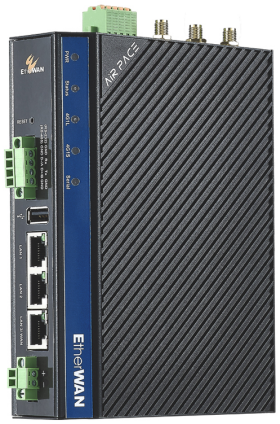
AiR PACE CL Series

Industrial Smart IoT Edge Computing LoRa Gateway (Project base with quantity requirement)

Microsoft Azure Certified

aws



4G LTE | Modbus | MQTT | Python | A/D Converter

Edge Computing | GNSS | LoRa | Node-RED

Highlights

Highly-reliable network connection

» Offers multiple Internet access methods: Gigabit Ethernet, Global 3G/LTE Cat. 4 networks
» With support of Dual-SIM, redundant link backup, and VRRP hot standby, the gateway ensures continuous connection by seamless transition to a backup link when main link fails

Powerful edge computing capabilities

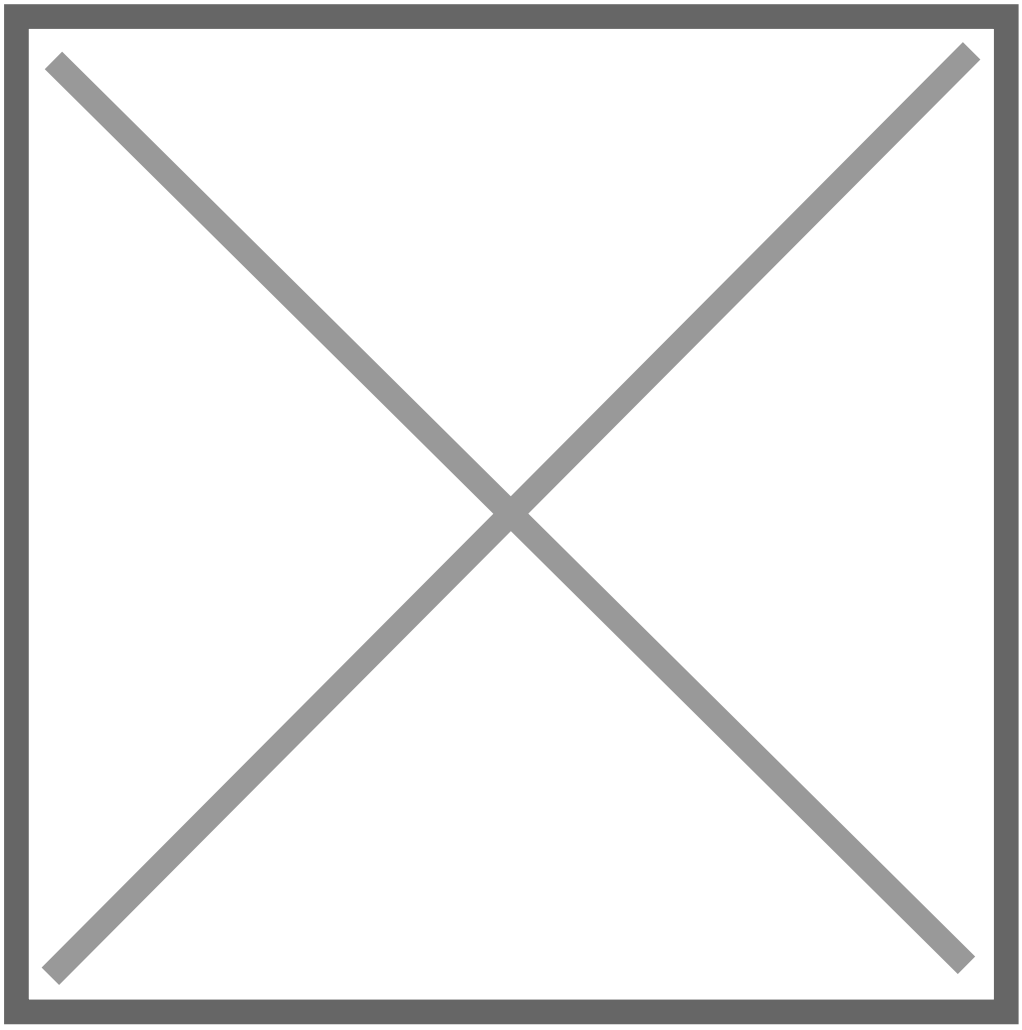
» ARM Cortex-A53 processor, 1GHz main frequency, up to 1GB DDR3 RAM and 8GB eMMC FLASH give the gateway powerful Edge computing capabilities to perform data optimization, real-time response, agile connection, smart applications, security and privacy protection at the IoT Edge

