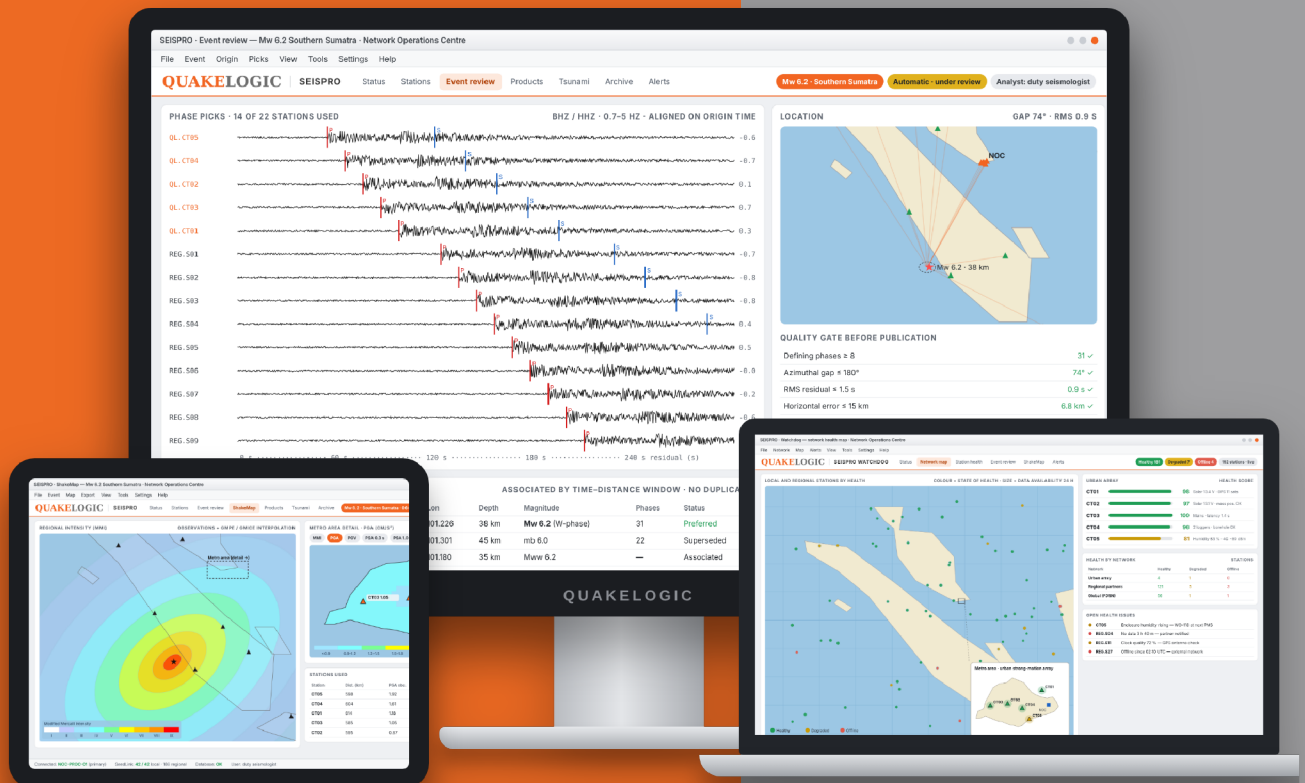


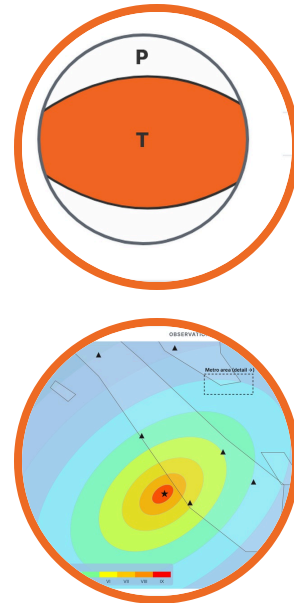
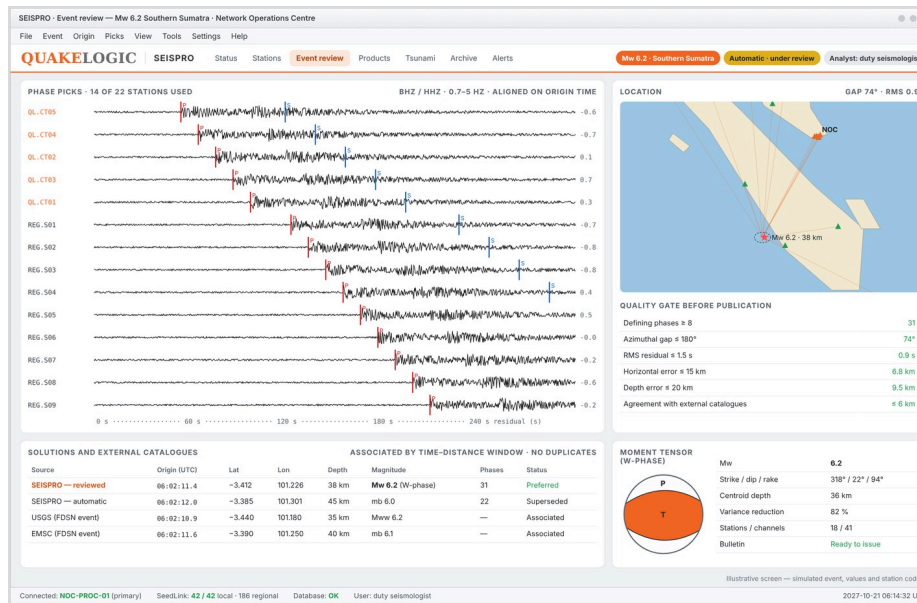
QUAKELOGIC

SEISMIC NETWORK MONITORING SOFTWARE



SEISPRO

Seismic Network Monitoring & Earthquake Information Software



FROM GROUND MOTION TO PUBLIC BULLETIN IN MINUTES

SEISPRO is QuakeLogic's end-to-end software suite for seismic and strong-motion networks. Built on the open-source SeisComP core, it adds acquisition and archiving, ML-assisted event detection, moment tensors, strong-motion processing, ShakeMap, tsunami assessment, multi-channel dissemination and a full network health watchdog. It runs on your own servers, in high-availability tiers, under a perpetual licence with no runtime fees.

- Automatic location, magnitude and bulletin typically within two minutes of origin
- One integrated console for analysts, operators and maintenance teams
- Open data formats and standard services — no vendor lock-in
- Perpetual licence, on-premise deployment, full data sovereignty

STANDARD FEATURES »

- SeedLink real-time acquisition
- Gap-filling archive (SDS / miniSEED)
- FDSNWS dataset, station, event
- ML-assisted phase picking
- NonLinLoc probabilistic location
- ML, mb, Ms, Mw(mB), Mwp magnitudes
- W-phase moment tensor
- Strong-motion parameters
- ShakeMap (MMI, PGA, PGV, PSA)
- Tsunami assessment module
- E-mail, SMS, fax & REST alerts
- QuakeML / XML bulletins
- Web operations console
- Station state-of-health watchdog
- Network health map
- Data-quality & noise PSD QC
- SLA reporting & primary / secondary HA
- Role-based access, TLS 1.2+

