DIGITEXX
DATA SYSTEMS, INC

User can configure system or any of the devices attached to the system remotely.

Notification and reports are sent to any user that is in the notification list.

Ethernet Connection

Ethernet connection is best option for installation with large number of devices, where AC power is accessible on more locations on the bridge and cabling is not a problem. Also this type of connection is recommended for installations with xSense devices. Properly installed cables offers durable and stable system.

User can access real-time or offline data from any computer connected to internet

Internet

System can be connected to the internet with standard router with internet connection, or with GSM internet connection.

ETHERNET BUS (Power + Data)

xPlorer can provide up to 100W power to the bus. More power can be integrated optionally. xPlorer can accept external battery for providing power autonomy for the whole system.

Maximum allowed length of Ethernet cable can be up to 100m. For longer distances Network Switches are used to build more complicated network with multiple devices.
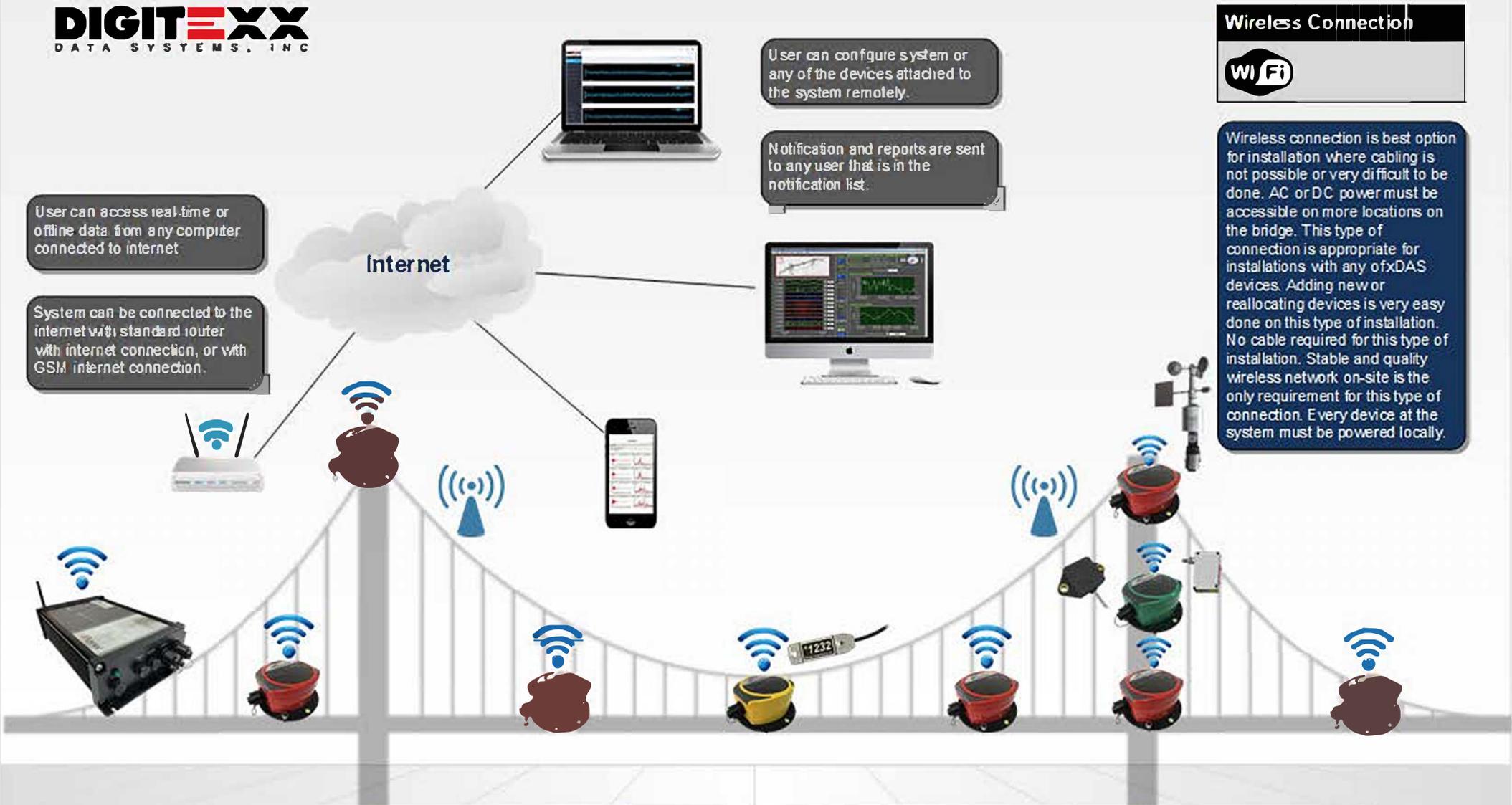
Ethernet installation can be done by:
- CAT5, CAT6 cable that provides data or data and power to all devices.
- Optical cable for long range data transfer. If optical cable is used, system require optical to Ethernet converters. In this case devices must be powered locally.

xSense and xStrain are providing power supply for all sensors that are attached to them

xPlorer can be installed as a standalone hardware unit on-site, or can be configured as a cloud application.

