

QUANTERRA

A Division of Kinemetrics

Q330S+

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VERY LOW-POWER HIGH-RESOLUTION INTEGRATED SEISMIC SYSTEM

The Q330S+ is the newest member of the world-standard Q330 family, and is an advanced 3 or 6 channel broad-band, high resolution seismic system incorporating Quanterra's proven IP networking technology into a very low-power field package. The Q330S+ leverages Quanterra's extensive experience in ultra-reliable seismic systems design, and combines sampling up to 1kHz with ultra-high low-frequency resolution.

The Q330S+ supports real-time data telemetry to up to 3 independent central sites *and* internal, reliable local low-power USB recording system, *simultaneously*. Recording may be cycled to conserve power.



FEATURES

Low Power

Incorporating the latest low-power technology, the Q330S+ achieves integrated capability with an average power (cycled mode) requirement of ~0.75W, including recorder & GPS.

Internet-Ready Industry Standards

The telemetry protocols use industry-standard stateless IP communications over UDP or TCP transport layers, enabling the use of off-the-shelf IP equipment and service providers. The Q330S+ is designed for simple and powerful network maintenance and administration.

Comprehensive Sensor Control

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

SPECIFICATIONS

Channels	3, optional 6-channel, bandwidth-optimized 32-bit and 64-bit data paths
Dynamic Range	Typical~138dB wideband RMS
Format	32-bit integer, Level 2 compressed 1-second packets
Input Range	40V P-P at gain=1
Gain	Selectable per channel group: 1, 8, 32
Filtering	Linear or Minimum Phase FIR.
Sample Rate	1000, 500, 250, 200, 100, 50, 40, 20, 10, 1. Other rates available.
Time Base	Precision TCXO, locked to GPS. No adjustment.
Telemetry (real-time)	Full Duplex, low-latency efficient positive acknowledge with error control. UDP/IP over serial and Ethernet. Burst or continuous. Operates with major application software.
Temperature	Fully specified -20 to +50C Operative -40 to +70C
Data Storage and Retrieval	2 PC/MAC/Linux-formatted removable USB media, 16G each (128G in development). Industry-standard. Standard HTTP, FTP and SSH servers for remote retrieval.
Sensor Control	Calibrate: step, low-THD sine, or random. Recenter, on-command.
Operational Data	Temp, DC voltage, GPS status, Sensor boom position (6 channels)
Memory	64MB RAM standard
Network	Ethernet (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.

Power	12VDC nominal ~0.7W avg. 3-channel (cycled) ~1.0W avg. 6-channel (cycled) ~2.4W avg. 6-channel (continuous)
Physical	Sealed, Aluminum, 17 X 4 X 6 in., 10 lbs., Rubber endcaps, Externally visible status and fault indicators.