

NO POWER NO PROBLEM

The ideal solution to implement wireless sensor monitoring in IoT applications where power is not available.



At last, there's a “roll-out ready” way to implement a remote sensor monitoring solution in locations with no power, or limited power.

We are all aware of the challenges associated with remote monitoring. First, and foremost, is the lack of available power. You can use solar panels, but they are expensive. Local RF networks work, but they are cumbersome to deploy and most companies can't afford the specialized staff needed to manage such complex networks.

Faced with these obstacles, many organizations have not been able to economically or logistically deploy remote monitoring, even in critical process areas. The lack of monitoring leads to increased safety risks, higher operating and production costs, environmental risks and generally lower visibility into what is going on within your operations.

Digi has created a solution to specifically address these issues: The new Digi Connect® Sensor+. This market-disruptive cellular gateway has an internal battery that not only powers itself, but also external sensors and machines, completely eliminating the need for additional power sources. Connect Sensor can be readily installed by non-specialized personnel; and its low data usage keeps recurring costs low and predictable.

When combined with Digi Remote Manager®, Digi Connect Sensor+ offers an industrial IoT solution for new industries, processes and applications not previously addressable.

Digi Connect Sensor+ is a battery-powered, cellular gateway providing connectivity to a broad range of industrial sensors where power is not an option.





Any Environment, Anywhere

Digi has decades of experience deploying mission critical communication devices in rugged environments. Digi Connect Sensor+ has an industrial temperature rating and an IP65 enclosure rating, making it ideal for deployment in harsh environments. With its Penta band cellular module permitting worldwide cellular band support, this new gateway is ready to be deployed anywhere around the globe. Furthermore, Digi Connect Sensor+ can be used in hazardous locations due to its UL Class 1 Division 2 safety rating.



Roll-Out Ready

With both Digi Connect Sensor+ and Remote Manager, you are buying a comprehensive product, not a project. Digi Connect Sensor+ requires no code development. It is a highly configurable product that can be adapted to your application requirements. Read and report intervals, alarms, inputs, and output power can all be configured through the Digi Remote Manager interface. Data is automatically reported to Digi Remote Manager where customers can view, set alarms, or export to third party applications, enterprises or clouds.



Easy to Install and Manage

Digi Connect Sensor+ was specifically designed for easy installation and deployment by non-specialized personnel. Configuration can be stored prior to installation in Digi Remote Manager and downloaded automatically to one or all of your devices when they connect in the field. A first-of-its-kind mobile app, Digi Connect Wizard, guides installers through the process and verifies proper installation. Because it communicates via cellular signals, there is no need to have RF or network engineers on site during or after installation.



Self-Powered ROI

Digi Connect Sensor+ produces an immediate positive return on investment as you can now deploy remote monitoring, and diagnostics, in places where it was never economically feasible before. Internal batteries eliminate the need to wire power to the site or to install a solar panel for power. The product consumes little cellular data, keeping recurring costs as low as possible, while the Modbus protocols enable remote diagnostics that will help reduce outages and service calls.



Flexible Power Options

A battery-powered cellular gateway has little value if you need to change batteries every two to three months. To extend battery life, Digi Connect Sensor+ sleeps between sensor readings and reporting intervals to conserve power. Or it can be used with other external power supplies, like solar or wired, while the battery is for backup power only.



Industrial

The rugged design, industrial temperature range and safety certifications of Digi Connect Sensor+ make it ideal for a wide range of critical industrial and process control applications.



Smart Cities

An economical price allows cities to deploy sensors in applications like water/wastewater, to gain wider visibility and maintain compliance with environmental regulations.



Oil and Gas

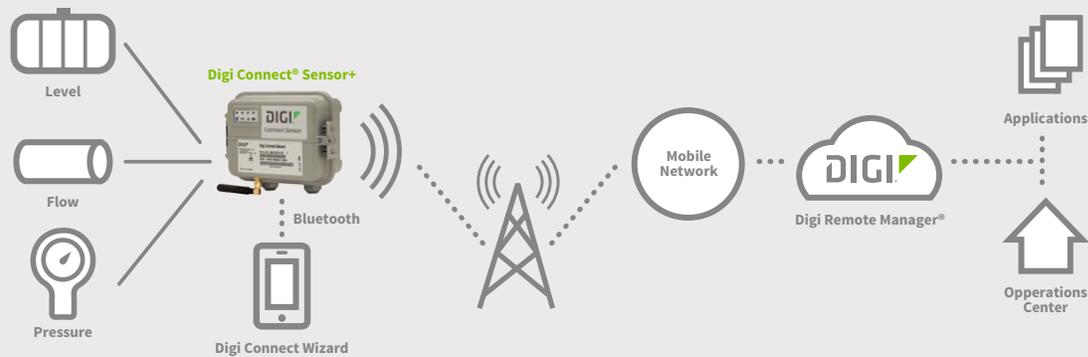
Implement tank, pipeline and valve monitoring and diagnostics in remote areas or in sites that cannot support an expensive SCADA system.