Maximum number of devices that can be connected to single Ethernet network is 254. For more devices subnetworks must be configured.

Any device can be powered through the Bus, or can be powered locally.

Any combination and number of xDAS devices can be added to the system.

xDAS – Digital Structural Health Monitoring System

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System can be connected to the internet with standard router with internet connection, or with GSM internet connection.

Internet

Wireless connection is best option for installation where cabling is not possible or very difficult to be done. AC or DC power must be accessible on more locations on the bridge. This type of connection is appropriate for installations with any of xDAS devices. Adding new or reallocating devices is very easy done on this type of installation. No cable required for this type of installation. Stable and quality wireless network on-site is the only requirement for this type of connection. Every device at the system must be powered locally.

xPlorer can be installed as a standalone hardware unit on-site, or can be configured as a cloud application.

xPlorer can accept external battery for providing power autonomy for itself. xPlorer is also have wireless capabilities and supports IEEE 802.11 b/g/n standard

xDAS units supports IEEE 802.11 b/g/n standard, and can work in any single-band 2.4GHz Wi-Fi network.

Maximum number of devices that can be connected to single Wi-Fi network is 254. For more devices subnetworks must be configured.

Wireless installation can be done:
- With simple wireless router. Coverage of the network is limited and accessible on short distances.
- At planed and previously installed wireless network. On the market there are plenty of network devices (wireless routers, access points, repeaters, range extenders, MESH networks) that can build professional Wi-Fi network that covers big area.

Any device must be powered locally from its own power supply.

xSense and xStrain are providing power supply for all sensors that are attached to them.

Any combination and number of xDAS devices can be added to the system.

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www.digitexx.com

xDAS - Digital Structural Health Monitoring System

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User can configure system or any of the devices attached to the system remotely.

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Serial connection is best option for installation with few devices, where AC power is not accessible across the bridge and cabling is not a problem. There is minimal or no latency on the serial bus, so the system can work with only one GPS antenna attached. The wiring of a serial daisy chain topology is most easily implemented.
Serial connection requires inexpensive CAT5 or CAT6 cable. For better performance and longer distances double shielded, twisted pair cable can be used. On-site installation is easy done with standard RJ45 connectors.

User can access real-time or offline data from any computer connected to internet

System can be connected to the internet with standard router with internet connection, or with GSM internet connection.

Internet

xPlorer must be installed as a standalone hardware unit on-site.

Maximum allowed length of serial bus can be up to 1000m. For longer distances RS485 repeaters are used multiply length of the bus.

Serial installation can be done:
- With single bus for up to 7 devices, with or without repeaters depending of cable length. All devices can be powered from the single central position.
- With multiple buses to collect data from more devices distributed at different places on the bridge. All buses can be powered from the same place.

xSense and xStrain are providing power supply for all sensors that are attached to them.

xPlorer can provide up to 100W power to the bus. More power can be integrated optionally. xPlorer can accept external battery for providing power autonomy for the whole system.

Maximum number of devices that can be connected to single serial bus is 7. Up to 4 busses can be attached at single xPlorer unit.

Any device can be powered through the Bus, or can be powered locally.

Serial bus is a good choice for a system with xWave units. Other xDAS units with lower channel number can be added

xDAS - Digital Structural Health Monitoring System

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User can access real-time or offline data from any computer connected to internet

System can be connected to the internet with standard router with internet connection, or with GSM internet connection.

Internet

Multiple Connections

Bridge Sentry System allows multiple connections on same installation. Ethernet connection can be used for large number of devices where AC power is accessible and cabling is not a problem. Devices located at places where cabling is not possible or very difficult to be done can be connected wirelessly at the system. Farthermost devices, where AC power is no accessible, can be connected to the system with serial bus. Devices with large number of channels, as xSense, should be connected on Ethernet bus or on Wi-Fi.

