Wzzard LRPv Node

Industrial LoRa Private Node

Features

- Long Range Wide Area IoT gateway
- Low power consumption for solar and battery power applications
- LoRa Private protocol for closing system application
- Ethernet and I/O for connecting a wide array of field assets with DIN rail or wall mounting
- Connect to industry standard analog or digital sensors
- Rugged, IP66-rated, fiber reinforced polyester PBT enclosure
- MQTT and JSON IoT protocol to application platform

Introduction

The Wzzard LoRa private node intelligent sensor platform creates a complete, quick and easy connectivity stack between your sensors and your application, on your network or on the Internet. The platform uses Intelligent Edge Nodes, and a wireless LoRa network to transmit sensor data to the SmartSwarm 243 LoRa Gateway. The SmartSwarm 243 LoRa Gateway can connect to the Internet via wired connections and communicate with application platforms using the MQTT IoT protocol and JSON data formats. Wzzard LoRa Intelligent Edge Nodes accommodate virtually any industry standard external sensors. Connections can be made via conduit fitting, cable gland or M12 connector. The Nodes provide a wide variety of sensor interface options, including general purpose analog inputs, digital input/output and thermocouple.

Specification

Power

- **Internal** (2) 3.6V 2400 mAH Lithium Thionyl Chloride AA batteries
- **Optional External Input Voltage** 6 ~ 12 V_{DC}

Mechanical

- **Physical Connection** M12 Connector
  1/2" (12.7 mm) Conduit, sensor interface cable included; 8 wire, 26 gage, 6 ft. (1.8 m)
- **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, 868~915MHz
  Dimensions 6.69 inches (170 mm)
- **Mounting** Magnetic mounting via internal magnet
  Pull force 4.7 lbs (2.13 kg), (4) Mounting ears, M5 (#10)
- **Enclosure** IP66-rated, fiber reinforced polyester PBT
- **Weight** 0.75 lbs (0.34 kg)

Technology

- **Wireless** LoRa Private 868/915MHz
- **LED** Network Connectivity

Environmental

- **Installation** Indoor or outdoor
- **Operating Temperature** -40 to 75 °C (-40 to 167 °F)
- **Storage Temperature** -40 to 85 °C
- **Operating Humidity** 0 to 95% Non-condensing

Digital Inputs

- **Voltage range** 0 ~ 48 V_{DC}
- **V_{IL}** 0.97 V Maximum
- **V_{IH}** 1.8 V Minimum
- **Pull up current** 32uA
- **Type** Sourcing (PNP)/Sinking (NPN) Software selectable input
- **Isolation** None

Analog Inputs

- **Input ranges** 0 ~ 5 V_{DC}, 0 ~ 20 mA, 4 ~ 20 mA
- **Resolution** 12 bit
- **Input load resistance** 100 Mega ohm (0 ~ 5V_{DC}), 250 ohm (0 ~ 20 ma)
- **Accuracy** Voltage: 0.10% of full scale reading, 0.20% max.
  Current: 0.11% of full scale reading, 0.24% max.

Thermocouple Input

- **Types Supported** K
- **Ranges Supported** Type K -270 to +1,372 °C
- **Resolution** 0.25 °C
- **Accuracy** Typical +/- 2 °C, +/- 6 °C over the temperature range of -40 to 80 °C

Digital Outputs

- **Voltage range** 0 ~ 30 V_{DC}
- **Output Type** Open Drain
- **Output Current** Not to be less than 100ma
- **Protection** Current Limit Protection
- **Isolation** None

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 Thermocouples, 2 AI, 1 DI, 1 DO, Conduit, External Antenna with 915MHz
- **BB-WSL2C2112T-2** LoRa node with Power Monitoring, 2 Thermocouples, 2 AI, 1 DI, 1 DO, Conduit, External Antenna with 868 MHz
- **BB-WSL2C31000-1** LoRa node with Power Monitoring, 3 AI, 1 DI, Conduit, External Antenna with 915 MHz
- **BB-WSL2C31000-2** LoRa node with Power Monitoring, 3 AI, 1 DI, Conduit, External Antenna with 868 MHz
- **BB-WSL2M31000-1** LoRa node with Power Monitoring, 3 AI, 1 DI, M12, External Antenna with 915 MHz
- **BB-WSL2M31000-2** LoRa node with Power Monitoring, 3 AI, 1 DI, M12, External Antenna with 868MHz

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