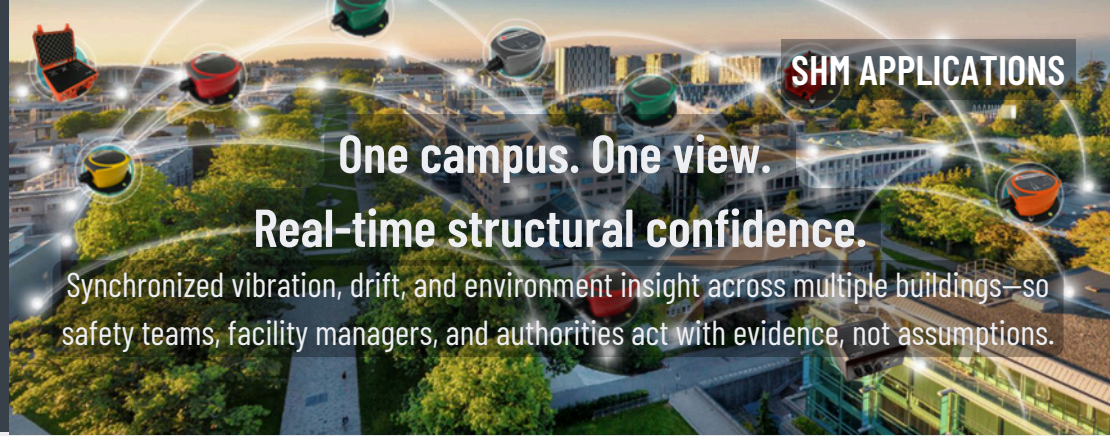


CAMPUSES

STRUCTURAL HEALTH MONITORING (SHM)



One campus. One view.

Real-time structural confidence.

Synchronized vibration, drift, and environment insight across multiple buildings—so safety teams, facility managers, and authorities act with evidence, not assumptions.

Why Digitex for Campus

- Digitize at the source + DigiSync® for clean, phase-aligned data across many buildings.
- No gaps through outages with Store&Forward® and local logging; auto-backfill when links return.
- Field-ready, flexible power: IP67 hardware; AC/PoE/solar/battery options.
- End-to-end suite: Voyager® (acquire), Observer (OMA), Nexus (redundant streaming), Vista (view), xAlarm (notify).

What you monitor

- Free-field ground motion arrays for campus-wide reference after events
- Floor acceleration & inter-story drift at selected levels per building
- Strain/tilt/displacement at critical cores, link beams, and equipment bases
- Weather coupling (wind/temperature/humidity) for response correlation

Impact at a glance

- Rapid re-occupancy decisions for labs, hospitals, dorms, and classrooms
- Cost control: targeted inspections; fewer unnecessary evacuations/closures
- Clarity: one synchronized dataset for owners, engineers, and authorities

Campus SHM that scales with your estate

Instrument the points that matter—**free-field stations, basements/podiums, key mid-levels and roof nodes**—and **stream synchronized, high-fidelity data into a single workspace**. Start with a pilot on priority buildings and expand across the estate without redesigning; the same **xDAS®** architecture supports dozens to hundreds of channels with sub-millisecond timing and Store&Forward resilience.

Links adapt to campus topology—**Ethernet, Wi-Fi, DigiMESH®, GSM**—and when connectivity drops, local recording continues and auto-backfills on reconnection. Facilities and safety teams work with comparable datasets across seasons and events, enabling **reliable drift estimates, performance trending, thresholds** tied to criteria, and fast, defensible decisions.



Example: University campus with free-field triaxial nodes at two open areas; instrumented basements and selected mid/roof levels in priority buildings (hospital, data center, residence hall). Streams to xPlorer/Voyager; events analyzed, thresholds checked, and stakeholders notified via dashboards and reports.

Outcomes

- Faster pre-/post-event comparisons and building-by-building triage
- Evidence-based reopen/close decisions that protect operations and reputation
- Clear audit trail for regulators, insurers, and campus leadership

Result: Faster modal insights and confident alarms without babysitting the network.

Your workflow with Digitex

- **Instrument** – mount/level sensors; auto-discover in Voyager
- **Acquire** – real-time streaming or local logging; sub-ms time sync
- **Analyze** – trends, spectra, OMA; correlate with free-field & weather
- **Act** – thresholds/alarms, PDF summaries, share with stakeholders

SENTRY SYSTEM – ARCHITECTURE OVERVIEW

Sentry System® is Digitex Systems' end-to-end platform for Structural Health Monitoring. It digitizes at the sensor, time-synchronizes every channel (GPS/DigiSync®), and moves data reliably over Ethernet, Wi-Fi, DigiMESH®, or GSM/4G to a central xPlorer unit running Voyager®. This architecture eliminates analog noise and drift, keeps channels phase-aligned for serious analytics (spectra, modal, trending), and scales from pilots to large multi-asset networks.

