WISE-6610

Industrial LoRaWAN Gateway

Features

- Long-range wide area IoT gateway
- LoRaWAN protocol for closed and public system application
- Ethernet and I/O for connecting a wide array of field assets
- DIN rail and wall mounting design
- Low power consumption for solar and battery power applications
- Enhanced memory for hosting customer software applications
- Redundancy-enhanced functions for continuous data transmission

Introduction

The WISE-6610 is a high-performance LoRaWAN gateway that offers reliable connectivity for industrial environments. It supports the LoRaWAN protocol for building LoRaWAN private and public networks, as well as various protocols including MQTT. The hardware and software flexibility of the WISE-6610 provides rich features for edge intelligence systems, and its support for VPN tunneling with various protocols ensures safe communications. The WISE-6610 also provides a network server that can phase the LoRaWAN data in our device. The WISE-6610 provides the redundancy-enhanced functions to prevent connection loss.

Specifications

WSN Support

Standard	LoRaWAN
Frequency	868/915/923MHz
ANT Connector	RP-SMA Male connector x 1

LAN Interface

Ethernet	10/100 Mbps, auto MDI/MDIX
Connector	1 x RJ45
Protection	1.5-kV built-in magnetic isolation protection

Digital I/O

Port Type	1x Digital Input On Voltage: 2.7V to 36V_{DC}
Port Connector	4-way Molex mini-fit connector

General

LED Indicators	PWR, DAT, WAN, ETH
Reboot Trigger	Reset button

Software

Network and Routing	DHCP server, NAT/PAT, VRRP, dynamic DNS client, DNS proxy, VLAN, QoS, DMVPN, NTP client/server, IGMP, BGP, OSPF, RIP, SMTP, SMTPS, SNMP v1/v2c/v3, backup routers, PPP, PPPoE, SSL, port forwarding, host port routing, Ethernet bridging, network server
Configuration	SSH, Web Browser
Network Security	HTTPS, SSH, VPN tunnels, SFTP, DMZ, firewall (IP filtering, MAC address filtering, inbound/outbound port filtering)
VPN tunnelling	Open VPN client and server and P2P, L2TP, PPTP, GRE, EasyVPN, IPSec with IKEv1 and IKEv2

Cellular Interface (WISE-6610-EXXXC/WISE-6610-AXXXC Only)

LTE Bit rate	150 Mbps (DL), 50 Mbps (UL)
LTE Bands	B20 (800 MHz), B8 (900 MHz), B3 (1800 MHz), B1 (2100 MHz), B7 (2600 MHz)
3G Bit rate	42.0 Mbps (DL), 5.76 Mbps (UL)
3G Bands	900, 2100 MHz
No. of SIM Slots	2 x Mini SIMs (2FF)
ANT Connector	2 x RP-SMA female connectors

Cellular Interface (WISE-6610-N100C-A/N500C-A Only)

LTE	Cat M1
LTE Bit rate	375 Kbps (DL), 375 Kbps (UL)
LTE FDD	B12, B13, B28 (700 MHz), B20 (800 MHz), B5, B18, B19, B26 (850 MHz), B8 (900 MHz), B4 (1700 MHz), B3 (1800 MHz), B2 (1900 MHz), B1 (2100MHz)
LTE TDD	B39 (1900 MHz)

Mechanics

Dimensions (W x H x D)	150 x 37.5 x 83 mm (5.9" x 1.48" x 3.27")
Mounting	DIN rail, wall
Weight	500g
Enclosure Rating	IP30
SD Card	1 x Micro SD Card Slot (WISE-6610-XXXXC Only)

Power Requirements

Power Input	9 ~ 36 V_{DC}
Power Connector	4-way Molex mini-fit connector
Power Consumption	8.2W-9W (9-36V_{DC}/1A)

Environment

Operating Temperature	-40 ~ 75°C
Storage Temperature	-40 ~ 85°C
Operating Humidity	10 ~ 95% RH

Regulatory Approvals

EMC	EN61000-4-2, Level 3
	EN61000-4-3, Level 3
	EN61000-4-4, Level 3
	EN61000-4-5, Level 3
	EN61000-4-6, Level 3
	EN61000-4-12, Level 3
	EN61000-4-11, voltage dip: 70%
Shock	IEC 60068-2-27
Free Fall	IEC 60068-2-32
Vibration	IEC 60068-2-6
RF	FCC/RED/NCC

Accessories

Power Supply	BB-RPS-MO4-M (not included)
LoRaWAN Antenna	1750008946-01(included)
LTE Antenna	1750009236-01 (cellular version included)

Dimensions

WISE-6610

Unit: mm [inch]

83

140
150

125.40

7.50

37.50

WISE-6610 LTE

Ø5 [0.197]

70 [2.756]
83 [3.268]

140 [5.512]
150 [5.906]

18 [0.709]

125.40 [4.937]

87.10 ref. [3.429]
83 [3.268]

37.50 [1.476]

15 [0.591]

M3 TAP x 2

64.80 [2.551]

Ordering Information

- **WISE-6610-N100-A**   LoRaWAN gateway supports up to 100 nodes with 915 MHz
- **WISE-6610-E100-A**   LoRaWAN gateway supports up to 100 nodes with 868 MHz
- **WISE-6610-A100-A**   LoRaWAN gateway supports up to 100 nodes with 923 MHz
- **WISE-6610-N500-A**   LoRaWAN gateway supports up to 500 nodes with 915 MHz
- **WISE-6610-E500-A**   LoRaWAN gateway supports up to 500 nodes with 868 MHz
- **WISE-6610-A100C-A**   LoRaWAN Cellular Gateway support up to 100 nodes with 923 MHz

- **WISE-6610-A500C-A**   LoRaWAN Cellular Gateway support up to 500 nodes with 923 MHz
- **WISE-6610-A500-A**   LoRaWAN gateway supports up to 500 nodes with 923 MHz
- **WISE-6610-N100C-A**   LoRaWAN Cellular Gateway support up to 100 nodes with 915 MHz
- **WISE-6610-N500C-A**   LoRaWAN Cellular Gateway support up to 500 nodes with 915 MHz
- **WISE-6610-E100C-A**   LoRaWAN Cellular Gateway support up to 100 nodes with 868 MHz
- **WISE-6610-E500C-A**   LoRaWAN Cellular Gateway support up to 500 nodes with 868 MHz

Mouser Electronics

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