Compatible with multiple industrial protocols

» MQTT

Optional LoRa Gateway with network server

» Accessing up to 200 of LoRaWAN edge nodes
» LoRaWAN 3 in 1, combine LoRa Gateway, Network Server and Applicaton Sever in One (Fig 1)
» LoRaWAN network redundancy to secure LoRa data (Fig 2)



Overview

AiR PACE, the EtherWAN Industrial Smart IoT Edge Computing Gateway for Internet of Things (IoT), is a configurable and manageable wireless gateway. The AiR PACE features various interfaces and supports useful user application tools to meet IoT applications. It provides real-time data analysis and intelligent processing at the fieldbus edge, which is more effective and secure. The AiR PACE is both Microsoft Azure IoT edge certified and AWS IoT Greengrass qualified. Quick-to-deploy, the AiR PACE smart gateway can be tailored to any IoT application needs.

EtherWAN — "When Connectivity is Crucial."

Frequency Bands

LoRa (*AiR PACE 1-XX-CL Series)

	4G LTE		3G	2G	LoRa	Region
Sku Code	FDD LTE	TDD LTE	WCDMA	GSM/EDGE		
TA	B1(2100)/ 3(1800)/ 4(AWS)/ 5(850)/ 7(2600)/ 8(900)/ 28(700 APT)	B40(2300)	B1(2100)/ 2(1900)/ 5(850)/ 8(900)	B2(1900)/ 3(1800)/ 5(850)/ 8(900)	920-925MHz (AS923)	Taiwan
EA	B1(2100)/ 3(1800)/ 5(850)/ 7(2600)/ 8(900)/ 20(800)/ B28A(700)	B38(TD 2600)/ 40(TDV 2300)/ 41(TD 2500)	B1(2100)/ 8(900)	B3(1800)/ 8(900)	920-925MHz (AS923)	APAC
EU	B1(2100)/ 3(1800)/ 5(850)/ 7(2600)/ 8(900)/ 20(800) /B28A (700)	B38(TD 2600)/ 40(TDV 2300)/ 41(TD 2500)	B1(2100/ 8(900)	B3(1800)/ 8(900)	863-870MHz (EU868)	EU & Vietnam

Features

Functions

Cellular

3GPP, 3G/4G, IP Pass-through, IPv4

Band management for band lock

Ether-WAN

Dynamic IP, Static IP, PPPoE, PPTP, L2TP

Protocols

DHCP Server/Relay

Port-based, Tag-based VLAN

QoS

LLDP

Port Forwarding

NAT 1-1, 1-Many, transversal, Virtual Server/Computer, DMZ, VPN Pass-through

Network Management

Configuration

Web Console, CLI, Command Script, Python

Management

SNMP v1/v2c/v3, AiR PACE MIB

System

Upgrade, Backup & Restore, Reboot & Reset, SysLog

Diagnostic

Ping, Traceroute, Packet Analyzer, Sniffer (Field communicating data logging), Diagnostic tool

Security

VPN

IPSec (Up to 16 Tunnels), OpenVPN, PPTP, L2TP, GRE

Firewall

SPI Firewall with Stealth Mode, IPS

Access Control

URL Blocking, URL Blocking, MAC Filter

Field Communication

Virtual COM

RFC2217, TCP Client, TCP Server, UDP

Data Interchange

MQTT Broker, MQTT Client

Data Logging

Sniffer, Off-line/Full-time Proxy, Mixed modes

Service

Cellular Toolkit

Data Usage, SMS, SIM PIN, USSD, Network Scan

Event Handling

User Defined Manage/Notify Event; Action & Trigger by SMS, Mail, Syslog, SNMP Trap, Modbus, I/O

Development Platform

Python Customization Development
Amazon AWS Greengrass
Microsoft Azure IoT Edge

User Application Tool

Node-RED

LoRa

LoRa Gateway, Public Network Server (External), Private Network Server (Internal, up to 200 nodes)
Device Classes: Class-A and Class-C

GNSS

GPS Location Tracking

Specifications

Platform

CPU: ARM Cortex A53 1.35GHz Dual Core
DRAM: 1GB DDR3 Memory
Storage Pre-installed: 8GB eMMC
Storage Slot: MicroSD Slot x 1 for SD 3.0 (SDXC) Compliant Storage Expansion