ETHERNET BUS (Power + Data)
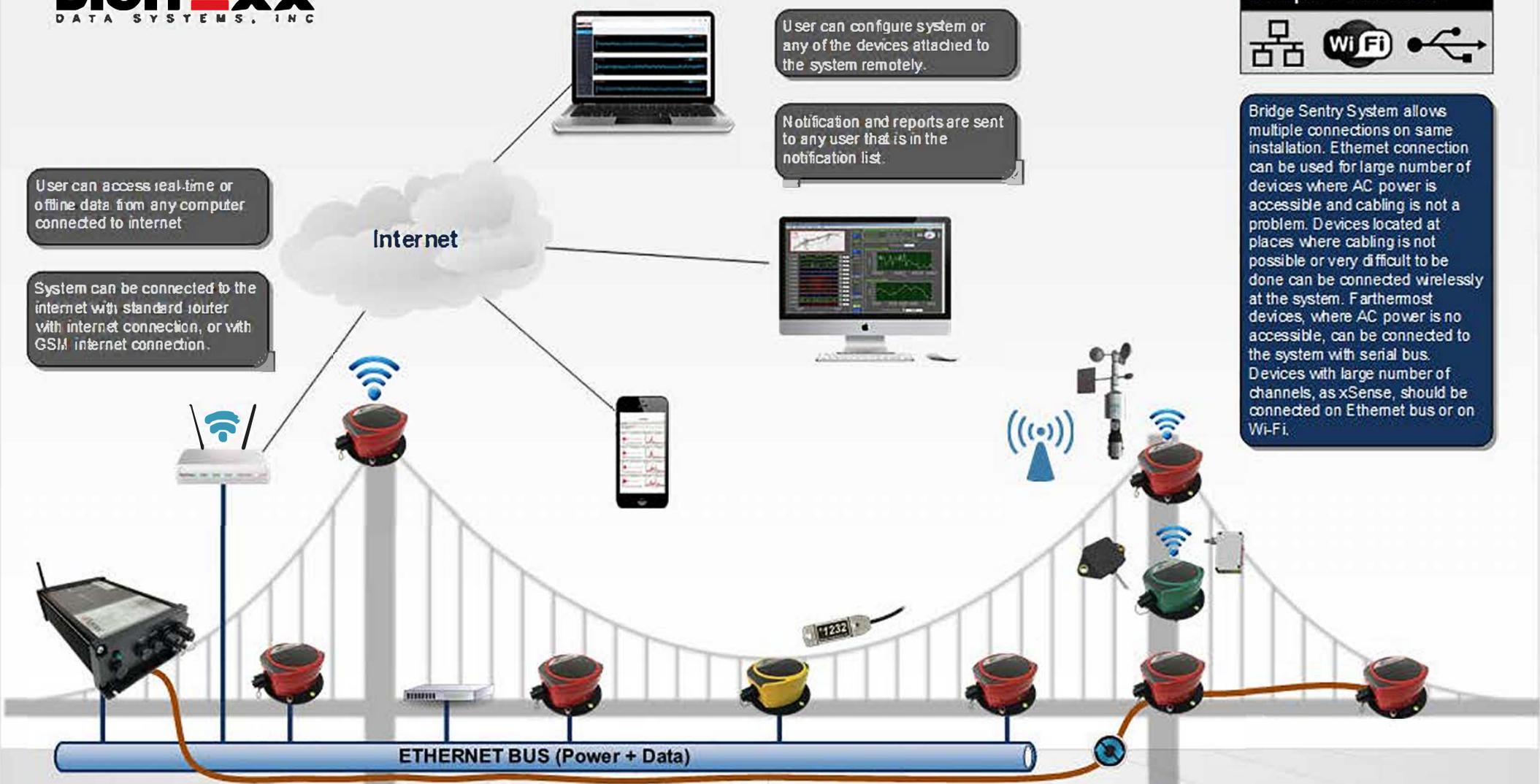
xPlorer can provide up to 100W power to the buses. More power can be integrated optionally. xPlorer can accept external battery for providing power autonomy for the whole system.

xPlorer can be installed as a standalone hardware unit on-site, or can be configured as a cloud application (In cloud variant serial connection is no supported).

Maximum allowed length of Ethernet cable can be up to 100m. Network Switches are used for more complicated network. Wireless devices are connected at 2.4GHz Wi-Fi network. Serial bus can be up to 1000m long, but using repeaters this distance can be multiplied.

Using multiple connections system can acquire data from large number of devices.

Installation can be done with multiple connections:
- Ethernet, with CAT5, CAT6 cable that provides data or data and power to all devices or with optical cable for long range data transfer. Connected devices can be powered locally or from the bus.
- Wireless, with Wi-Fi network extended with access points. Here devices must be powered locally.
- Serial communication, done with twisted pair, double shielded, cable or CAT5/6 cable for acquiring data from farthermost devices. These devices can be powered from the serial bus.

xSense and xStrain are providing power supply for all sensors that are attached to them.

Any combination and number of xDAS devices can be added to the system using appropriate connection type.

xDAS - Digital Structural Health Monitoring System