

Wzzard LRPv Node

Industrial LoRa Private Node



Features

- Long-range wide area IoT gateway
- Optional solar or battery power input for low power consumption
- LoRa private protocol for closed system applications
- Ethernet and I/O ports for connecting a wide range of field assets with DIN rail or wall mounting design
- Provide connection to industry standard analog or digital sensors
- Rugged, IP66-rated, fiber-reinforced polyester PBT enclosure
- MQTT and JSON IoT protocol support

Introduction

The Wzzard LoRa private node intelligent sensor platform enables you to quickly and easily create a complete connectivity stack between your sensors and applications via either a network or the Internet. The platform uses intelligent edge nodes and a wireless LoRa network to transmit sensor data to the SmartSwarm 243 LoRa Gateway, which can connect to the Internet via a wired connection and communicate with application platforms using MQTT and JSON protocols. Wzzard LoRa Intelligent Edge Nodes can accommodate virtually any industry standard external sensors. Connections can be made via conduit fittings, cable glands, or an M12 connector. The nodes provide various sensor interface options including general purpose analog inputs, digital input/output, and thermocouples.

Specifications

Power

- **Internal** Two 3.6-V 2400-mAh lithium thionyl chloride AA batteries
- **Optional External Input** 6 ~ 12 V_{DC} Voltage

Mechanical

- **Physical Connection** M12 12.7-mm (1/2") conduit, sensor interface cable included; 8-wire, 26-gauge, 1.8-m (6")
- **Sensor Inputs** Analog input (0 ~ 5 V_{DC}, 0 ~ 20 mA, 4 ~ 20 mA), digital input (0 ~ 48 V_{DC})
Integrated temperature, thermocouple K-type digital output (0 ~ 30 V_{DC})
- **Optional External Antenna** RP-SMA, omnidirectional, 1.5 dBi, 868 ~ 915 MHz; length, 170 mm (6.69")
- **Mounting** Magnetic mounting via an internal magnet
Holding force, 2.13 kg (4.7 lbs); four mounting ears, M5 (#10)
- **Enclosure** IP66-rated, fiber-reinforced polyester PBT
- **Weight** 0.34 kg (0.75 lbs)

Technology

- **Wireless** LoRa private 868/915 MHz
- **LED** Network connectivity

Environmental

- **Installation** Indoor or outdoor
- **Operating Temperature** -40 ~ 75 °C (-40 ~ 167 °F)
- **Storage Temperature** -40 ~ 85 °C (-40 ~ 185 °F)
- **Operating Humidity** 0 ~ 95% noncondensing

Digital Inputs

- **Voltage Range** 0 ~ 48 V_{DC}
- **V_{IL}** 0.97 V (max)
- **V_{IH}** 1.8 V (min)
- **Pull-Up Current** 32 μA
- **Type** Source/Sink (PNP/NPN) software-selectable input
- **Isolation** None

Analog Inputs

- **Input Range** 0 ~ 5 V_{DC}, 0 ~ 20 mA, 4 ~ 20 mA
- **Resolution** 12 bit
- **Input Load Resistance** 100 MΩ (0 ~ 5 V_{DC}), 250 Ω, (0 ~ 20 mA)
- **Accuracy** ±1% (Voltage) at 25 °C
±1% (Current) at 25 °C

Thermocouple Input

- **Types Supported** K
- **Ranges Supported** Type-K -270 ~ 1372 °C (-454 ~ 2502 °F)
- **Resolution** 0.25 °C (34.25 °F)
- **Accuracy** ≤ 0 °C: ±2.5 °C
> 0 °C: ±1.5 °C