Cellular

Standards
4G LTE: FDD-LTE, TDD-LTE, Transfer rate (max): LTE FDD: 150Mbps down; 50Mbps up; LTE TDD: 130Mbps down; 35Mbps up
3G: WCDMA, Transfer rate (max): 42Mbps down; 5.76Mbps up
2G: GSM/EDGE, Edge Transfer rate (max): 236.8Kbps down & up

SIM Slot
2 x microSIM card slots

LoRa (*AiR PACE 1-XX-CL Series)

Frequency Band
863-870MHz (EU/EU868), 920-925MHz (APAC/AS923)* Japan Excluded

Specification
8-channel LoRa Gateway module
Max. Output Power: 14dBm (EU868), 20dBm (AS923)
Sensitivity: -137dBm@293bps (SF=12, 125k Bandwidth)

Ethernet

Standards

IEEE 802.3 10/100/1000BASE-T

IEEE 802.3u 100BASE-T(X)

IEEE 802.3ab 1000BASE-T(X)

IEEE 802.1x Flow control

Full/Half duplex mode

Auto MDI/MDI-X connection

Auto negotiation speed

Ports

1 x RJ-45 GbE (WAN/LAN Configurable) +2 x RJ-45 GbE

Serial

Ports

1 x RS-232/RS485 (4-pin Terminal Block)

Signal

RS-232: TxD, RxD, GND

RS-485: D-/A, D+/B, GND

I/O

Analog Input

2 x AI

Conversion: 12bit ADC

Input Range: 0-10V

Resolution: 2.5mV

Digital Input

2 x DI (Isolated, "Logic 0": 0-2V, "Logic 1": 5-30V)

Digital Output

2 x DO (Isolated, Non-Relayed Output, 24V/300mA for each port)

Connector

10-pin Terminal Block

USB

Standards

USB 2.0 Host

Ports

1 x USB Type A

Antennas

Cellular

2 x SMA Female (Main & Aux.)

GNSS

1 x SMA Female

LoRa (*For AiR PACE 1-XX-CL Series Only)

1 x SMA Female

LED Indicators

System

PWR x 1; Status x 1

Data

LAN1, LAN2, LAN3/WAN, 4G1L, Serial, LoRa* (*LoRa Model Only)

Cellular Signal

4G1S

Power

Input

9-36VDC

AiR PACE 1-XX-CX: 14.5Watts (Max.), 8.5Watts (Typical)

AiR PACE 1-XX-CL: 17Watts (Max.), 11Watts (Typical)

Physical

Casing Material
Metal Case

IP Rating
IP30

Dimension
40 x 117.8 x 161.3mm (W x D x H)
40 x 127.4 x 161.3mm with DIN-Rail kit (W x D x H)

Weight
0.76kg (1.67lbs)

Installation Type
DIN-Rail mounting
Wall mounting Bracket* (*Optional)

Environment Limits

Operating Temp.
-30 to 70°C (-22 to 158°F)

Storage Temp.
-40 to 85°C (-40 to 185°F)

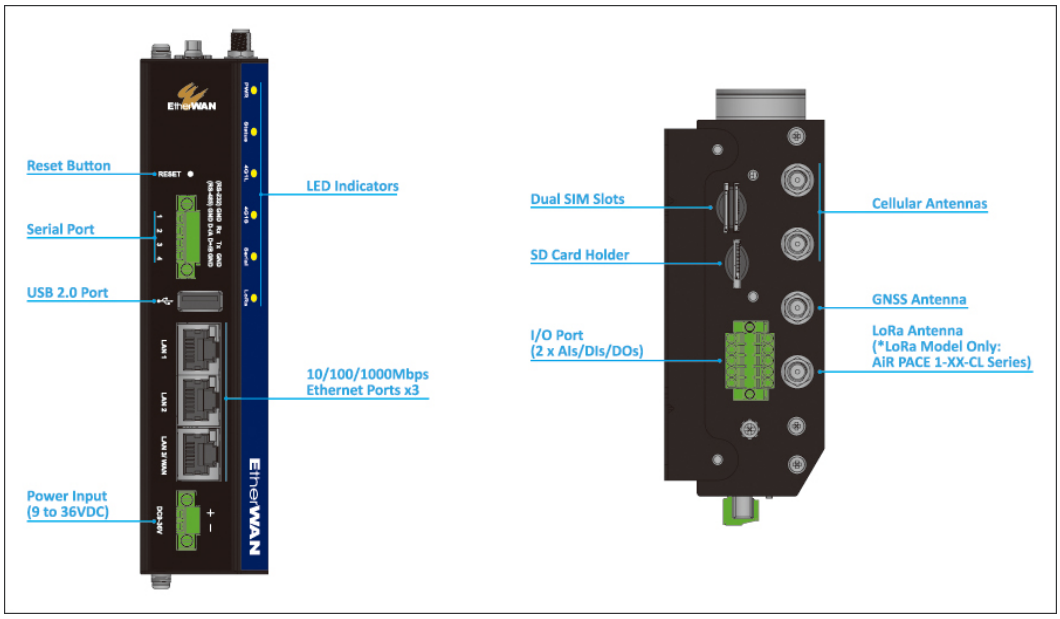
Relative Humidity
5% to 95% (non-condensing)

