xAlarm
Digital Alarming Unit

Key Features:

- **Rugged aluminum enclosure with IP67 protection**
- **4 relays for event triggering**
- **SMS notifications on trigger/scheduled/manual event**
- **User configurable SMS parameters and contacts**
- **Configurable via Voyager alarming interface**
- **One or more units on different locations at single Voyager account**
- **Easy installation, wireless or using simple CAT5e cable. POE capability**
- **Ultra low power consumption**
- **Wide range of Operating Temperature: -40°C ~ 85°C**

Overview

xAlarm is an advanced GSM gateway and remote relay unit. This device can be connected to any Sentry System equiped with xDAS or xCAS units where external inputs need to be activated on triggered event. The units provides SMS notification with some key values when triggering mechanism on Voyager is activated. Depending on user needs, Sentry System can be equiped with one or more xAlarm units on different locations.
xAlarm is designed for applications in harsh environments and small places. Size, weight, and cabling are critical design requirements in almost any installation. By taking advantage of the extreme performance and small size, xAlarm is able to deliver unprecedented control and alarming capabilities in a compact, rugged package with extreme industrial certifications and ratings for operation in harsh industrial environments. Temperature ranges of -40° to 55° C (-40° to 131° F) and a variety of international safety, electromagnetic compatibility (EMC), and environmental certifications and ratings are all available with xAlarm.

Technical Information

Software
Proprietary Digitex Software included with xAlarm. Fully compatible with xPlorer hardware and server software, xAlarm can work as a part of Sentry System.

Hardware
xAlarm is digital unit with embedded GSM modem for SMS alarming and 4 relays for event triggering external devices.

Inputs/Outputs	
No. of Outputs	4 Relays
Output Type	Volt-Free, NO/NC
Output	Voyager trigger
Inputs	Quit button (optional)
Output duration	User configurable

GSM	
Bands	850/900/1800/1900MHz
SIM Card	User provided
SMS Message	Configurable via Voyager
Events	Trigger/Sched./Manual
Calculations	PGA/PGV/PGD

Power	
Powering	From CAT5e data cable
Input Voltage	12-24 VDC or PoE
Power Cons.	1-2W (w/o sensor)
Relay	Volt-Free contact

Physical	
Packaging	Rugged aluminum
Protection	IP66/IP67
Weight	700g
Dimensions	130x120x65mm

User Interface
Informational LED
System Configuration Panel
Web Application Panel

Environmental	
Operating Temp.	-40°C to 55°C
Humidity	90% non-condensing

DIGITEX
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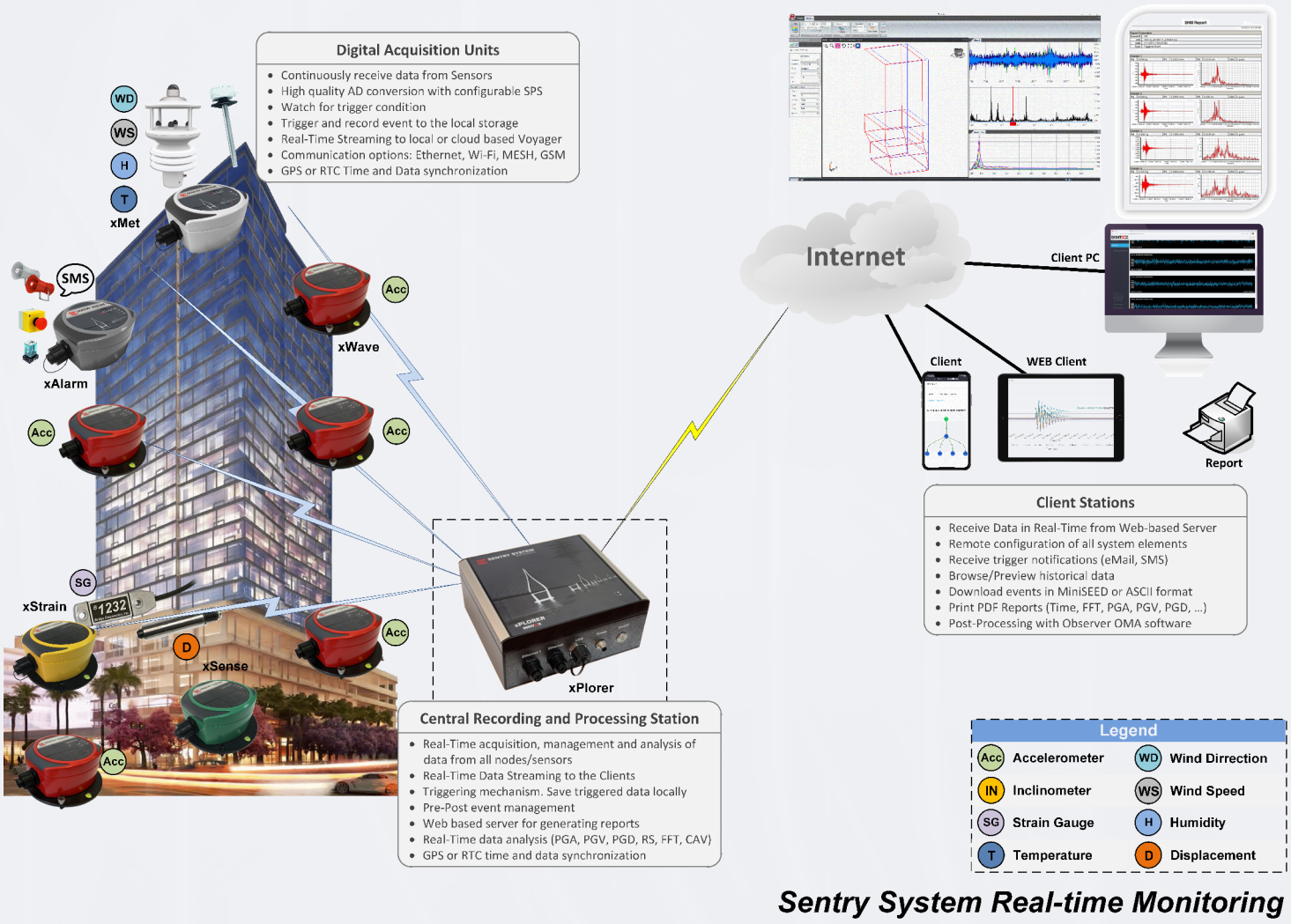
Real Time Monitoring System Architecture

The Digitex monitoring system is based on a highly efficient, multithreaded software design that allows the system to acquire data from a large number of xDAS units, monitor and condition this data, and distribute it, in real time, over the Internet to multiple remote locations.

Sensors on the structure continuously send out data to the system. If an event such as an earthquake occurs, pre-assigned thresholds of drift are exceeded in one or multiple locations, thus triggering the recording and analyzing of data (including pre-event memory). Once an event is recorded, the system notifies a list of users (via e-mail) and uploads the event via FTP to another site.

Using the "quick analysis" capability of the Digitex system, various measures of the monitored system's response can be distributed to multiple locations and displayed in real time. The system can cross correlate data, plotting useful information about the interaction between the dynamic loads on the structure and its modal characteristics. It can be used for a rapid (rough) estimation of the dominant structure mode being observed in the selected time window, as well as an estimator of the corresponding structure damping parameters.



Sentry System Real-time Monitoring

About Digitex

Digitex is a company specialized in design and development of real time 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.

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