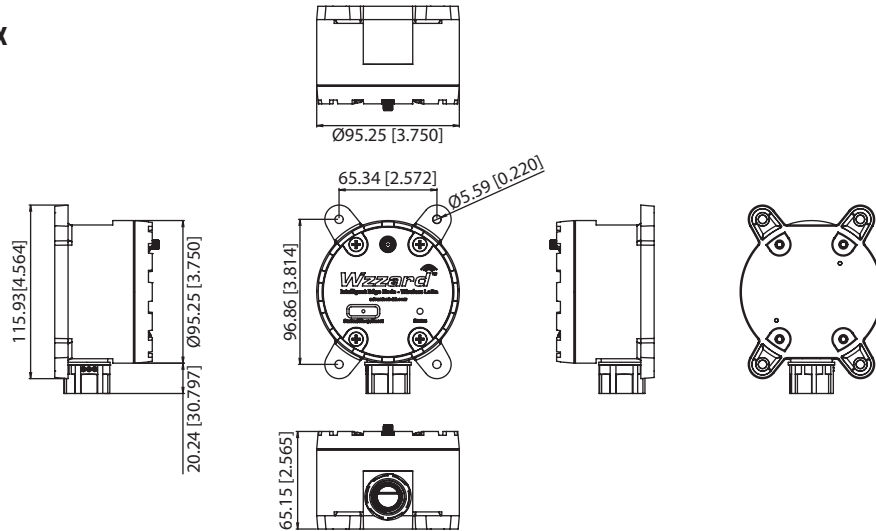
Digital Outputs

- **Voltage Range** 0 ~ 30 V_{DC}
- **Output Type** Open drain
- **Output Current** 100 mA (min)
- **Protection** Current limit protection
- **Isolation** None

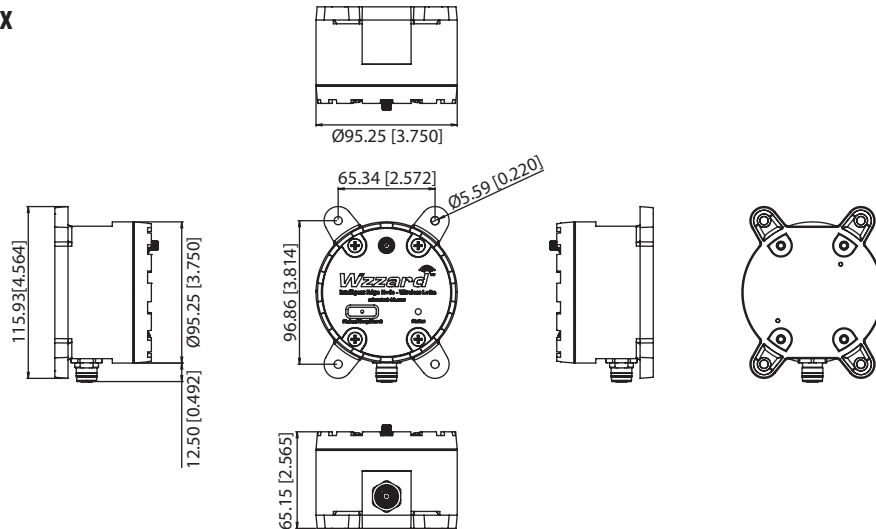
Dimensions

Unit: mm [inch]

BB-WSL2CXXXXX-X



BB-WSL2MXXXXX-X



Outline Dimension: 95.25 x 65.15 x 115.9 [3.75 x 2.56 x 4.56]

Regulatory Approvals

- Shock IEC60068-2-27
- Free Fall IEC60068-2-32
- Vibration IEC60068-2-6

Ordering Information

- **BB-WSL2C2112T-1** LoRa node with power monitoring, 2 x thermocouples, 2 x AI, 1 x DI, 1 x DO, conduit, external antenna (915 MHz)
- **BB-WSL2C2112T-2** LoRa node with power monitoring, 2 x thermocouples, 2 x AI, 1 x DI, 1 x DO, conduit, external antenna (868 MHz)
- **BB-WSL2C31000-1** LoRa node with power monitoring, 3 x AI, 1 x DI, conduit, external antenna (915 MHz)
- **BB-WSL2C31000-2** LoRa node with power monitoring, 3 x AI, 1 x DI, conduit, external antenna (868 MHz)
- **BB-WSL2M31000-1** LoRa node with power monitoring, 2 x AI, 1 x DI, M12, external antenna (915 MHz)
- **BB-WSL2M31000-2** LoRa node with power monitoring, 3 x AI, 1 x DI, M12, external antenna (868 MHz)