KEY FEATURES

- **Real-time acquisition** — SeedLink ingest from local and international stations with automatic back-fill from datalogger buffers after link outages.
- **Automatic event detection** — ML-assisted pick scoring, phase association and NonLinLoc location with a quality gate before anything is published.
- **Source characterisation** — W-phase and regional full-waveform moment tensors with Mw, centroid depth and focal mechanism.
- **Strong-motion engineering** — corrected accelerograms, PGA, PGV, PGD, Arias intensity, CAV and response spectra using USGS PRISM methods.
- **ShakeMap** — observed and predicted shaking merged into MMI, PGA, PGV and spectral maps in GIS-ready formats.
- **Tsunami assessment** — on-the-fly simulation plus scenario database, forecast-zone threat levels and tide-gauge confirmation.
- **Dissemination** — templated bulletins over e-mail, SMS, fax, SFTP and REST, with delivery tracking and retries.
- **SEISPRO Watchdog** — live state of health for every server, service, station and datalogger, with SLA reports and work orders.

PRODUCT FEATURES

Acquisition & Archive

SeedLink client/server, gap-free archive, SDS miniSEED, StationXML inventory, FDSNWS

Detection & Location

STA/LTA and AIC pickers with ML scoring, S-phase picking, NonLinLoc, 3-D velocity model support

Magnitude & Source

ML, MLv, mb, mB, Ms, Mw(mB), Mwp, W-phase and regional full-waveform moment tensors

Strong Motion & ShakeMap

PRISM-based processing, response and Fourier spectra, MMI / PGA / PGV / PSA 0.3, 1.0, 3.0 s maps

Tsunami

easyWave-class simulation, pre-computed scenarios, forecast zones, tide-gauge picking, bulletins

Dissemination

E-mail, SMS, fax gateway, SFTP, HTTP/REST, QuakeML and configurable XML schemas

Operations & QC

Web console, SOH watchdog, noise PSD vs NHNM/NLNM, availability and latency SLAs

For more information about the features, specifications, and available configurations of the SEISPRO, please contact QuakeLogic.

SYSTEM CONFIGURATION

COMPONENT	CONFIGURATION
Deployment	On-premise, customer-owned servers
Operating system	Rocky Linux 9 (RHEL-compatible)
Architecture	3 tiers: acquisition, processing, exchange
Redundancy	Primary / secondary sites, automatic failover
Staging	Separate test environment for patches and changes
Data input	SeedLink, miniSEED, FDSNWS, tide-gauge feeds
Data output	SeedLink, FDSNWS, QuakeML, GeoJSON, XML
User interface	Web console plus desktop analyst tools
Security	RBAC, TLS 1.2+, CIS-based hardening, audit log
Backup	Nightly configuration and database backups
Time reference	NTP / PTP to GNSS time server
Licence	Perpetual, site-wide, no runtime fees

PERFORMANCE & CAPACITY

SPECIFICATION	VALUE
Network size	Local arrays to national networks
Real-time streams	Hundreds of stations, thousands of channels
Sample rates	1 to 1,000 sps per channel
Acquisition latency	Typically < 2 s station to server
Origin to first bulletin	Typically < 2 min (regional events)
ShakeMap generation	Typically < 5 min after origin
Tsunami simulation	On-the-fly run in under 1 min
Archive retention	Limited only by installed storage
Availability target	≥ 99.5 % with HA configuration

OPTIONAL FEATURES & ACCESSORIES

TSUNAMI MODULE

Adds real-time tsunami simulation, scenario database, forecast-zone threat levels and tide-gauge confirmation to the SEISPRO workflow.

HIGH-AVAILABILITY CLUSTER

Turnkey primary and secondary server sets, pre-installed and hardened, with automatic failover and remote monitoring.

TRAINING & COMMISSIONING

On-site installation, acceptance testing and role-based training for analysts, operators and system administrators.