How It Works

External sensors and power supplies can be routed through water-tight cable glands at the bottom of the enclosure and into a screw terminal internal to the product.

Digi Connect Sensor+ has four analog inputs that can be configured as either a 0-10 VDC or 4-20 mA input. Each of these four analog inputs has a power output that can be enabled or disabled by the user. The power outputs have a configurable DC voltage level so Digi Connect Sensor+ can power almost any sensor.

Digi Connect Sensor+ also has a digital I/O which can be configured for any number of functions. Beyond a simple digital input or output, the I/O can be configured to count pulses when connected to mechanical switch or pulsed output meters. The digital I/O can also be configured to wake the device out of “sleep mode” on a rising and/or falling edge. The digital I/O, like the analog inputs, has its own DC power output.



Digi Connect Sensor+ has configurable read and report intervals. On a read interval, the device will wake up from sleep mode and take readings for all enabled sensors, powering each with the configured voltage level and implementing a user-configurable delay to allow each sensor to stabilize before taking a reading. If any of the readings are outside of the configurable alarm thresholds, they will be reported immediately, otherwise they will be stored and Digi Connect Sensor+ will go back to sleep.

On a report interval, Digi Connect Sensor+ will read sensor values using the same process as above, but after reading, it will report any stored values to Digi Remote Manager where they can be viewed, alerted or imported into third-party applications.

Digi Connect Wizard

A first-of-its-kind mobile application for industrial markets, the Digi Connect Wizard maximizes the usability of the Digi Connect Sensor+. Digi Connect Wizard can connect directly to Digi Connect Sensor+ over a Bluetooth interface to stream sensor values locally. This eliminates the need for outdated and expensive LCD displays to show sensor values locally. Digi Connect Wizard can also connect directly to Digi Remote Manager to verify configurations and aid in debugging.

For installers, the Digi Connect Wizard performs the final verification of installation to ensure the device has connected, has good signal strength and battery health. For technicians and drivers, the Digi Connect Wizard streams sensor values when they are on site. Installers can connect without needing any passwords, or Digi Remote Manager access, and the device automatically scales the readings so they get real-time sensor data.



Digi Remote Manager

Digi Connect Sensor+ is integrated with Digi Remote Manager to create a complete remote monitoring and diagnostic IoT solution:

Access data from edge devices anywhere

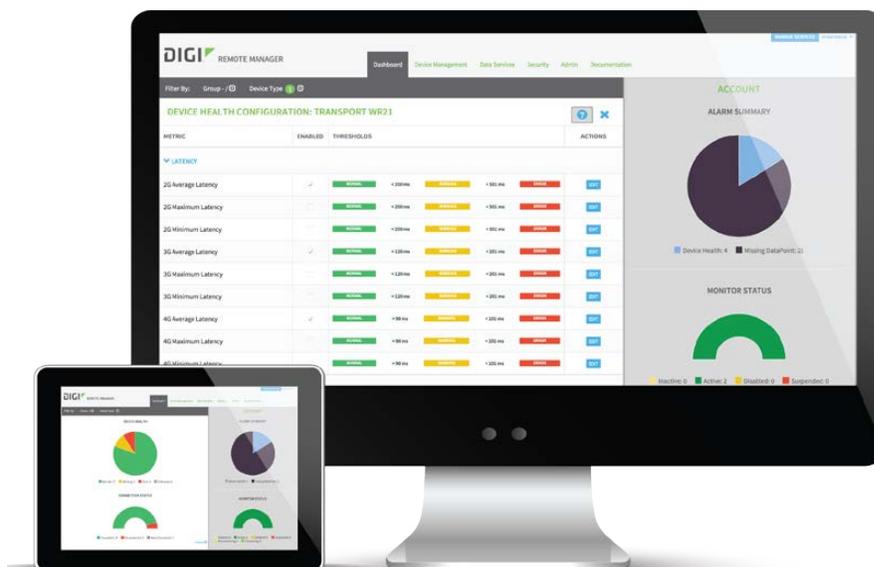
Centralized control to edit configurations, update firmware, download software and monitor the status, health and location of remote assets via a web browser.

Create alarms and notifications based on data conditions

Set alarm conditions and receive immediate notification when sensors meet or exceed thresholds. Schedule and automate tasks, such as reboots or firmware updates, and group and tag devices to organize your network.

Integrate device data into a third party system

Using the Digi Remote Manager open APIs, push device data into any third-party application or build a custom M2M application.



Digi Connect Sensor+ and Digi Remote Manager will open up an entire new class of Industrial IoT applications that were not feasible until now.

FOR MORE ON DIGI CONNECT SENSOR+:
DIGI.COM/CONNECTSENSOR

Contact a Digi expert and get started today

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