



Overview: Panoramic Power Security Measures

1. Overview

At Panoramic Power we understand the sensitivity and criticality of data and network security. Therefore, we have taken relevant measures to keep your network and critical assets free of threat. We secure, manage and monitor account access and activities across the entire deployment process.

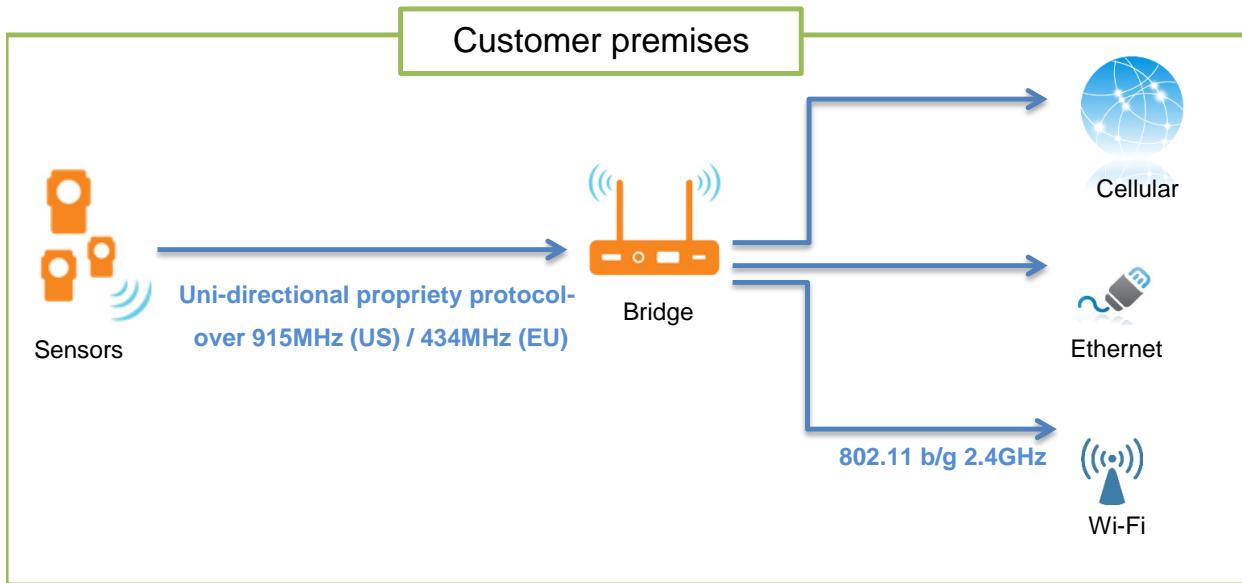
The Panoramic Power sensors measure and transmit energy readings at a predefined interval. The coded information only contains the sensor ID number and the amperage or voltage measured. Any machine or device-specific information such as the type and name of the monitored devices, site name etc., is maintained separately in Panoramic Power's secured servers. By enforcing this separation between business data and real time energy measurements, we guarantee that in the unlikely event that the outbound transmission of the data packet is intercepted; it has no discrete information or meaningful use.

We designed the data flow of our sensors and bridges in the installed facility to be unidirectional only. Data traffic from the sensor to the bridge and to the facility's local network is kept unidirectional. External devices or systems cannot initiate any type of communication with the bridge or change its setting.

This document describes the security measures used in the Panoramic Power solution.

2. Data Flow Diagram

2.1. On-Premise Data Flow



Panoramic Power sensors transmit small unidirectional packets over a proprietary protocol in the ISM 915MHz (US) and 434 MHz (EU) band. Transmissions are sent 5 to 6 times a minute to a bridge unit.

