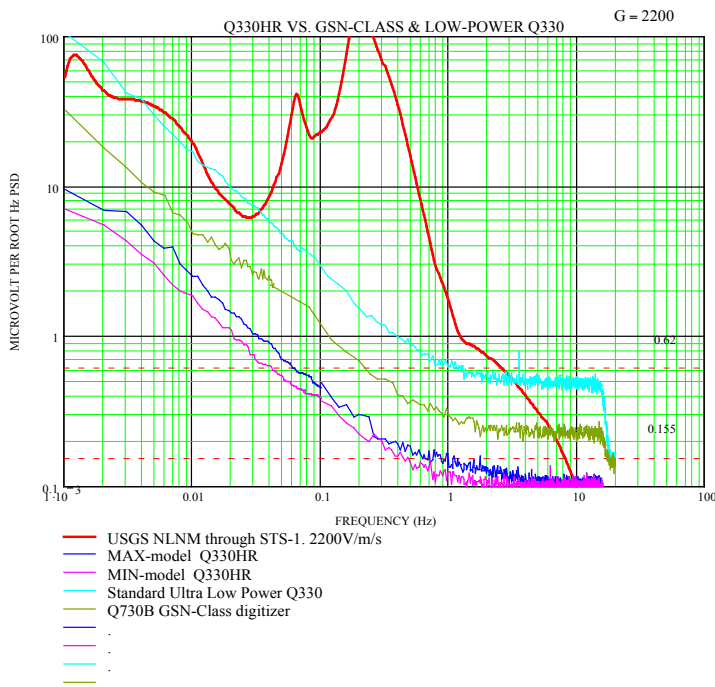# Q330HRS

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.

Q330HR VS. GSN-CLASS & LOW-POWER Q330

- USGS NLNM through STS-1. 2200V/m/s
- MAX-model Q330HR
- MIN-model Q330HR
- Standard Ultra Low Power Q330
- Q730B GSN-Class digitizer

FEATURES

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 ultra-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.

QUANTERRA

A Division of Kinemetrics

⚙ SPECIFICATIONS

Channels
3 channels 26-bit and 3 channels 24-bit; option for all 6 channels 26-bit available bandwidth-optimized 32-bit and 64-bit data paths

Dynamic Range
0.02-20Hz, 148-149 dB typical
0.02-10Hz, 151-152 dB typical
0.02-7Hz, 152-154 dB typical

Input Range
40V P-P at gain=1

Gain
Selectable per channel: 1,20

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 inter faces. Burst or continuous.

Media
Dual USB up to 64GB 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 +50° C
Operative -20° to +65° C

Sensor Control
Calibrate step, sine, or random.
Recenter, on-command

Additional State-of-Health
Temperature, DC voltage, GPS status, Sensor boom position (6chan)

Memory
64MB RAM standard

Ethernet Network
Dual Ethernet (10BaseT & 10/100BaseT)
Full IP Protocol Stack (Linux)

Wireless
IrDA interface supported.

Power
<2.0 W avg. 12VDC 3-channels on
<2.5 W avg. 12VDC 6-channel on

*Specifications subject to change without notice