

# **EDGE 1 Series**

IoT LPWA Solution - EDGE 1 Industrial LoRa Edge Node (Project base with quantity requirement)





## **Overview**

EDGE series products are Internet of Things devices which speed up IoT project deployment on field sites in an easy and scalable way. The major advance wireless LPWA solution:LoRaWAN<sup>™</sup> is deployed on the Edge node product respectively, fulfilling wireless monitoring and controlling needs under an IoT framework.

The EDGE 1 deploys LoRaWAN<sup>™</sup> wireless technology to provide field asset connectivity to AiR PACE Smart LoRa IoT Edge Computing Gateway with 4G LTE Backhaul & Network Server in low data rates over long distances.

EtherWAN — "When Connectivity is Crucial."

# Spotlight

- » Multiple I/O to connect to a Wide Variety of Field Equipment
- » Integrated 10 bit A/D Converter to convert Analog Signal to Digital Data
- » Serial port supports Modbus RTU Interoperability
- » Battery or DC Power Input
- » -30 to 70°C Temperature Range
- » IP65 Enclosure Design



## **Frequency Bands**

## + LoRa Communication Frequency Band

ModelsBand OptionsRegionsEDGE 1-EA923-924MHz (AS923)\*Japan, Vietnam ExcludedAPAC (\*Japan, Vietnam Excluded)EDGE 1-EU863-870MHz (EU868)\*Europe, VietnamEurope, Vietnam

## **Features**

## WAN & Uplink

- » EDGE 1
- Uplink: Support LoRa wireless data transmission capability, with standard LoRaWAN™ Protocol and Class A/C and

self-organizing network capabilities

• Data Security: Supports LoRaWAN™ standard Encryption

## Field Communication

- » Modbus
  - Windows Utility, Console CLI

### Administration

» Configuration

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• Windows Utility, Console CLI



# **Specifications**

### Wireless Interfaces

#### EDGE 1

• 1 x LoRa Module

#### **Frequency Band**

• 863-870MHz (EU/EU868), 923-924MHz (APAC/AS923)\* Japan Excluded

#### **Specification**

- Max. Output Power: 14dBm (EU868), 20dBm (AS923)
- Sensitivity: -132dBm@980bps

## I/O Interfaces

#### **Analog Input**

- 3 x Al ports (supports 0-10V/4-20mA)
- Conversion: 10bit ADC
- Input Range: 0-10V, or 4-20mA (Dual mode)
- Resolution: 10mV, or 20uA (with 2-bit hard-wired divider involved)

#### **Digital Input**

• 2 x DI ports (Isolated, supports Pulse Counter, Dry Contact)

#### **Digital Output**

• 1 x DO port (Isolated, Non-Relayed Output, Maximum 24V/300mA)

#### RS-485

- Support 8 sets Modbus RTU devices
- Modbus/RTU read command FC 1,2,3,4 and write command FC 5,6 from MQTT

## I/O Connectors

• 2 x M16 waterproof connectors with 2-hole cable gland for wiring the required ports to external sensors/meters

### **Embedded Antennas**



#### **EDGE 1 Series**

• 1 x Internal LoRa Antenna

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#### Power

• 4000mAh 3.6V Li-SOCL2 battery (Optional), or external 5-12VDC Power Input predefined by Jumper

### **Mechanical**

#### Casing

- Plastic (PC, UL-94V2)
- IP65

#### Dimension

- 105 x 55 x 76.47mm (W x D x H); Enclosure only
- 131.97 x 81 x 76.47mm (W x D x H); Including Cable Gland, Brackets

#### Weight

• 0.3Kg (0.66lbs)

#### Installation

Bracket mounting

## **Environment Limits**

#### **Operating Temperature**

• -30 to 70°C (-22 to 158°F)

#### **Storage Temperature**

• -40 to 85°C (-40 to 185°F)

#### **Ambient Relative Humidity**

• 5% to 95% (non-condensing)

## **Regulatory Approvals**

#### Safety

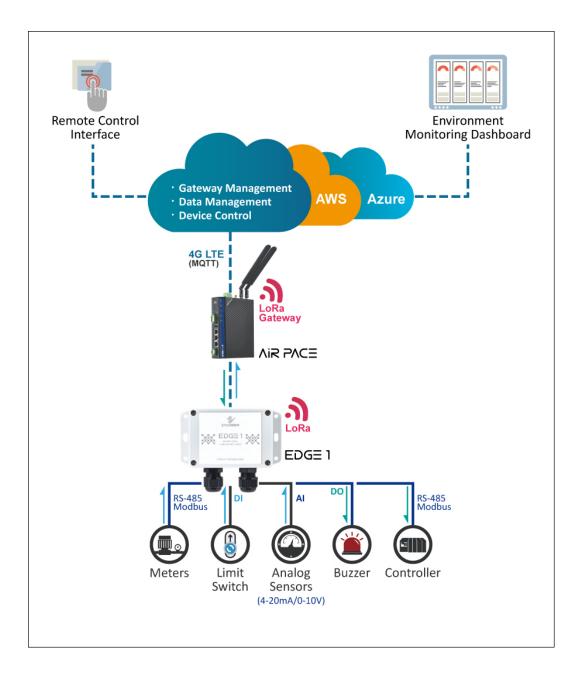
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#### **Emissions/Immunity**

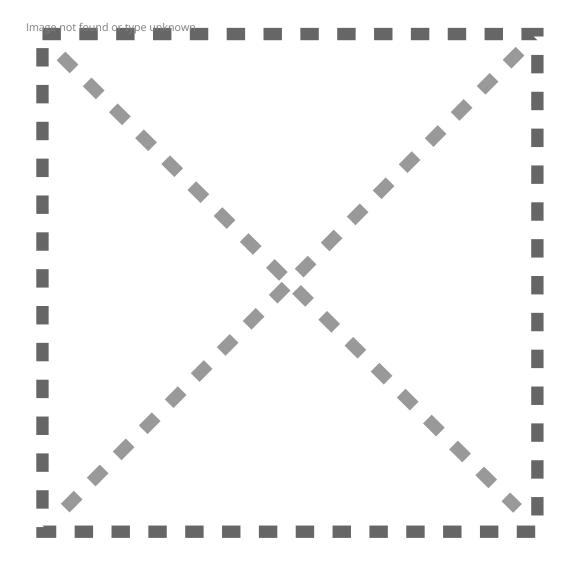
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# Application





# Dimensions





# **Ordering Info**

Model	Band/Channel	Regions
EDGE 1-EA	923-924MHz (AS923)	APAC (*Japan, Vietnam Excluded)
EDGE 1-EU	863-870MHz (EU868)	Europe, Vietnam
Included Accessories		
• Device x 1		
• Cable Tie for fixing battery x 2		
• Jumper for Al current mode setting x 3		
• Water & Dust-proof stopper x 3		
Optional Accessory		
USB-to-Serial Console		Note
W96G-11330Y100 ER18505-3.6V-4000mAh battery for EDGE 1 & EDGE 2 series.		



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