xNet Ambient

Portable Network Unit

Key Features:

- Small ABS enclose (UL94V-0)
- Supports wireless DigiMEH® protocol
- Wireless 802.11 b/g/n at 2.4 GHz
- Wi-Fi Defragmentation
- Easy configuration via web interface
- Easy installation
- Compatible with all xDAS wireless units
- Compatible with Pulse units
- Soft On/Off switch
- Low power consumption
- Automatic Battery Charging, when connected to 5V USB
- Battery level indicator
- Internal battery for 12 hours operation

Overview

DigiMESH® network offers a self-healing algorithm that automatically chooses the best route to send the data even if some wireless sensors have inadvertently lost connection. The algorithms only allow connections that are available and working. Even when some sensors are not working, the whole network still works. DigiMESH® networking also allows devices to communicate with each other without going all the way back to the gateway. DigiMESH® networking offers real-world advantages to wireless SHM applications, as it is always accessible, always on and highly reliable.

xNet Ambient supports 802.11n/g/b standard for wireless extension and superb backward compatibility with all xDAS wireless units. You can use xNet Ambient to extend your wireless network to all sensors in most easy and inexpensive way. xNet Ambient supports DigiMESH® protocol and offers extended connection as you move or relocate your xWave Ambient units around the measured structure when linked with a xPlorer Ambient unit or cloud-based Voyager. Wireless units will automatically connect to each other or to the nearest xNet Ambient.

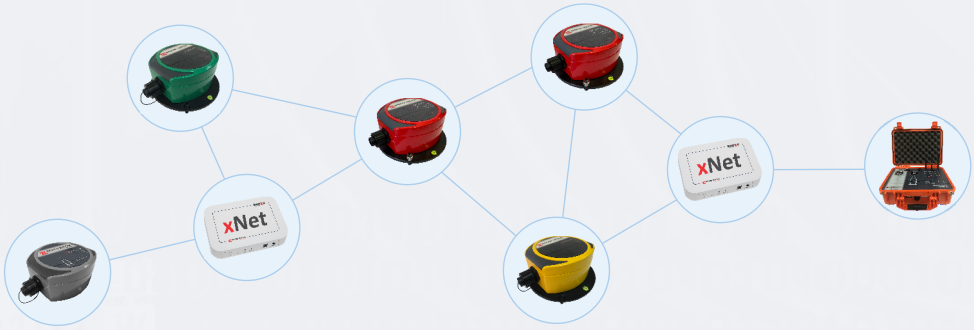
Using our DigiMESH® technology You can easily build your wireless network of SHM sensors without network expertise, expensive network equipment and complex installations. If your wireless xWave units are too far apart from each other, just add additional xNet Ambient units for more efficient Wi-Fi coverage for your sensors. xNet Ambient is powered by battery that can offer more than 12 hours continuous measurement. The device is equipped with internal battery charger and 5V USB connector.

Features	
Wireless Net	2.4GHz for devices
Protocol	802.11 b/g/n
Network type	DigiMESH®
Antenna Gain	2.5dBi (6dBi optional)

Power	
Powering	5VDC
Battery	Internal 18650, 3.7V
Power Cons.	Less than 1.5W
Charger	Integrated

User Interface
Informational LED
System Configuration Panel
Web Application Panel

Physical	
Packaging	ABS (UL94V-0)
Weight	120g (with Battery)
Dimensions	125x67x35mm



