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.

## 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.

## SPECIFICATIONS

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|---|---|
| **Main Channels** | Six: 3 HR 26-bit & 3 standard 24-bit |
| **Dynamic Range** | 147-148 dB wideband rms typical |
| **HR Channels** | 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. |

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| **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 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 |

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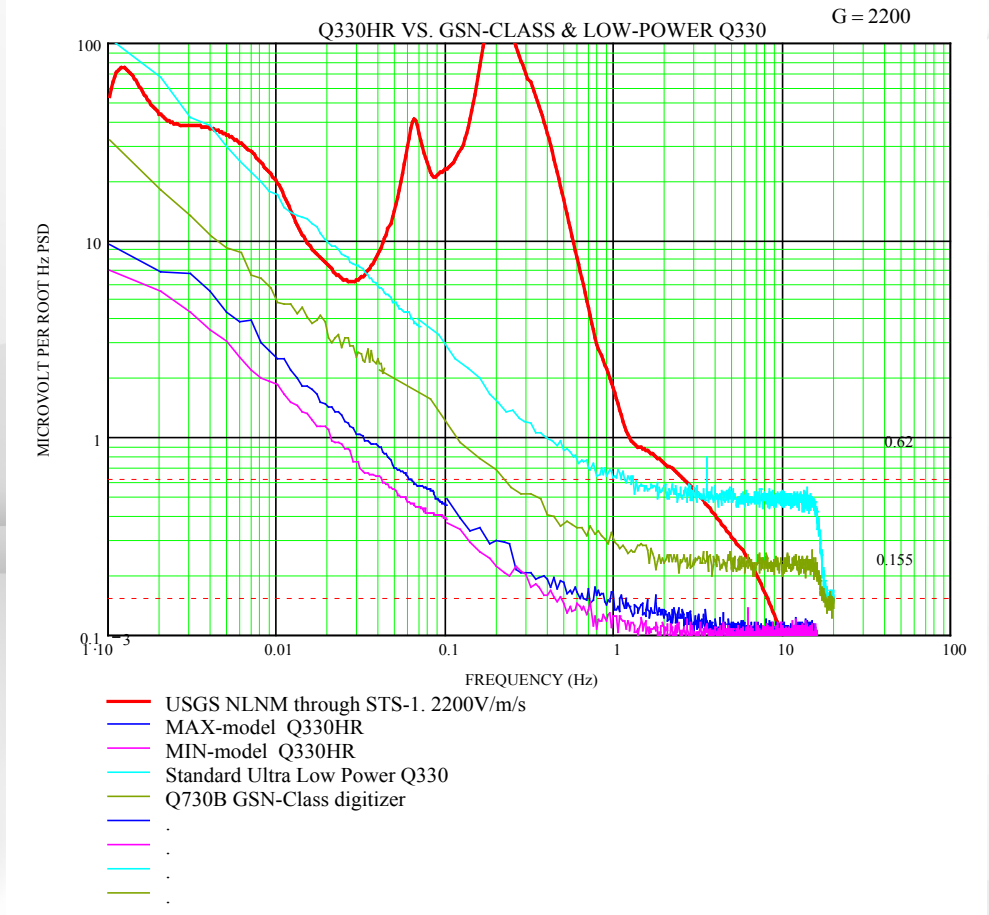
## SPECIFICATIONS

| | |
|---|---|
| **Sensor Control** | Calibrate step, sine, or random.<br>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) |
| **Serial Network** | 2 serial network ports<br>up to 115 kbaud. |
| **Wireless** | IrDA interface supported. |
| **Power** | <2.0 W avg. 12VDC 3-channels on<br><2.5 W avg. 12VDC 6-channel on |




The Kinemetrics facility in Pasadena, CA has a certified ISO9001 Quality Management System.

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