ANNUAL SUPPORT

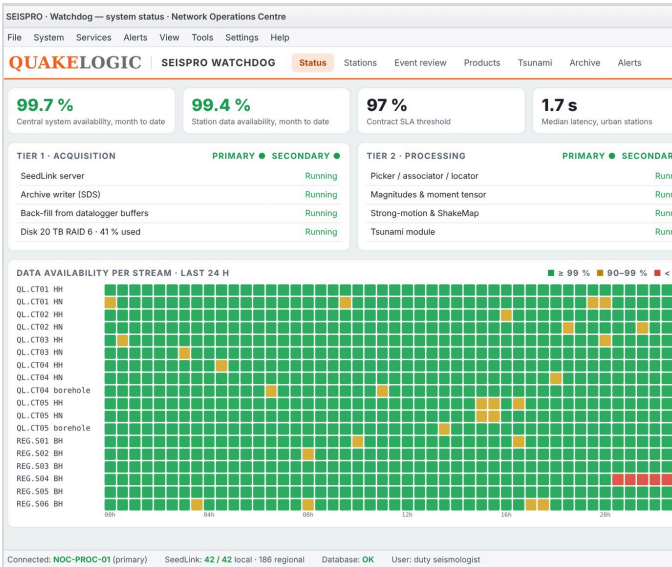
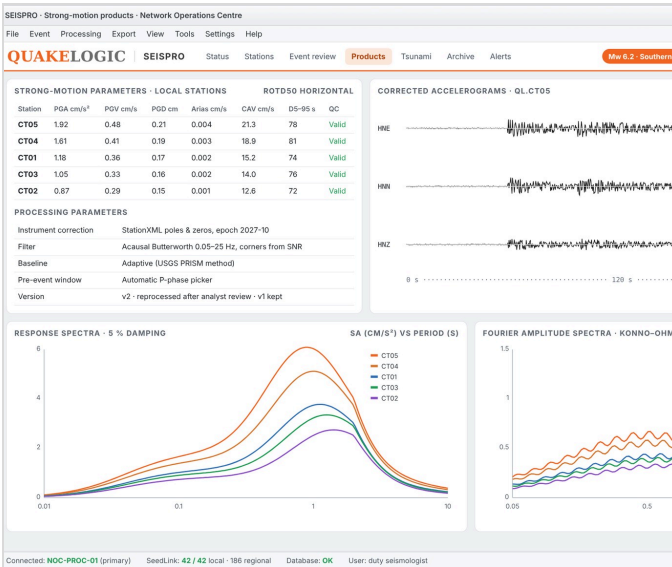
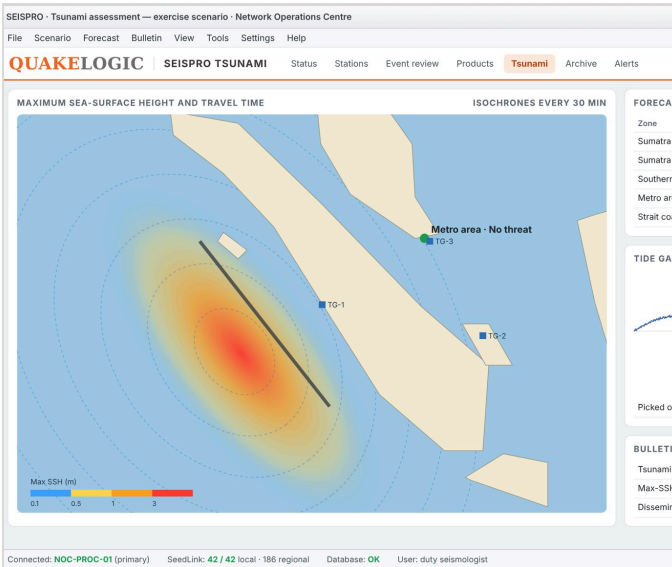
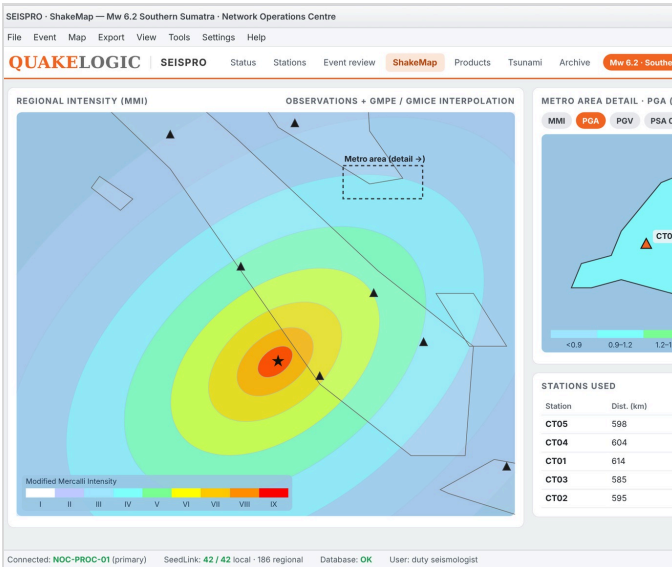