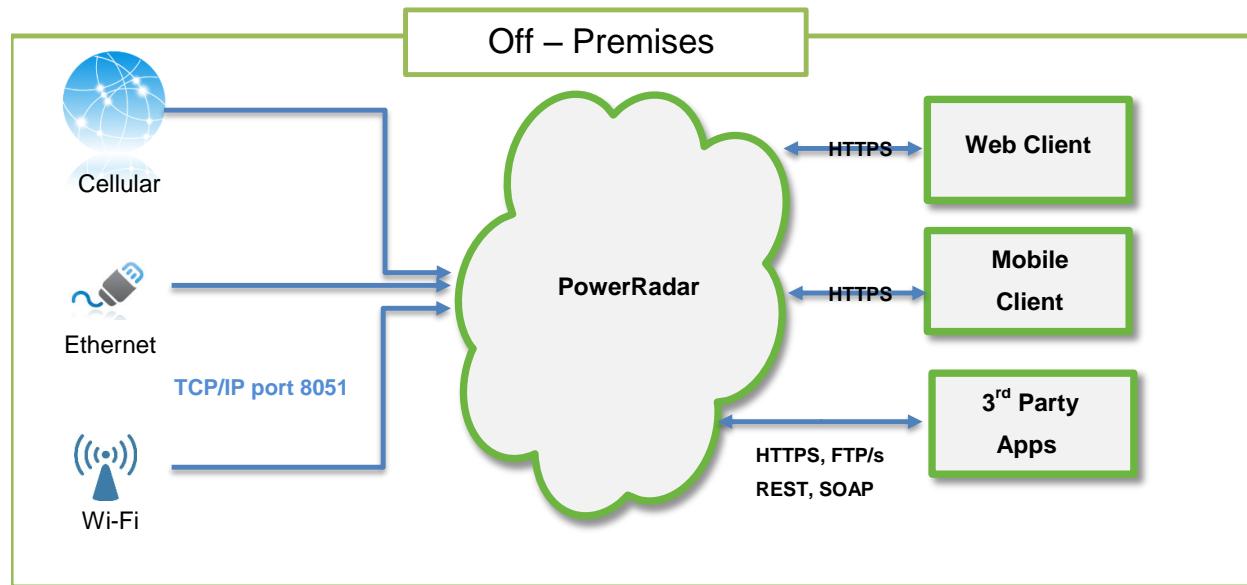
Sensors cannot receive any incoming communication from the bridge or from any other device. Sensor to bridge transmissions include: the sensor ID and the circuit current (Amp) reading and does not include any customer information such as circuit name and type, site name, etc. The effective distance between the sensor and the bridge is typically 16 feet (5 meters) but may be shorter depending on the installed environment.

The bridge collects the sensor transmissions and conveys them to the Panoramic cloud. The bridge can convey the sensor's transmissions using one of the following options: Wi-Fi (802.11b/g, 2.4GHz), Ethernet or cellular modem.

When using Wi-Fi, bridge connectivity to the local access point may be encrypted using one of the following security protocols: WPA,WPA2, WPA2, Enterprise, WEP64 and WEP128.

To communicate with the Panoramic cloud server, the bridge uses the TCP protocol at port 8051 (outgoing traffic only); the bridge cannot be addressed or accessed from the outside. The only way to change the bridge settings is to physically connect to it with an Ethernet cable.

2.2. Data Privacy and Security



The Panoramic Power cloud servers are hosted at Amazon AWS and S3 cloud services and utilize the security measures enforced by Amazon. For more information about Amazon AWS security and compliance, please refer to : <http://aws.amazon.com/compliance/>

To ensure secure connection to Panoramic Power system, we use a rigid security policy and enforce idle session method to automatically disconnect the user from the application after a number of minutes of inactivity.



Panoramic Power connectivity to third-party systems via API is protected by sophisticated RBAC (Role Based Access Control) password protection mechanism.

Customer Data –

We at PanoramicPower know that you care how your data and information is used and shared, and we appreciate your trust that we will do so carefully and sensibly.

Only users authorized by the customer and a number of authorized Panoramic Power personnel may have access to customer's data.

We do not share your data and information with companies, organizations and individuals outside of PanoramicPower unless one of the following circumstances applies:

- **With your consent:**

We will share personal information with companies, organizations or individuals outside of PanoramicPower when we have your consent to do so.

- **For legal reasons**

We will share personal information with companies, organizations or individuals outside of PanoramicPower if we have a good-faith belief that access, use, preservation or disclosure of the information is reasonably necessary to: meet any applicable law, regulation, legal process or enforceable governmental request, enforce applicable Terms of Service, including investigation of potential violations, detect, prevent, or otherwise address fraud, security or technical issues, protect against harm to the rights, property or safety of PanoramicPower, our users or the public as required or permitted by law.

Changes to this Policy

Panoramic Power may amend its Privacy Statement. Use of information we collect now is subject to the Privacy Statement in effect at the time such information is used. If we make material changes to our Privacy Policy, we will notify you by posting the revised notice on our site or send you an email so you are always aware of how we use the information we collect, and under what circumstances if any, it is disclosed.

About Panoramic Power

Panoramic Power is the leading provider of device level energy management solutions – enabling businesses to optimize their energy consumption, improve operational efficiency and generate income through load response programs. Using its innovative and affordable circuit-level cloud-base analytics solution, companies across a wide range of retail and commercial industries gain insight into their energy usage and are able to optimize operations, processes and maintenance resources.