

3D Tracker-LT

Deformation Monitoring System

ADVANTAGES:

- +/-5 mm position accuracy
- Hourly position updates
- Tracks GPS and GLONASS satellites
- No on-site computer
- Low power consumption



An antenna mounted on a cast concrete column at a mountain top installation.

3DTracker-LT is a powerful solution for monitoring the movement and deformation of large natural and manmade structures. Typical applications include landslides, mines, buildings, bridges, dams and volcanoes. 3D Tracker-LT processes signals to both the GPS and GLONASS satellite constellations, which together comprise the Global Navigation Satellite System (GNSS.)

A 3D Tracker-LT system consists of multiple monitoring stations, each of which receives signals from the GNSS. Each station relays the signals to our Gemeni software package, via Wi-Fi and the Internet. Gemeni calculates 3-dimensional station position to an accuracy of ± 5 mm and updates this position hourly. The monitoring stations are of two types, remote and reference. Remote stations are located on the ground or structure to be monitored.

Reference stations are placed on stable ground and provide the stable reference needed to track movement with high accuracy. In a typical installation only one reference station is needed. Baseline lengths—the distance between the reference station and any remote station—can be up to 5 km and still maintain the specified system accuracy of ± 5 mm.

After Gemeni computes the positions of the remote stations, it forwards those positions to the Atlas server in the AGI data center. Atlas is a web-based data reporting service that delivers monitoring results via a password-protected web page accessible from your web browser. Atlas also can be programmed with alarm thresholds to notify you by email when movement limits are exceeded.

At the heart of AGI's 3DTracker-LT system is the OEMStar™ L1 GPS+GLONASS receiver. The OEMStar features up to 14 channels of L1 GPS only, GLONASS only or combined GPS and GLONASS code and carrier phase tracking for increased positioning accuracy and satellite availability. In addition, OEMStar supports NovAtel's Pulse Aperture Correlator (PAC) technology which optimizes performance in high multi-path environments.

The 3D Tracker-LT receiver, Wi-Fi radio, and associated electronics are housed in a rugged NEMA 4X enclosure and are fully protected against environmental extremes. AGI's monitoring



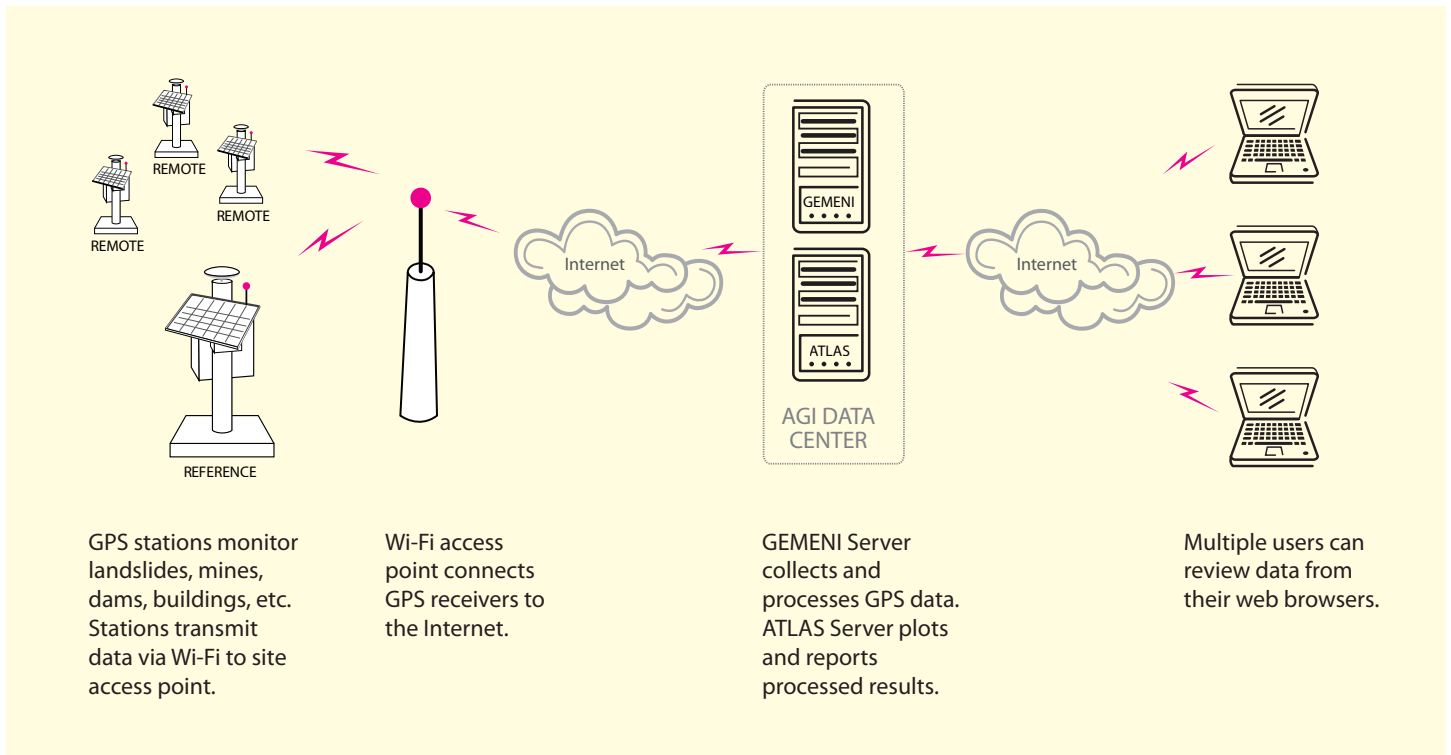
A standard pole mounted installation on a Hydro dam.



A mobile installation for short-term monitoring.

capabilities include a variety of permanent and mobile monument designs that are suitable for a broad range of project conditions.

Contact us today for detailed information about using 3D Tracker-LT to monitor your site.



| PERFORMANCE SPECIFICATIONS | |
|----------------------------|---|
| ACCURACY: | +/- 5 mm using an hourly baseline solution |
| ENVIRONMENTAL: | -40 °C to +85 C |
| POWER CONSUMPTION: | <0.5 W |
| TIME TO FIRST FIX: | 65 seconds (cold start) or 35 seconds (hot start) |



3D Tracker-LT L1 GPS + GLONASS receiver.

Ordering Information

| | |
|-----------|--|
| Atlas | Web monitoring service for data review, alarming and reporting. |
| 804-00003 | Reference/Remote GPS monitoring station, L1 GPS+GLONASS. Complete with receiver, battery, solar panel, Wi-Fi radio and necessary antennas. |
| 804-00004 | Site Wi-Fi Access Point (2.8GHz), AT&T. Complete with rugged Wi-Fi access point, Raven X CDMA modem (for Internet access), battery, solar panel and all necessary antennas. |
| 804-00005 | Site Wi-Fi Access Point (2.8GHz), Verizon. Complete with rugged Wi-Fi access point, Raven X CDMA modem (for Internet access), battery, solar panel and all necessary antennas. |

APPLIED GEOMECHANICS, INC.

140 Chestnut St.
 San Francisco, CA 94111 USA
 T: +1-415-364-3200
 F: +1-415-861-1448
 geomechanics.com
 A CARBO Company