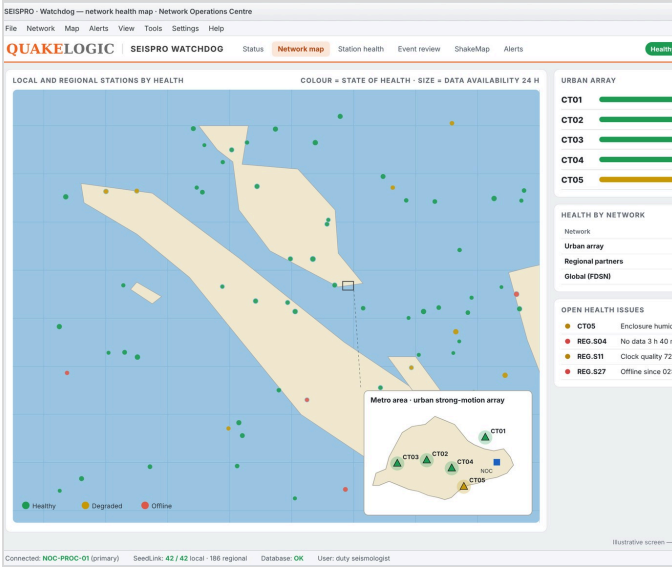
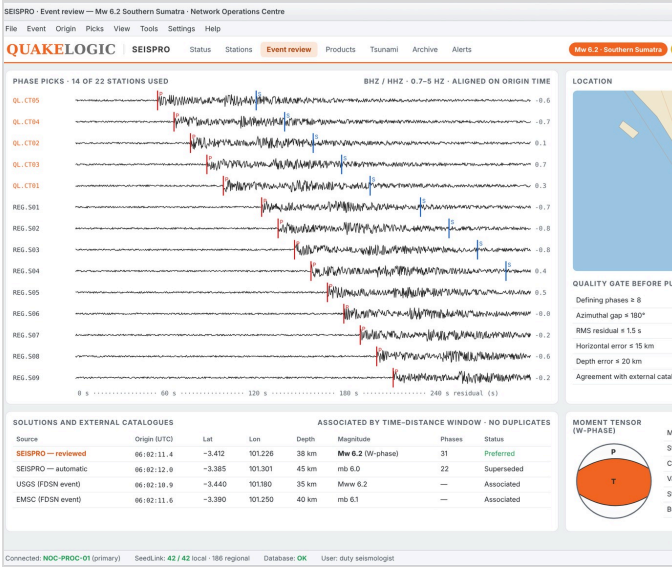
Software updates, remote monitoring, help-desk response SLAs and preventive maintenance for software and stations.

