

xPlorer Premium

CENTRAL RECORDING &
PROCESSING UNIT

DISTRIBUTED SYSTEM

The Backbone of Your SHM

Rugged central station with built-in Voyager®—acquire, synchronize, process, alarm, and report from one reliable hub.

Why xPlorer Premium

- All-in-one: industrial hardware + full Voyager® software onboard.
- Manages hundreds of channels with continuous Ring Buffer recording.
- Sub-ms network alignment via GPS and DigiSync®.
- Store&Forward® resilience + local retention (up to ~60 days).
- Dual Ethernet + DigiMESH® for flexible topologies and remote access.
- OTA updates, secure reboot, web access, automated PDF reports.

What makes it different

- True centralization: one device to ingest, time-sync, trigger, alarm, and publish.
- Multi-format data: proprietary compressed, MiniSEED, ASCII—ready for analysis tools.
- Optional alarming: relays, SMS, email—integrated with Voyager® triggers.
- Built-in UPS battery (>20 h) keeps you online through outages.
- Field-proven aluminum enclosure; LEDs for quick diagnostics.

Made for

Bridges • Dams & HPPs • High-rises •
Tunnels • Pipelines & corridors •
Industrial plants & mines—any long-term SHM installation

How xPlorer Premium fits your SHM

- Acts as the central brain for all xDAS Sentry devices (xWave, xInc, xStrain, xGeo, xMet, xAlarm).
- Orchestrates synchronization (GPS/DigiSync®), recording, triggers, alarms, and data publishing.
- Serves teams with web access, live previews, automated reports, and remote management.



Configure your unit

Comms: Dual Ethernet (10/100); DigiMESH®; USB service; FTP/SeedLink.

Timing: GPS 1PPS + DigiSync® for sub-ms alignment across devices.

Recording: Continuous Ring Buffer; local SSD retention up to ~60 days; Store&Forward®.

Formats: Proprietary compressed, MiniSEED, and ASCII.

Alarming (option): Relay outputs, SMS/email notifications; integrates with Voyager® logic.

Management: Web UI, automated PDF/FFT/PSD/stats reports, logs; OTA firmware;

Power: 110/220 VAC; ~15 W; integrated UPS battery (>20 h); protections (OV/OC/SC).

Outcome snapshot

- Continuous, synchronized, loss-tolerant acquisition across your entire network.
- Faster decisions via built-in processing, alarms, and automated reporting.
- Lower OPEX: one hub to manage, maintain, and scale.

Result: One reliable hub for synced, loss-tolerant acquisition—fewer site visits, faster alarms, lower OPEX, and easy scale-up.

Your workflow with Digitex

- **Instrument:** install xPlorer centrally; connect sensor; attach GPS.
- **Acquire:** onboard Voyager® ingests all streams; Ring Buffer + Store&Forward®
- **Analyze & report:** preview data, run FFT/PSD/statistics, generate PDFs; export MiniSEED/ASCII.
- **Act:** configure relays/SMS/email for thresholds and scenarios.
- **Operate & scale:** manage securely over the web; OTA update; add more nodes ...

CE • ISO • Calibration certificate

DIGITEX
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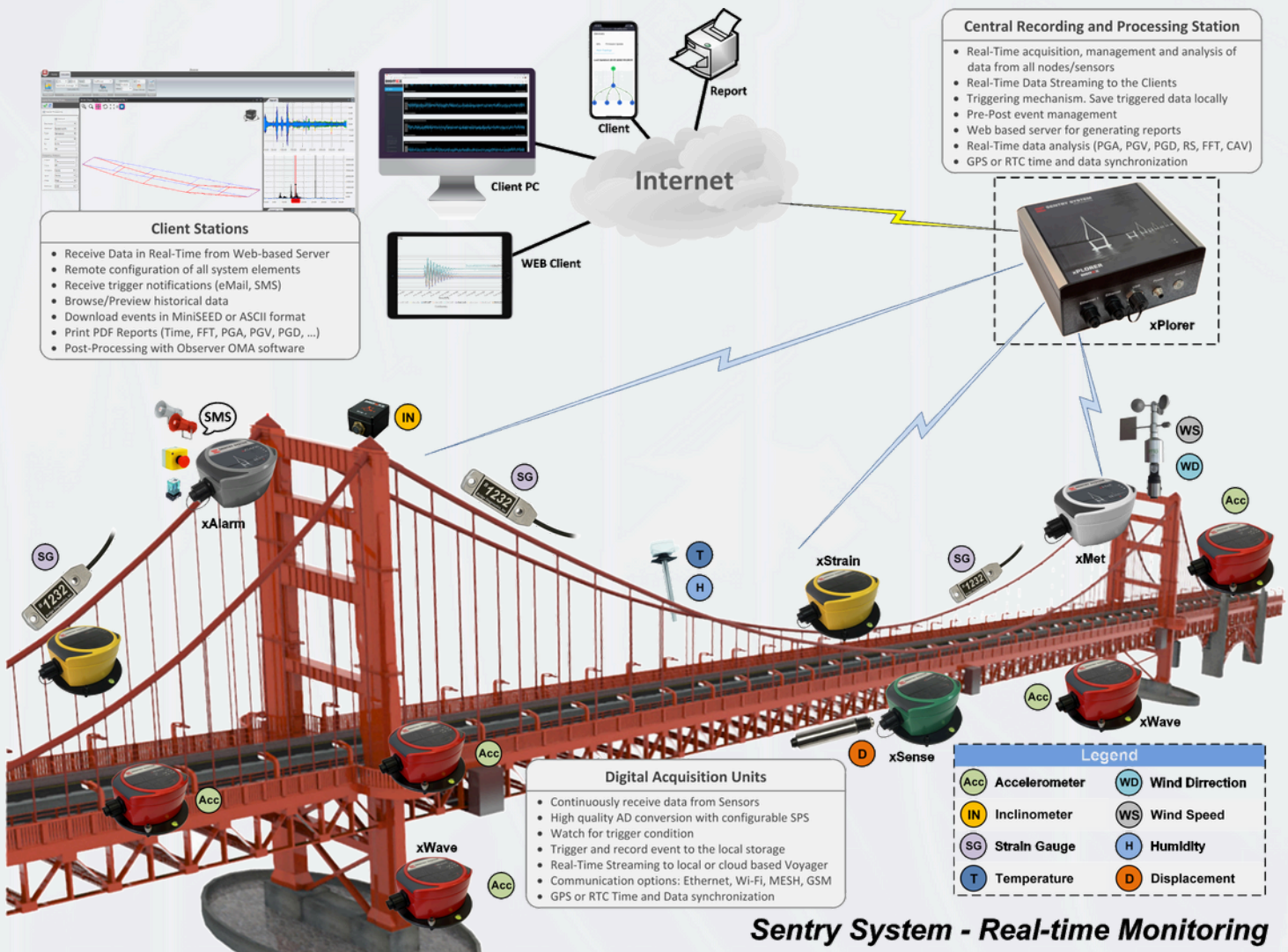
DISTRIBUTED SYSTEM OVERVIEW

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 xPlover® 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: **xPlover** – 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.