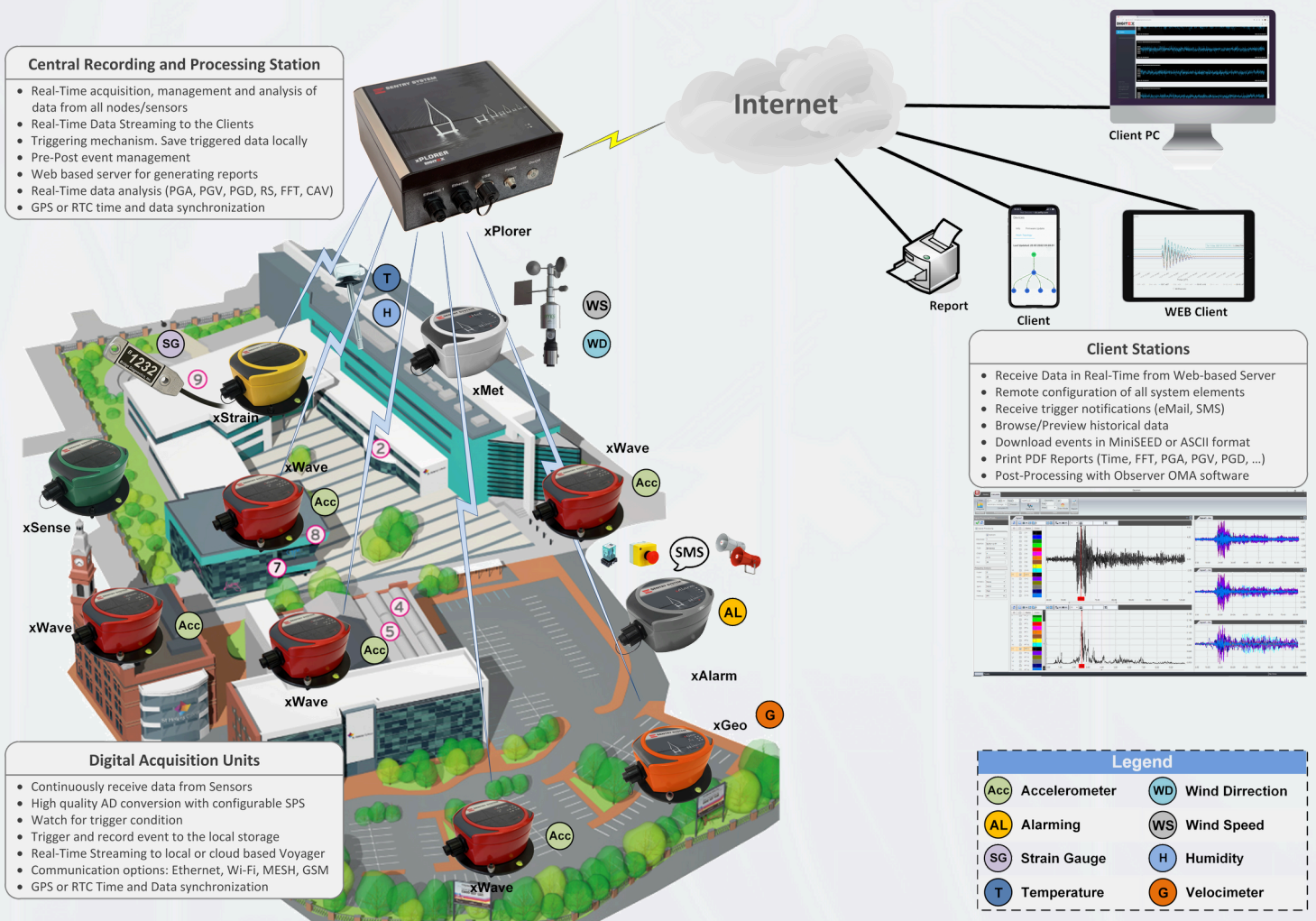
Each edge device records locally with Store&Forward® to survive link outages and auto-backfills the moment connectivity returns. Operators and engineers work in a single workspace: configuring devices, watching real-time streams, setting thresholds and alarms, and exporting reports. With Observer for OMA, Nexus for redundant streaming, Vista for viewing, and xAlarm for notifications, Sentry turns raw measurements into decisions—day-to-day and post-event.

SENTRY SYSTEM – FAMILIES YOU CAN CHOOSE

Distributed (xDAS) • Centralized (xCAS) • Standalone (xDSU) • Portable (xDAS Ambient) • Personal (pSHM) • Hybrid Architectures

SENTRY SYSTEM – DATA FLOW

Sense → **Digitize at source** ($\Delta\Sigma$ A/D) → **Sync** (GPS/DigiSync®) → **Transmit** (Ethernet / Wi-Fi / DigiMESH® / GSM) → **Core** (xPlorer + Voyager) → **Analyze** (Observer, Nexus, Vista) → **Act** (xAlarm, reports).



Sentry System - Real-time Monitoring

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.