TECHNICAL SPECIFICATIONS

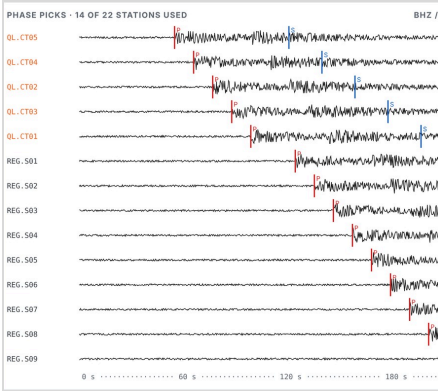
SPECIFICATION	DESCRIPTION
Product	SEISPRO seismic network software suite
Core framework	SeisComp (open source), extended by QuakeLogic
Operating system	Rocky Linux 9 / RHEL 9
Deployment	On-premise; virtual or bare-metal
Real-time protocol	SeedLink v3 / v4
Archive format	miniSEED in SDS structure
Inventory	StationXML, dataless SEED
Web services	FDSNWS dataselect, station, event
Event format	QuakeML 1.2, SC3ML, CSV
Waveform export	miniSEED, SAC, ASCII
Pickers	STA/LTA, AIC, ML pick scoring, S-picker
Locator	NonLinLoc, LOCSAT
Magnitudes	ML, MLv, mb, mB, Ms, Mw(mB), Mwp
Moment tensor	W-phase; regional full waveform
Strong-motion methods	USGS PRISM processing
SM parameters	PGA, PGV, PGD, Arias, CAV, duration
Spectra	Response (5 % damping), Fourier

SPECIFICATION	DESCRIPTION
ShakeMap layers	MMI, PGA, PGV, PSA 0.3, 1.0, 3.0 s
ShakeMap outputs	PNG, PDF, GeoJSON, KML, Shapefile
Tsunami engine	easyWave-class simulation + scenario DB
Tsunami outputs	Max SSH, travel time, zone threat levels
Alert channels	E-mail, SMS, fax gateway, SFTP, REST
Bulletin templates	Configurable text, XML, QuakeML
Data-quality QC	Noise PSD vs NHHM / NLNM, gaps, spikes
Station SOH	GPS lock, clock, power, temperature, humidity
Sensor SOH	Mass position, calibration status
Telemetry SOH	Latency, 4G / link signal, storage
SLA reporting	Central and station availability, monthly
Maintenance	Work orders linked to station alarms
Access control	Role-based user accounts, audit log
Encryption	TLS 1.2+ for all web and API traffic
Redundancy	Primary / secondary, automatic failover
Licence	Perpetual, no runtime or per-station fees
Support	Remote monitoring and annual support plans

