

xDSU®

STANDALONE STRUCTURAL HEALTH MONITORING UNIT

STANDALONE SHM UNIT

Install • Monitor • Report — edge-first and resilient!

Digitize at the source; Voyager® ready at the edge with triggers & Store&Forward® features; PoE/LTE options that keep a single site online.

What is xDSU

- All-in-one SHM platform for a single structure or small site
- xPlover-Standalone runs Voyager® at the edge for acquisition, storage, and access
- Works with digital accelerometers (xWave) and auxiliary sensors (tilt/strain/temp)
- Permanent or semi-permanent installs with rugged, weather-proof hardware
- Automated PDF summaries for quick reporting to stakeholders

Why the xDSU

- Noise-free by design: fully digital signal chain from the sensor
- Precise timing: GPS/DigiSync® keeps channels aligned for trending/OMA
- Simple deployment: compact footprint, PoE support, DIN/IP67 options
- Edge intelligence: triggers, ring buffers, and Store&Forward®
- Remote operations: secure web UI, cloud sync, alerts, notifications

xDSU SHM Applications

- Long-term monitoring of single bridges, spans, piers, or bearings
- Buildings/chimneys/stacks—drift, tilt, vibration, and serviceability
- Construction and retrofit works: proof-of-performance & handover
- Compliance (vibration limits near sensitive facilities)
- Industrial foundations, machinery bases, tanks, and stacks

System Snapshot

xDSU® is a compact, edge-powered SHM system that pairs a **Voyager®**-enabled xPlover unit with **digital sensors** to deliver continuous, synchronized data from a single site. Signals are **digitized at the source** for noise-free transmission; triggers and ring buffers capture events; and automated PDF reports provide immediate insight. Connectivity includes **Ethernet/Wi-Fi/LTE** with **Store&Forward®** for resilient logging when links drop. Power options range from **PoE to solar/UPS**, and the hardware is engineered for rugged, unattended operation.



xWave MAX

Outcome

- Prove compliance with auditable histories and shareable PDFs
- Protect people & assets via reliable thresholds and alarms
- Faster decisions with live dashboards and auto-reports
- Fewer site visits thanks to remote access and resilient edge logging
- Consistent datasets for trend analysis and lifecycle planning

Your workflow with Digitex

- **Instrument** - mount/level digital sensors; wire PoE or power; auto-discover in Voyager®
- **Acquire** - real-time streaming or local logging with sub-ms time sync
- **Analyze** - spectra, OMA (FDD/EFDD/SSI/FSDD) as needed; automated PDF
- **Act** - thresholds/alerts, scheduled reports; share with stakeholders

STANDALONE SYSTEM OVERVIEW

xWave MAX is Digitex Systems' standalone SHM approach. It delivers synchronized, low-noise acceleration (and optional external strain, tilt, geophone, and weather) with local storage, event triggers, and built-in alarming—everything in one rugged box. Use it where cabinet infrastructure isn't feasible, but professional-grade data and reporting are required. Client stations (PC/tablet/phone) can preview live streams, review events, and generate PDF reports. Store&Forward® protects continuity during link drops, and OTA updates keep the system current.

STANDALONE SYSTEM MEMBERS

The Standalone Sentry System family consists of units that can be installed as standalone devices or as part of a complete deployment: **xWave MAX** – digital standalone unit with integrated timing, storage, and alarms; Client Stations – **Voyager®/xPlorer®** for setup, live view, event review, and reporting.



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.