QuickView Data Visualization

The GeoCloud data management system can acquire hundreds of measurements per hour. QuickView provides quick graphical access to those measurements via a secure project website.

Quickview Advantages

Secure Access: The QuickView website supports two-factor authentication and three levels of user permissions. Authorized users get quick, secure access to data wherever there is an internet connection.

Continuous Availability: QV operates 24/7, automating data retrieval, importing and processing readings, checking for alarms, and generating plots and reports.

Consistent Calculations: QV processes incoming readings by applying calibration factors, baseline readings, and calculation instructions stored in a sensor table.

Consistent Presentations: Views, plots, and reports can be preconfigured to ensure consistent scales, terminology, and sensor selection. Values are updated automatically.

Wide Compatibility: GeoCloud's specialized preprocessing applications extend QV's functionality, provide compatibility with nearly any type of monitoring device, and eliminate data silos and the need to switch applications to view specialized data.

Centralized Data Storage: QV stores all types of project-related data to maintain traceability and simplify access, including action plans, calibration sheets, reports, journal entries, borehole logs, and photos.

Quickview can provide multiple views of the site. CAD drawings, images, or maps can serve as base layers for a view. The screenshot above uses a satellite view. Layers for sensors and graphs are created automatically as needed.

Sensors have their own layer. Labels show sensor ID, current reading, and alarm status. The magnified inset shows sensors with alarm flags. Views can be zoomed and each type of sensor can be toggled on and off for easier viewing. view.
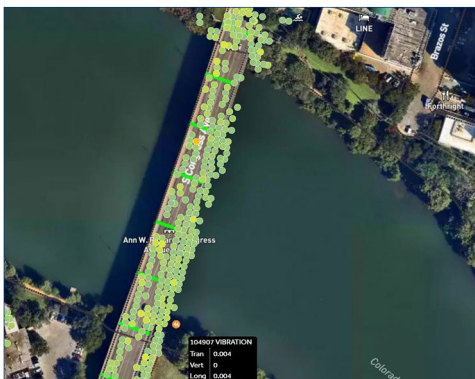
QuickView can display processed inSAR data
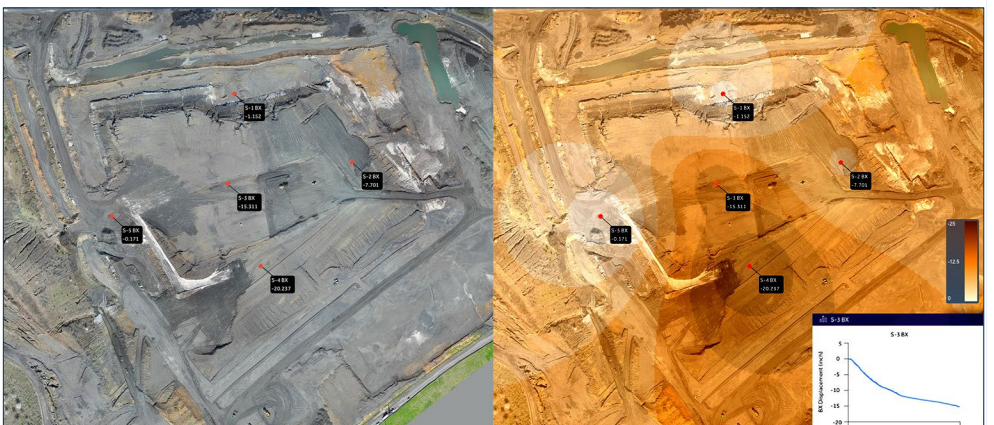
The view on the left shows five settlement sensors. The same view on the right has a contour overlay that provides a visual understanding of settlement. The small trend plot at right pops up when the cursor is rolled over a sensor.

Sensor Compatibility

QV can work with any type of sensor. In addition to preprocessing modules supplied by GeoCloud, QV has a built-in UI for defining new sensors and data formats.

Processing

Running on GeoCloud servers, QV stores and applies calibration factors to convert raw data to engineering units. QV also provides:

Easy baseline management

Most mathematical functions

Virtual sensors

Cumulative displacement calculations

Averaging of data in charts

Slope and deflection ratios

Cant and twist calculations

Presentation

Full geospatial coordinate support

Multiple views of the project

Maps and images as base layers

Client logos on views

Contour overlays

Plot Types

Time plots

Profile plots (inclinometers, etc)

Pre-configured plots for standardization and reports

On-the-fly plots for investigations

Pop-up plots when cursor touches sensors

Alarms

Threshold alarms and watchdog alarms

Annotations

Advanced annotation functions

Alarm trigger values in plots

Predicted deformations

Tunnel alignments & TBM movements

Archives

Installation reports

Calibration certifications

Photographs

Alarm logs

Raw data

Security Features

Hosted on Microsoft Azure platform in US

Azure core services uptime is 99.99 %

Data encrypted in transit and at rest

Daily backups of project website

Two-factor authorization for logins

Three permission levels for users

Graphs can be created from any sensors displayed on a view. Select the sensors and then click the View Graph command. QuickView automatically applies Y scales and labels for different types of sensors. The example above shows AMTS displacement data and temperature. Scales and date ranges can be changed on-the-fly.

QuickView also provides definable graphs with preselected sensors and scaling. These graphs are available for immediate use, since no adjustments are needed. QuickView PDF reports are generated using these pre-defined graphs.

QuickView is fully mobile compatible. Views and graphs load quickly and can be zoomed.