DIGITEX INNOVATIVE SYSTEMS

US Office:
9 Wildwood Trail
Ormond Beach,
FL 32174, USA

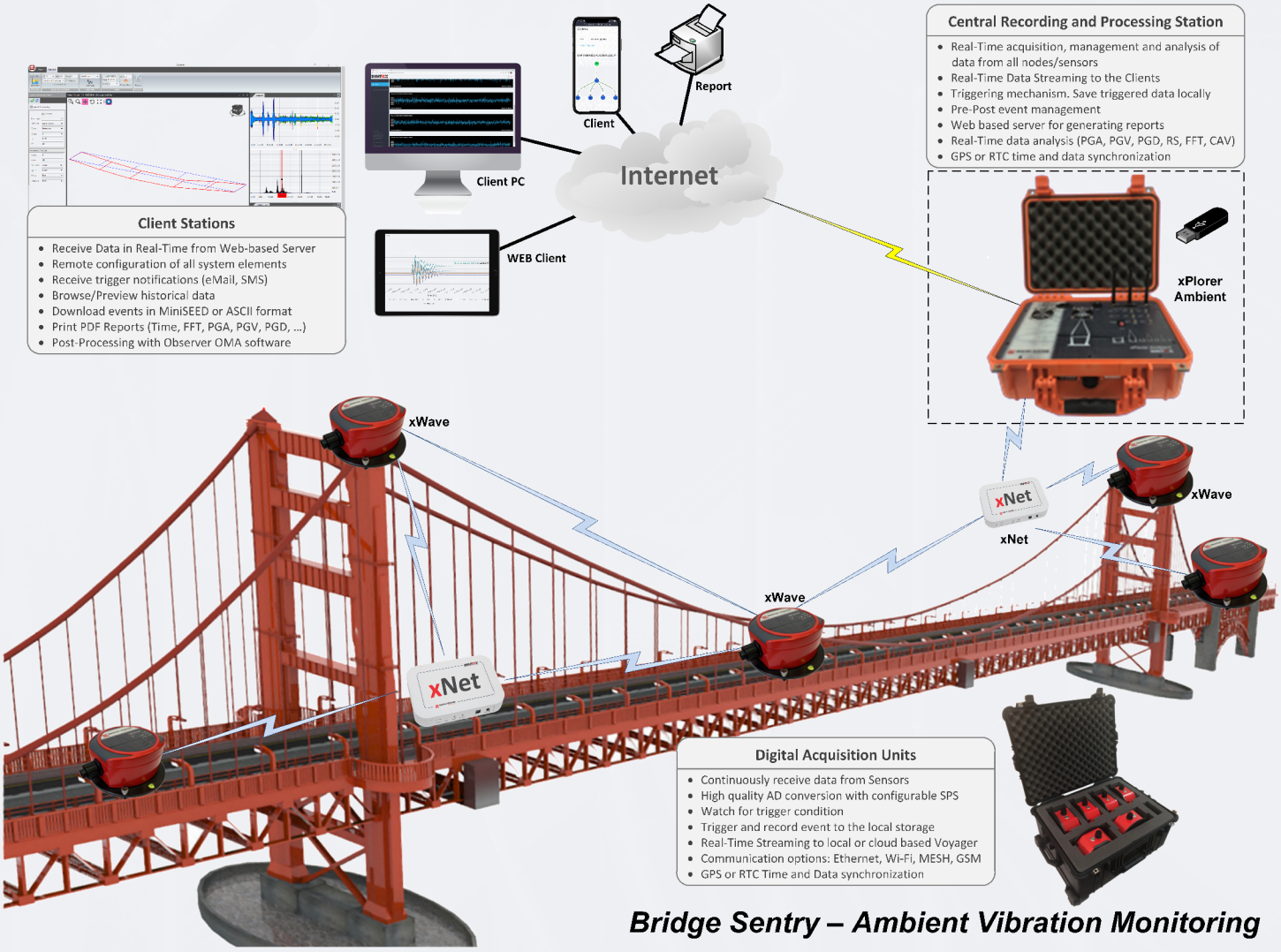
Europe Office:
23, Prashka
1000 Skopje
Republic of Macedonia

www.digitexsystems.com
+1.386.265.3122
+389.72.213.782
info@digitex.me

Real Time Ambient Vibration Measurement System Architecture

The Digitex xDAS AVM System is a fully portable battery-operated equipment that measures data from vibrations surrounding the structure. Measurement data is automatically transmitted over the local wireless network to your PC, tablet or smartphone. The Digitex xDAS AVM System also offers an option for extending the wireless network coverage in harsh and noisy environments.

The Digitex xDAS AVM System is designed to work unattended around the clock, without external power sources, for an extended period of time in demanding outdoor environments. In the field, measurements are started and stopped with one push of a button. Place the sensors at the designated measurement points, start the measurement and leave the battery-operated instrument for the duration of the field test. Initial test results are obtained very easy in form of an automated PDF report that can be seen on the laptop or smartphone. A very energy efficient design provides up to 24h of battery operation, which together with the simple handling provides for superior project economy.



Bridge Sentry – Ambient Vibration 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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