and a variety of international safety, electromagnetic compatibility (EMC), and environmental certifications and ratings are all available with Digitexx RT Embedded System.

The embedded system has a Real Time operating system which is a huge advantage over using application installed on a computer with a standard operating system, when the system is used in environments where precise timing and long term reliability is crucial. RTOS is able to very reliably execute programs with very specific timing requirements. The system can be set up to **run reliably for days, months, or years** without stopping.



## Technical Information:

### Software

Proprietary Digitexx Software included with Digitexx RT Embedded System

Data Recording	
Recording	Event - triggered
Trigger Threshold	User Programmable
No. of Trigger Thresholds	Server Software: Any 10 User - Selectable Channels
Trigger Type	Channel weight mechanism

Independent Filters	
Type	<ul style="list-style-type: none"> <li>• Global</li> <li>• Trigger</li> <li>• Integration</li> </ul>

### Hardware

Digitexx RT Embedded System is available in two variants: without a sensor and a packet including one sensor.

Input Channels	
No. of Channels	12 - 32
Type	Differential
Full Scale [V]	+/-10, +/-5, +/-1, +/-0.2
Input Type	Voltage

Connectors	
Type	MIL-C-26482
Shell Size	12
Pin Quantity	10

Environmental	
Operating Temperature	-40 to 55°C (-40° to 131° F)
Humidity	90% non-condensing

User Interface	
Informational LED Display	
System Configuration Panel	
Web Application Panel	

Physical	
Packaging	Rugged aluminum enclosure
Weight	12 kg
Dimensions	330x220x180 mm

Digitizer	
Type	24-bit $\Delta\Sigma$
Sampling Rate	Up to 1000 Sps, 200 samples-per-second typical
Filters	Anti-aliasing, Software

Power	
Internal Battery	5 AH
External Battery	12V (optional, user supplied)
AC Input	110/220 VAC
Sensor power	Max 50 mA/channel