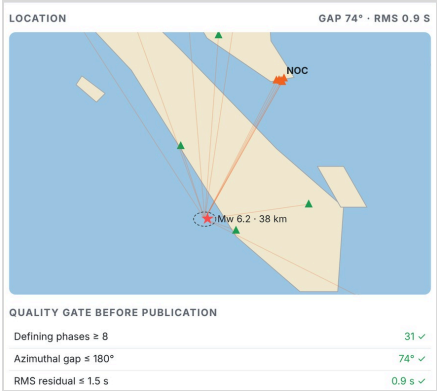
PRODUCT GALLERY



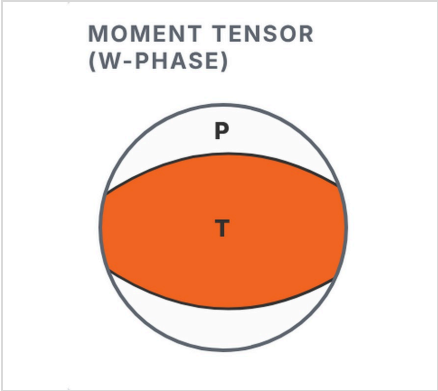
PRECISION COMPONENTS & CONFIGURATION



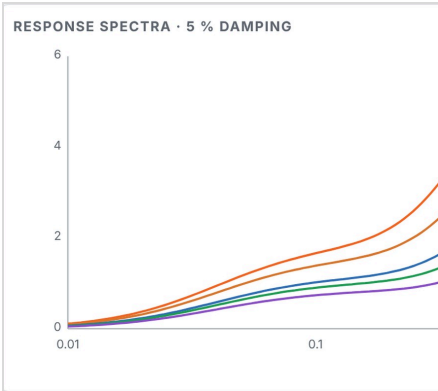
ML-ASSISTED PHASE PICKING



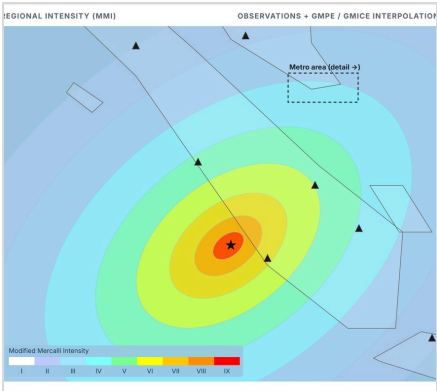
AUTOMATIC LOCATION



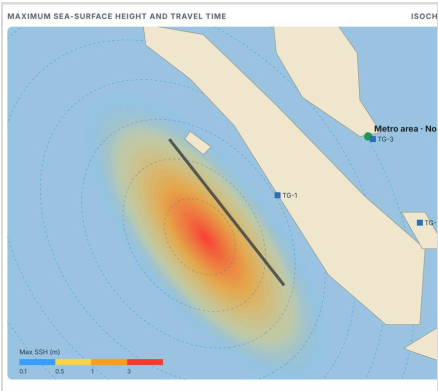
W-PHASE MOMENT TENSOR



RESPONSE SPECTRA



SHAKEMAP INTENSITY



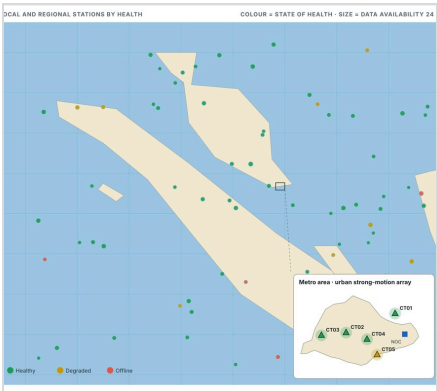
TSUNAMI ASSESSMENT

SEISMIC NETWORK STATE OF HEALTH · 5

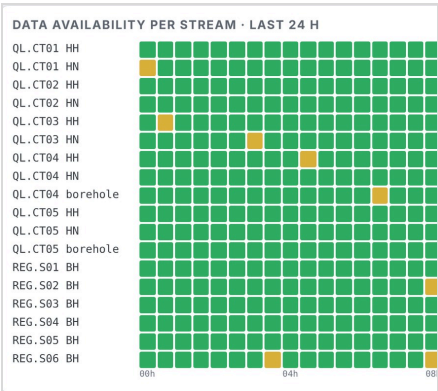
Station	Logger	Latency
● CT01	SL26-A	1.6 s
● CT02	SL26-A	1.9 s
● CT03	SL26-A	1.4 s
● CT04	SL26-A/B	1.7 s
● CT05	SL26-A/B	2.4 s

CT05 — enclosure humidity rising (63 %) and we

STATION STATE OF HEALTH



NETWORK HEALTH MAP



DATA AVAILABILITY

Corporate Headquarters:

QUAKELOGIC INC.

2008 Opportunity Dr., Suite 130
Roseville, CA 95678, USA

Monday – Friday

9:00 AM – 5:00 PM (PST/PDT)

Contact Us:

Phone: +1 (916) 899-0391

Email: sales@quakelogic.net

Web: products.quakelogic.net

About QuakeLogic:

QuakeLogic Inc. is a California-based engineering and technology company providing innovative, reliable, high-quality solutions to customers worldwide.

Our Commitment

We are committed to quality, innovation, and customer satisfaction – building lasting partnerships through reliable solutions and dependable support.

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