EDGE 2
Industrial LTE-M/NB-IoT Edge Node

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: LTE NB-IoT/Cat-M1 is deployed on the Edge node product respectively, fulfilling wireless monitoring and controlling needs under an IoT framework.

The EDGE 2 conveniently and transparently connects the existing field site sensors/serial devices with only basic configuration to NBIoT/Cat-M1 Internet network.

EtherWAN — "When Connectivity is Crucial."

3 Steps for Field Site IoT Deployment

Spotlight

✚ Flexible Connectivity for Critical Applications

Multiple I/O to connect to a Wide Variety of Field Equipment

Over thousands data storage (16MB Log storage); Scheduled Uplink

Integrated 10 bit A/D Converter to convert Analog Signal to Digital Data

✚ Rugged Industrial Design

IP67 Enclosure Design

-30 to 70°C Temperature Range

Battery or DC Power Input

✚ Reliable and Uninterrupted Connection

Serial port supports Modbus RTU Interoperability

Remote Control when VDC powered (DO output and Modbus Control)

Wake up trigger with sensor data continuing uplink

Smart alert with over threshold trigger DO and MQTT event activate

✚ IoT Cloud Connectivity

MQTT Protocol for Cloud Connectivity

Ready to Cloud for AWS and Azure

Frequency Bands

✚ LTE Cat. NB2/M1 Frequency Band

Model	Band/Channel	Regions
EDGE 2	FDD:B1/B2/B3/B4/B5/B8/B12/ B13/B17/B18/B19/B20/B25 /B27/B28/B66/B71/B85 GSM:B5/B8/B3/B2	All Regions (*Worldwide)

Features

➕ WAN & Uplink

EDGE 2

Protocol: TCP, UDP, MQTT

Cloud: AWS, Azure and MQTT based cloud

Data Security: SSL TLS 1.2

Connection: By schedule plan
(per Yearly/Monthly/Weekly/Daily/Hourly or per designated Minutes)

Data Upload: Multiple servers supported for redundancy,
re-trial plan for interrupted connection

➕ Field Communication

Modbus

Master for accessing attached Modbus RTU Slaves
(Up to 8 Modbus devices supported)

Data Logging

By schedule plan
(per Yearly/Monthly/Weekly/Daily/Hourly or per designated Minutes)

➕ Administration

Configuration

Windows Utility, Console CLI, USB-to-Serial console cable

System

Backup & Restore, Reboot & Reset, Syslog, Upgrade

Specifications

+ Wireless Interfaces

EDGE 2
1 x LTE Cat. M1/NB2 Module
3GPP, Cat. M1/NB2 with PSM (*Power save mode) supported

Data Transmission
Cat. M1: Max. 375Kbps (DL); Max. 375Kbps (UL)
Cat. NB2: Max. 32Kbps (DL); Max. 70Kbps (UL)

Specification
Max. Output Power: 23dBm
Sensitivity:
  -107dBm@Cat M1, 1.4MHz Bandwidth, CE Mode A
  -113dBm@Cat NB2, CE Level 0

+ I/O Interfaces

Analog Input
3 x AI 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)

Wake-up Port
1 x Internal Reed Switch (EDGE 2) and dedicated wake-up port reserved for device wake-up triggering

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 or LoRaWAN

+ I/O Connectors

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

+ Log Storage

Data logging (EDGE 2)
16MB Internal Storage

+ Power

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

Power Consumption:
Fully Operation: 1000 mW (3.6Volts)
Sleepn: 0.4mW (3.6 Volts)
Sending: 11.25mW (tx 45 seconds/hour, 3.6 volts)

