Whisker.io

Pro.Hub™

General Description

The Whisker.IO Pro.Hub™ is purpose built for extreme use in outdoor and industrial applications.

Features

- Plug and play operation
- Ethernet, WiFi and Cellular options
- Data buffering during loss of connectivity
- Integrated CanBus, ModbusTCP and ModbusRTU (RS-485) protocol*
- Integrated Digital and Analog I/O*
- Supports all Whisker.IO Cloud services
- Works with 3rd party platforms via Whisker.IO Forwarding
- IP65 rate enclosure, wall and pole mounting
- Flexible power options
    - Power over Ethernet
    - 8-48V DC
    - Solar panel*
- Supports two-way communication with field devices – monitor and control
- Communicate with field devices over distances more than a 1 mile.
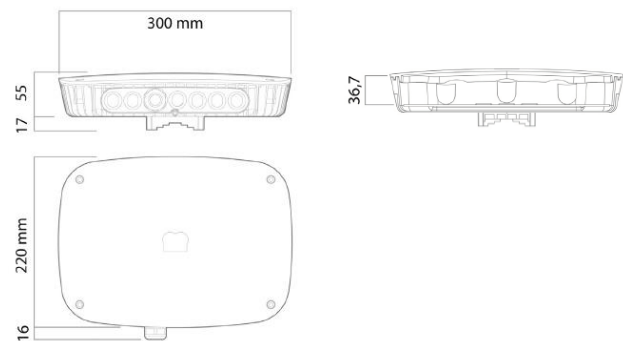
Future Feature

Throughput

The number of devices that can be supported by this hub varies with the reporting rate of the connected devices. This is a single channel hub, which ultimately determines its limitations; with a single channel, this hub can process about 1,800 messages an hour. The following table estimates device capacity for several different update rates.

Update Rate	# Devices (estimated)
5 minute	250
1 hour	1500
4 hour	5000
24 hour	10,000+

This hub supports two way communications with field devices that support the Whisker.IO protocol. For battery powered devices, the hub will queue down-stream messages (commands) and send them to the device when it reports in at its sampling interval; therefore, the command latency is equivalent to the update rate of the device. For line powered devices, commands are sent immediately, with a latency of less than 1 second.

Mechanical

Robustness and Reliability

If the hub loses connectivity to the Internet, it will buffer all incoming messages from field devices to storage on the SD card. When hub connectivity is restored, the messages will be sent to the cloud for storage and forwarding. In the event of catastrophic failure, the data on the SD card can be recovered using our Data Recovery App (Windows).

The Pro.Hub™ can be configured with battery back-up that will allow the hub to continue normal operation for up to 24 hours*. If power is lost on hubs equipped with battery back-up, the hub will notify the Whisker.IO cloud of the failure, allowing text and email alerts to be sent to specified contacts.

Whisker.IO Services

This hub supports all Whisker.IO services:

Storage
Devices that are configured with the storage service will persist their historic data in the Whisker.IO cloud, making it available for visualization and analysis using our Whisker.IO Portal web based software.

Alerting
Rules based alerting allows a text or email to be sent when the specified condition is met and when it clears.

Forwarding
The forwarding service allows two way communications between Whisker.IO devices and third party platforms such as Amazon, ThingLogix, etc.

Services are provided for a monthly fee per device and service. Services can be configured in the Whisker.IO Portal at www.d6labs.com

Connectivity Options

Every Whisker.IO hub can connect to the Internet via Ethernet.

For applications that require alternate methods of connectivity, WiFi and Cellular are available.

Our cellular-enabled hubs are shipped with a data plan that costs **$10 per month**, regardless of the number of devices that are attached. The hub can be configured for operation with Verizon, AT&T and other carriers.
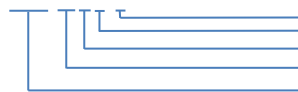
Installation and Setup

All Whisker.IO hubs are truly plug-and-play, requiring no provisioning or setup in the field. Simply mount the hub, connect it to power, and wait for all the status lights to come on.

Once a hub is installed, it is automatically configured to work with devices within its transmission range.

Ordering Information

Example Part Number:

WH-900-PDEW

Sec. Connectivity Option, E=Ethernet, C=Cellular, W=WiFi, N=None
Pri. Connectivity Option, E=Ethernet, C=Cellular, W=WiFi
Power type, A=120V AC, Z=230VAC, P=PoE, D=8-30VDC,
Pro.Hub version

Whisker.IO Frequency – 900=902-928MHz
868=868-870MHz