

xInc

DIGITAL INCLINOMETER UNIT

Extend the Core of Structural Intelligence
High-precision, synchronized inclination for static and dynamic behaviour—built for permanent SHM in harsh environments.

Why xInc

- High-precision tilt with optional accelerometer channels—static + dynamic in one unit.
- Synchronized networks via GPS or DigiSync® for sub-ms alignment.
- No data gaps: Store&Forward® + local SD/eMMC recording (MiniSEED).
- Embedded web interface—setup, charts, logs, diagnostics, OTA updates.
- Rugged IP67 aluminum housing with leveling hardware for fast installs.
- Integrates with xPlorer®, Voyager®, Nexus, Vista, and Observer.

What makes it different

- Precision down to $\pm 0.005^\circ$ with ultra-low noise; ranges to $\pm 10^\circ$ (HP) or $\pm 90^\circ$ (LP).
- Flexible modes: inclinometer-only or combined tilt + vibration.
- User-selectable sampling 1-1000 SPS for trends or events.
- Clean signals at the source: integrated low-pass/anti-alias filtering.
- Ethernet standard; optional Wi-Fi, DigiMESH®, GSM/4G for any topology.

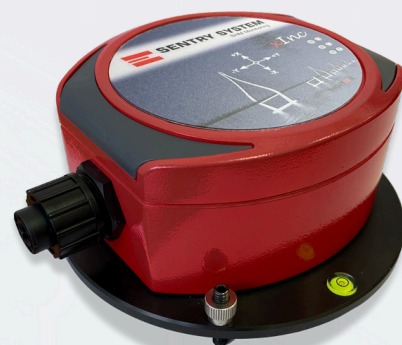
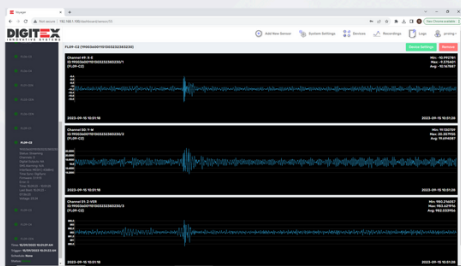
Made for

Dams • Bridges • High-rises • Towers & wind turbines • Tunnels • Pipelines • Mines/Industry • Foundations/settlement

CE • ISO • Calibration certificate

How xInc fits your SHM

- Capture true structural inclination—foundation drift, tower sway, long-term settlement—then correlate with vibration and environment.
- Deploy as a compact local tilt node or as a synchronized element across distributed SHM.
- Any link, any scale: CAT5e/PoE, Wi-Fi, DigiMESH®, optional GSM/4G—grow from one to hundreds of nodes.



Configure your unit

Comms to fit the site: Ethernet, Wi-Fi, DigiMESH®, optional GSM/4G.
Local logging: SD/eMMC for standalone or backup recording (MiniSEED).
Sampling: 1-1000 SPS for slow trends or higher-rate dynamics.
Flexible triggering: STA/LTA, thresholds, relative/absolute, voting mechanism.
Time sync: GPS or DigiSync®—sub-ms network precision.
Power options: 9-28 V DC, PoE-compatible; optional ~12 h battery.
Works with xPlorer®, Voyager®, Nexus, Vista, and Observer software.

Outcome snapshot

- Confident tilt baselines from day one—clean, comparable channels across sites.
- Continuous data through comms drops thanks to Store&Forward®.
- One workspace for teams: acquisition, storage, visualization in Voyager®.

Result: *Faster condition insights (tilt, settlement, sway) and earlier interventions—without babysitting the network.*

Your workflow with Digitex

- **Instrument:** mount, level, and secure; wire power/comms; add in Voyager®.
- **Acquire:** stream in real time or log locally; sync with GPS/DigiSync®.
- **Analyze:** trend tilt vs. temperature/wind/vibration; correlate events; export MiniSEED.
- **Act:** set alarms/notifications and share dashboards with stakeholders.

Scale from a single unit to hundreds—daisy-chain or star topologies across structures.

