

QUANTERRA Q330S

LOW-POWER HIGH RESOLUTION INTEGRATED SEISMIC SYSTEM



General Description

The Q330S is an advanced 3 or 6 channel broad-band, high resolution ultra-low-power seismic system incorporating Quanterra's proven IP networking technology and super rugged USB flash recording. The Q330 uses Quanterra's exclusive patented (US Patent 4866442, Japan Patent 2787445, others pending) delta-sigma 24-bit A/D with DSP, and includes 32Mb RAM, GPS receiver, USB recording, power management, sensor command/control, and an advanced telemetry application for reliable data delivery.

Telemetry...and Local USB Recording

The Q330S supports real-time data telemetry to multiple central sites and simultaneous local recording on rugged USB flash media. The peerless performance of the Quanterra Q330 in the IRIS/USArray program has established an unchallenged reputation for delivery of high quality data.

Rugged USB Media - MSEED

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

Low! Power

Incorporating the latest low-power technology, the Q330S achieves integrated capability with an average power requirement of <0.75W, including recorder & GPS!

Internet-Ready Industry Standards

The ultra-reliable Q330S 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.

Comprehensive Sensor Control

The Q330S is a seismological instrument, not a digitizer alone. Sensor control interface, including advanced sensor calibration, and sensor identification-tag support is built in.

Streamlined Remote Administration

The Q330S is designed for simple network maintenance and administration, before, during, and after deployment. Internet security is built-in. Proven UDP and TCP communications modes are standard.

Specification	Description
Channels	3- or 6-channel
Dynamic Range	132-135 dB wideband RMS typical Typical band-limited 136 dB
Format	32-bit integer, Level 2 compressed 1-second packets
Input Range	40V P-P at gain=1
Gain	Selectable per channel: 1,30
Filtering	Linear or Minimum Phase FIR.
Sample Rate	200, 100, 50, 40, 20, 10, 1 Other rates available.
Time Base	Precision TCXO, locked to GPS. No adjustment.
DSP/CPU	ADSP-2189M & EP9302
Telemetry	Full Duplex, efficient positive acknowledge with error control. UDP or TCP IP over Ethernet. Burst or continuous. Operates with major application software.
Temperature	Fully specified -20 to +50C Operative -40 to +70C
Sensor Control	Calibrate step, sine, or random. Recenter, on-command or auto
Operational Data	Temp, DC voltage, GPS status, Sensor boom position (6 chan)
Memory	32Mb RAM standard
Network	Dual Ethernet (10BT & 10/100BT) Full IP Protocol Stack (Linux)
Serial Ports	1 console ports up to 115kbaud.
Media	Dual USB up to 32G total, failover. -40 +70 rated media available.
Wireless	IrDA interface supported.
Power	<0.6 W avg. 12VDC 3-channel <0.8 W avg. 12VDC 6-channel Add 1.2W for continuous operation. Other dynamic dependencies.
Physical	Sealed, Aluminum, 17 X 4 X 6 in., 9 lbs., Rubber endcaps, Externally visible status and fault indicators.

Q330S - QUANTERRA, INC. – 325 Ayer Rd – Harvard MA, USA 978-772-4774

PRELIMINARY SPECIFICATIONS, SUBJECT TO CHANGE

Rev A.