+ Mechanical

Casing
Plastic (PC, UL-94V2)
IP67

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
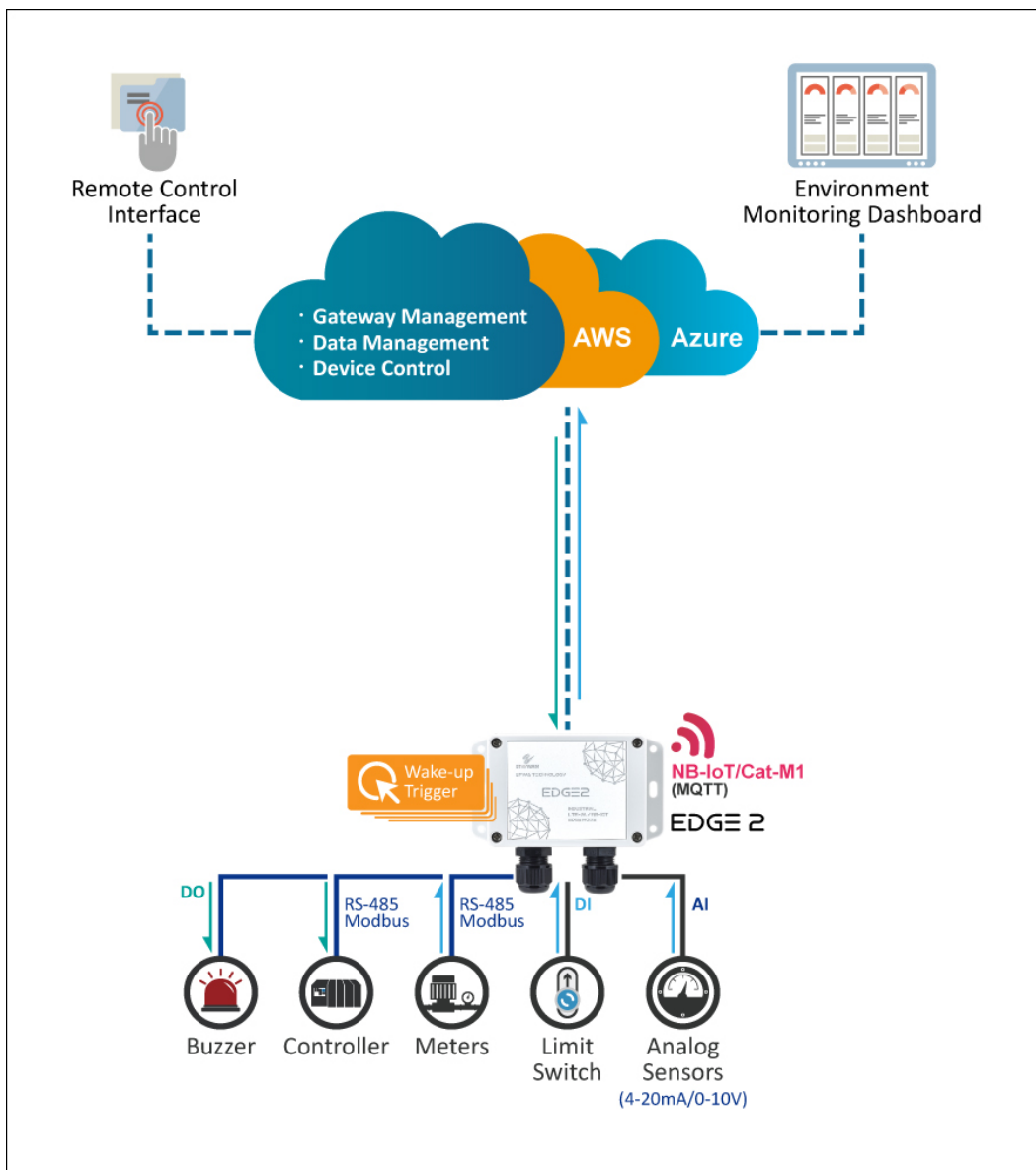5% to 95% (non-condensing)

✚ Embedded Antennas

EDGE 2 Series
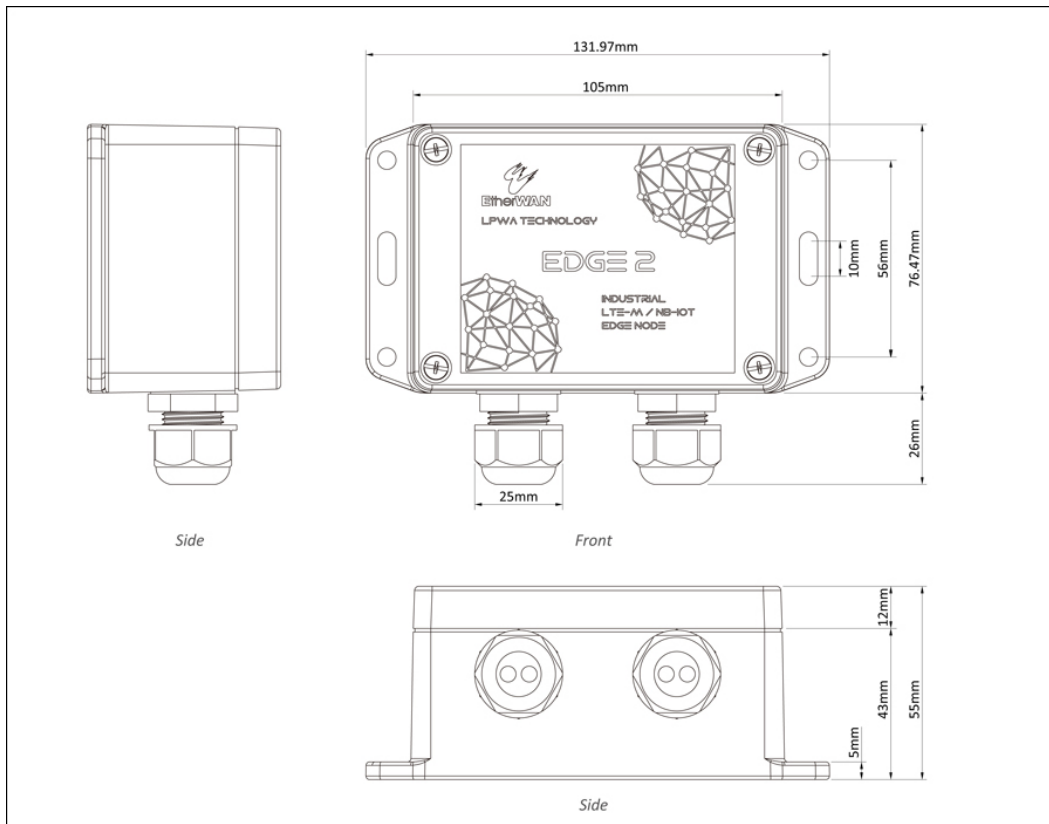1 x Internal 2dBi Antenna

✚ Regulatory Approvals

Safety
EN 60950-1

Emissions/Immunity
CE/NCC/EAC

Application

Dimensions

Side

Front

Side

Ordering Info

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✚ Included Accessories

Device x 1
Cable Tie for fixing battery x 2
Jumper for AI current mode setting x 3
Water & Dust-proof stopper x 3

✚ Optional Accessory

USB-to-Serial Console Cable	Note	Note
	W96G-1140Y1126	USB-to-Serial console cable is an optional accessory purchased separately for utility configuration for EDGE 2 setting and configuration.
	W96G-11330Y100	ER18505-3.6V-4000mAh battery for EDGE 2 series.