

LOW BANDWIDTH ANALOG RECORDERS

Low bandwidth recording, playback and analysis of Analog Instrumentation Data

Reach Technologies Inc. has leveraged 18 years of test and measurement product development experience into its line of Portable Instrumentation Recorders. This proven PC-based signal recording, playback and analysis instrument is accurate, reliable and cost effective. Reach Instrumentation Recorders offer all of the advantages of disk-based recording; including random access to data, high capacity, network data transfer capabilities and media reliability.

REACH
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Features and Options

Analog Input

- Supports 16 to 96 analog channels
- DC to 82 kHz bandwidth
- Continuously variable sample rate: 4 ksps - 216 ksps
- 24-bit quantization
- Single-ended and differential with variable gain
- Simultaneous sampling on all channels

Recording

Huge Storage Capacity

- Recording of all channels at the highest sample rate
- Recording duration limited only by disk size (typically measured in days of recording time)
- Data may be recorded as 32 or 16 bit sample values
- Input and output signal level meters and level history

Archiving

- Recordings are Wave64 files on the NTFS file system on standard PC hard drives
- Removable data drives (2.5" SATA)
- Transfer via GigE network to central server or workstation
- Write to DVD (internal DVD writer)
- Save to USB connected data storage

Other Features

- Removable system drive for classified operating environments
- Signal level display and history display
- Three channel oscilloscope function
- Real-time FFT display of all channels for monitoring
- Real-time high resolution FFT of a single channel

Third party analysis tools supported directly on the recorder (e.g. MATLAB)



www.reachtest.com

Applications

Monitoring

- Acoustic
- Stress/Strain
- Vibration
- Voice

Industries

- Aerospace
- Transportation
- Sonobouy
- Acoustic Research

Portable Chassis Benefits

- Rugged aluminum construction for field applications
- Large 17" LCD screen for clear real-time analysis display
- Remote operation using Remote Desktop or VNC
- Removable hard drive bays for data security

- Small model holds 1 recording disk and up to 8 channels
- Large model holds 6 recording disks and up to 24 channels
- Large model supports hot standby or mirrored system disk
- Supports the multi-chassis synchronization option

Specifications

Analog Interface

- Signal Type ■ Single-ended or differential
- Sample Rate ■ 4k to 216ksps (continuously variable)
- Bandwidth (Input)

- Narrow Bandwidth 48ksps:
 - DC to 23 kHz (-3 dB)
 - DC to 22 kHz (-0.1 dB)
- Wide Bandwidth 96ksps:
 - DC to 46 kHz (-3 dB)
 - DC to 43 kHz (-0.1 dB)
- Ultra Wide Bandwidth 216ksps:
 - DC to 82 kHz (-3 dB)
 - DC to 53 kHz (-0.1 dB)

- Quantization ■ 24 bits
- Connector ■ 2 x High-Density 68-pin
- I/O connector modules available



File Export

Data is recorded as 16 or 32 bit Wave64 files. User specified portions of these files can be exported in Wave64 or Wave format with conversion between 16 and 32 bit sample sizes. This allows smaller segments of long recordings to be easily created for analysis.

Annotation

- Voice
- Bandwidth ■ 10 Hz to 20 kHz (sample rate dependent)
- IRIG-B Time Code
- Level ■ +/- 2 V In/Out

Signal Inputs

- Input Range ■ +/-1, 2, 5, or 10 V software selectable

- Dynamic Range
- Gain Mismatch
- Phase Mismatch
- THD
- Impedance
- Coupling

- 114 dB (unweighted)
- 0.005 dB (0.1%) inter-channel
- +/- 120 nS inter-channel
- -100 dB @ -1 dB signal
- 1 M Ω
- DC with switchable 1 Hz high pass filter

Signal Outputs

- Output Range ■ +/-1, 2, 5, or 10 V software selectable
- THD ■ -41 dB @ -3 dB signal
- Impedance ■ 170 Ω

Event Recording

Events are recorded in the Wave file. Events contain time and a text string. There are three sources of events:

- User Events ■ Local events generated by GUI button press
- Network Events ■ Events sent by the user over a TCP/IP socket connection
- Time Events ■ Automatically generated periodic events: 10 sec. / 1 min. / 10 min. intervals used to preserve actual time in Wave files.

Media

- Disk Media ■ 2.5" laptop drives
- Disk Configuration ■ RAID 0, 1, 5 etc.
- Archive Media ■ AIT, SDLT, Ultrium, USB connected media, DVD

Portable Dimensions

	Large	Small
Depth	23.0 cm	15.2 cm
Width	41.3 cm	41.3 cm
Height	32.4 cm	32.4 cm
Weight	13 kg	9 kg

Power

- 110-240 VAC (50/60 Hz)

* Specifications subject to enhancement