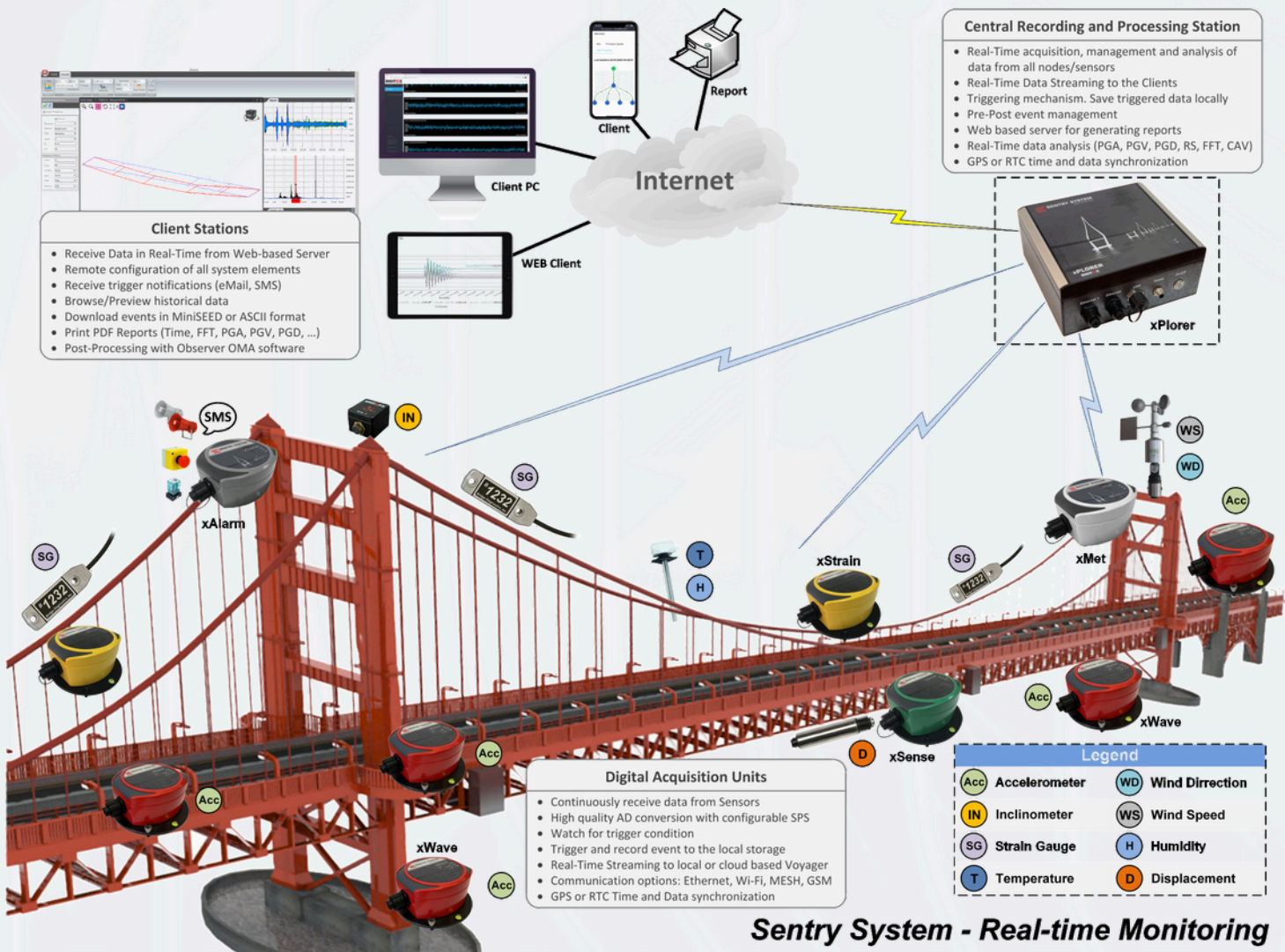
DISTRIBUTED SYSTEM OVERVIEW

xDAS® is Digitex Systems' distributed Structural Health Monitoring (SHM) solution, designed to instrument large and complex structures with networks of intelligent sensors. By combining multiple digital acquisition units, xDAS provides a scalable, modular, and reliable way to capture the dynamic response of structures in real time. From bridges and dams to skyscrapers, tunnels, pipelines, and industrial facilities, xDAS delivers the 'pulse' of any structure continuously, enabling operators to assess safety and performance instantly.

The system integrates seamlessly with Digitex's Voyager® software running on xPlorer® or in the cloud, providing centralized acquisition, storage, and analysis. Each xDAS node digitizes sensor data directly at the source, ensuring noise-free transmission over Ethernet, Wi-Fi, DigiMESH®, or low-cost CAT5 cabling. The modular architecture allows hundreds of units to be combined in daisy-chain or star topologies, making it ideal for projects of any scale.

DISTRIBUTED SYSTEM MEMBERS

The Distributed Sentry System family of products consists of several units that can be installed as standalone devices or as part of a complete SHM deployment: **xPlorer** – Central Acquisition and Processing Unit, **xWave** – Digital Accelerometer Unit, **xSense** – Voltage Sensor Digitizer Unit, **xStrain** – Bridge Sensor Digitizer Unit, **xGeo** – Digital Geophone Unit, **xInc** – Digital Inclinator Unit, **xMet** – Weather Station Gateway, **xAlarm** – Digital Alarming Unit.



ABOUT DIGITEX

Digitex is a company specialized in design and development of real structural health monitoring systems for a variety of industries and applications including: bridges, tall buildings, campuses, windmills, oil rigs and more. Digitex's innovative solution for ambient vibration measurements and quick health assessment of structures is jointly developed and validated with our partners and advisors from the Universities. When properly configured, the Digitex system is capable of measuring and responding to both natural and man-made events such as: earthquakes, wind, explosions and accidental heavy impacts.