KWJ-WSN
Wireless Range Extender

General Description

The KWJ-WSN Wireless Range Extenders allow you to extend the coverage area (range) of your wireless sensor network by relaying data between your wireless sensors and the wireless gateway.

Principle of Operation

On power up, the range extender will locate a wireless gateway that has the "best" signal available. The device then auto-configures itself to communicate and link with this gateway. After linking with the parent gateway, the range extender then establishes itself as a sub-network with it's own dedicated channel to the gateway, relieving congestion from multi-sensor networks.
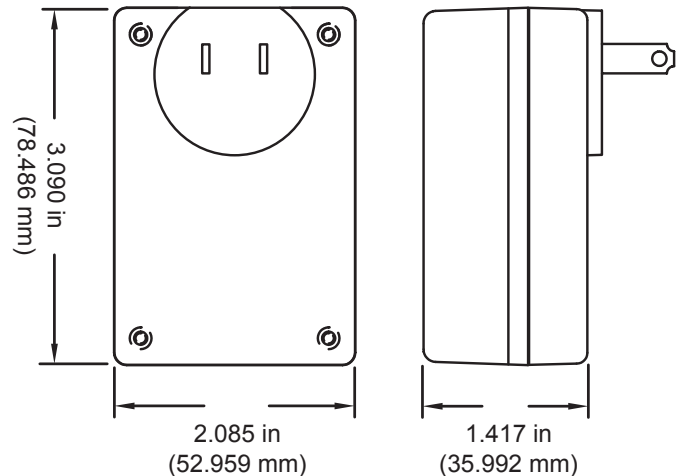
As data is generated in the range extender's sub-network, it will intelligently store and forward this information to its parent gateway. This conserves battery power on the wireless sensors, increases network reliability, and intelligently manages network traffic to avoid cluttering.

When a KWJ-WSN wireless sensor is locating a network, it will search for the "best" wireless signal. If the best signal is a range extender, the sensor will auto-configure itself to link with the range extender (no user intervention required). A range extender will permit a wireless sensor to link if one of the following conditions is met:

- The range extender already knows the wireless sensor and permits linking.
- The range extender confirms the wireless sensor's permissions from its parent gateway.

KWJ-WSN Wireless Range Extender Features

- Extends the coverage area of your wireless sensor network.
- Supports 6 messages / minute.
- Built in memory can queue up to 30,000 messages for delivery to the gateway.
- AC powered, so no batteries needed.

3.090 in (78.486 mm)

2.085 in (52.959 mm)

1.417 in (35.992 mm)

Applications

- Facilities / Building Operations
- Property Management
- Warehouse Monitoring
- Hotel / Motel Monitoring
- Food Chain Monitoring
- Restaurants / Food Services
- Convenience Stores
- Asset Management
- Agriculture and Greenhouses

KWJ-WSN Wireless Range Extender Specifications

Power

Standard Operating Range	100-240 VAC
Max Operating Range	90-264 VAC
Input Frequency	50/60Hz +/- 3Hz
Max Power Consumption	1.0W

Wireless Operation

Maximum Wireless Devices Per Gateway	Up to 100 Total Wireless Devices Per Gateway
Maximum Sensors Per Range Extender	Up to 99 Wireless Sensors (Other range extenders count as wireless devices)
Message Storage / Memory	30,000 Messages
Recommended Network Communications	Up to 6 Messages Per Minute
Range Extender Communication Delay	Up to 30 Seconds (At number of recommended network communications)

Mechanical

LEDs	Single LED H/W Status / Activity - Flashing Red/Green (device is looking for an APN to join) - Solid Red (no network found) - Solid Green (device has joined a network) - Flashing Green (sensor data is intercepted and relayed)
Enclosure	ABS Plastic UL94V-0 Flame Rating
Dimensions	3.09 x 2.085 x 1.417 in. (78.486 x 52.959 x 35.992 mm)
Weight	4.5 ounces

Environmental

Operating Temperature	-40° to +85° C (-40° to +185° F)
FCC Approval:	ZTL- RFSC1

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