Regulatory Approvals

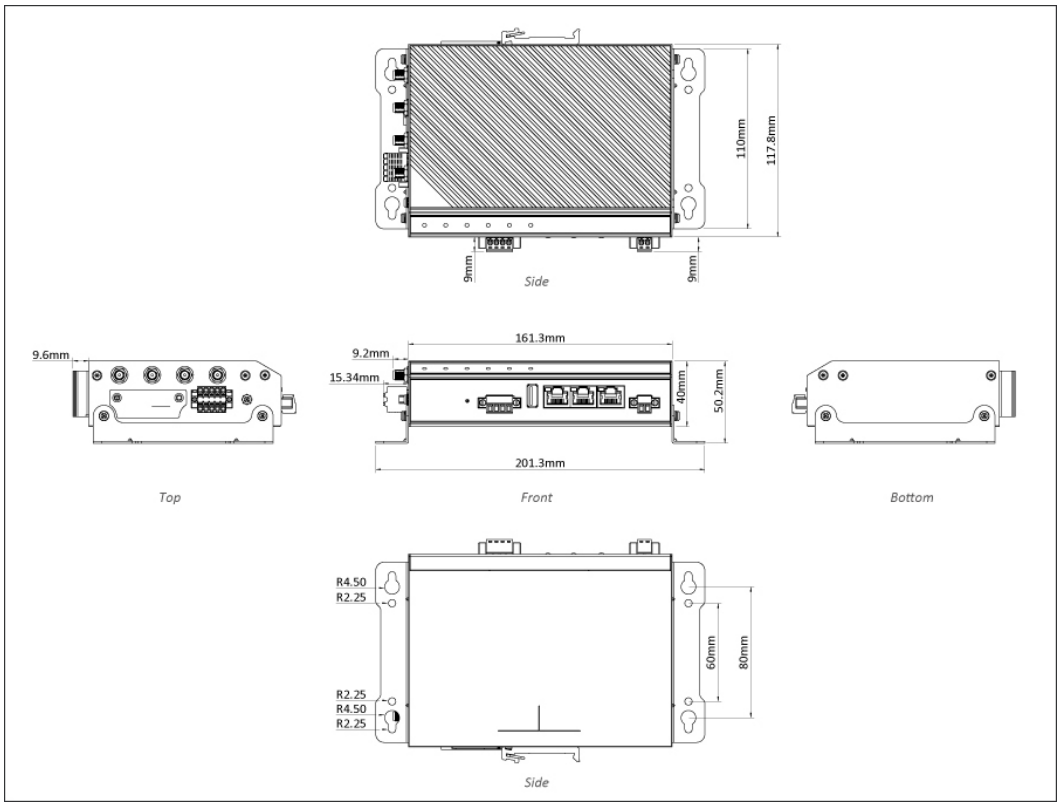
Safety
EN 60950-1
EN 62368-1: 2014

Emissions/Immunity
CE/NCC BSMI

Appearance



Dimensions



Ordering Info

4G LTE & LoRa Gateway

Model	Description	RF	Region
AiR PACE 1-TA-CL	Industrial Smart IoT LoRa Edge Computing Gateway with 4G LTE Backhaul & Network Server	Cellular LTE Cat. 4 & LoRa	Taiwan & Australia
AiR PACE 1-EA-CL	Industrial Smart IoT LoRa Edge Computing Gateway with 4G LTE Backhaul & Network Server	Cellular LTE Cat. 4 & LoRa	APAC
AiR PACE 1-EU-CL	Industrial Smart IoT LoRa Edge Computing Gateway with 4G LTE Backhaul & Network Server	Cellular LTE Cat. 4 & LoRa	EU & Vietnam

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