

QUANTERRA Q330HRS

ULTRA-HIGH-RESOLUTION NETWORK-AWARE SEISMIC SYSTEM



A New Performance Standard

The Q330HRS sets a new performance standard in seismological instrumentation, building upon the widely praised ultra-low-power Q330. The Q330HRS breaks the 24-bit performance barrier to extend the capability of advanced instrumentation for research. The Q330HRS remains 100% compatible with our Q330. ([See Q330 data sheet for a general and functional product description.](#))

Telemetry...and Local USB Recording

The Q330HRS supports real-time data telemetry to multiple central sites **and** simultaneous local recording on rugged USB flash media. The peerless performance of the Quanterra 330 in the IRIS/USArray program has established an unchallenged reputation for delivery of high quality data.

High! Resolution

The Q330HRS sets a new standard, requiring 26-bit resolution to fully represent its dynamic range. The 'HR exceeds GSN-class standard set by Quanterra nearly 20 years ago.

Rugged USB Media - MSEED

FDSN-standard recorded on dual USB media. The media are housed in a rugged watertight compartment.

Internet-Ready Industry Standards

The untra-reliable Q330HRS telemetry protocols have been proven in thousands of world-wide installations, and enable the use of off-the-shelf IP equipment and service providers. Dual Ethernet interfaces 10BaseT and 100BaseT are built in. Data recorded on local media may be accessed using simple standard protocols including HTTP, FTP and SSH.

Physical Dimensions

Sealed, aluminum, 14x4x6 in., 16 lbs., rubber endcaps, externally visible status and fault indicators.

Specification	Description
Main Channels	Six: 3 HR 26-bit & 3 standard 24-bit
Dynamic Range HR channels	147-148 dB wideband rms typical Typical 0.02-20Hz 150-151 dB
Input Range	40V P-P at gain=1
Gain	Selectable per channel: 1,20 HR; 1,30 standard
Filtering	Linear or Minimum Phase FIR.
Sample Rates	200, 100, 50, 40, 20, 10, 1. Independently available any channel.
Time Base	Precision TCXO, phase locked to GPS. No adjustment.
DSP/CPU	ADSP-2189M & EP9302
Serial Ports	1 console port up to 115kbaud
Telemetry	Full Duplex, efficient positive acknowledge with advanced error control. Industry-standard IP over serial and Ethernet interfaces. Burst or continuous.
Media	Dual USB up to 32G total, failover. -40 +70 rated media available.
Format and Protocol	32-bit integer, Level 2 compressed 1-second packets. Published protocols operate with numerous major application software packages.
Temperature	Fully specified -10 to +50C Operative -40 to +70C
Sensor Control	Calibrate step, sine, or random. Recenter, on-command
Additional State-of-Health	Temperature, DC voltage, GPS status, Sensor boom position (6 chan)
Memory	32Mb RAM standard
Ethernet Network	Dual Ethernet (10BT & 10/100BT) Full IP Protocol Stack (Linux)
Serial Network	2 serial network and 1 console interface up to 115 kbaud.
Wireless	IrDA interface supported.
Power	<2.0 W avg. 12VDC 3-channels on <2.5 W avg. 12VDC 6-channel on

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PRELIMINARY SPECIFICATIONS, SUBJECT TO CHANGE