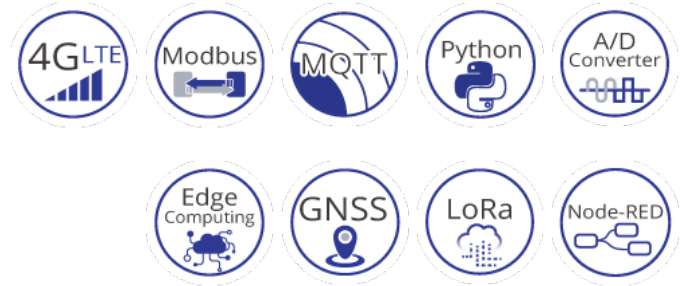


# AiR PACE CL Series

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



## 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

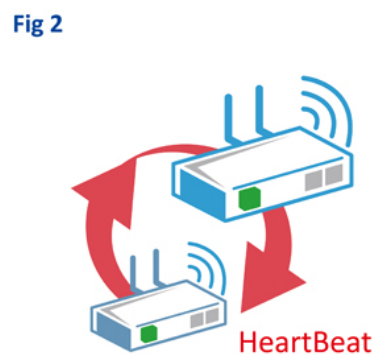
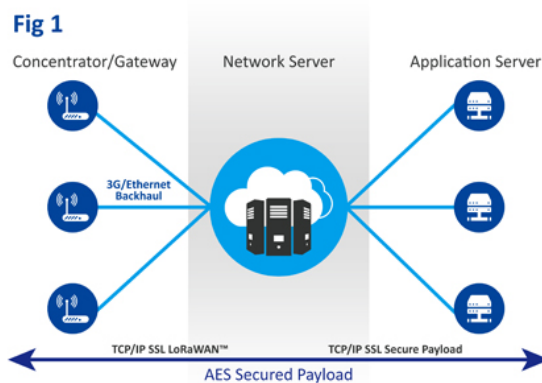
- » ARM Cortex-A53 processor, 1GHz main frequency, up to 1GB DDR3 RAM and 8GB eMMC FLASH give the gateway powerful Edge computing capabilities to perform data optimization, real-time response, agile connection, smart applications, security and privacy protection at the IoT Edge

### 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 Application Server 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)

Sku Code	4G LTE		3G	2G	LoRa	Region
	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: Tx/D, Rx/D, 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**

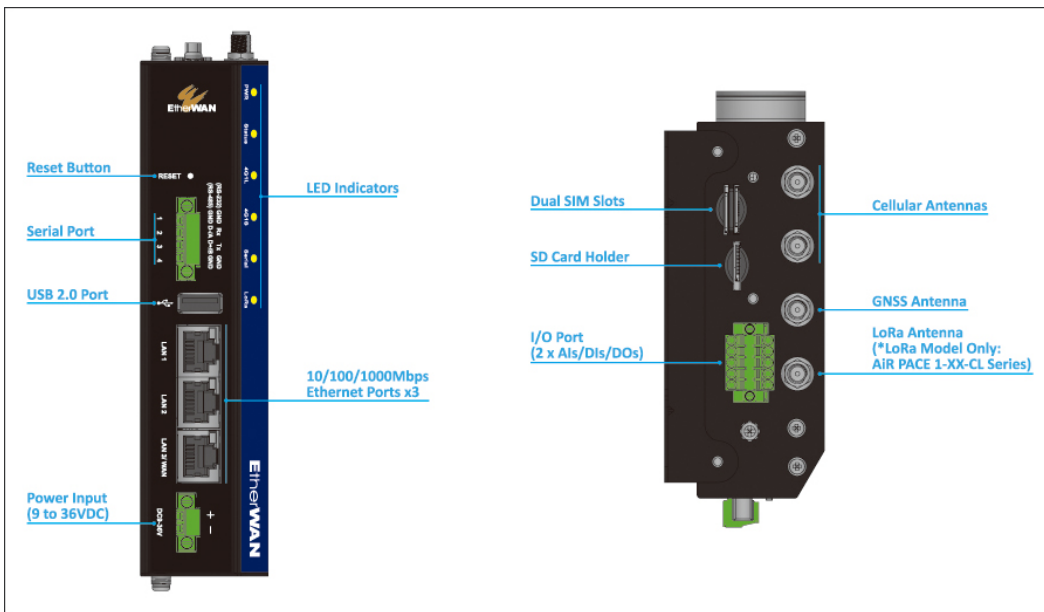
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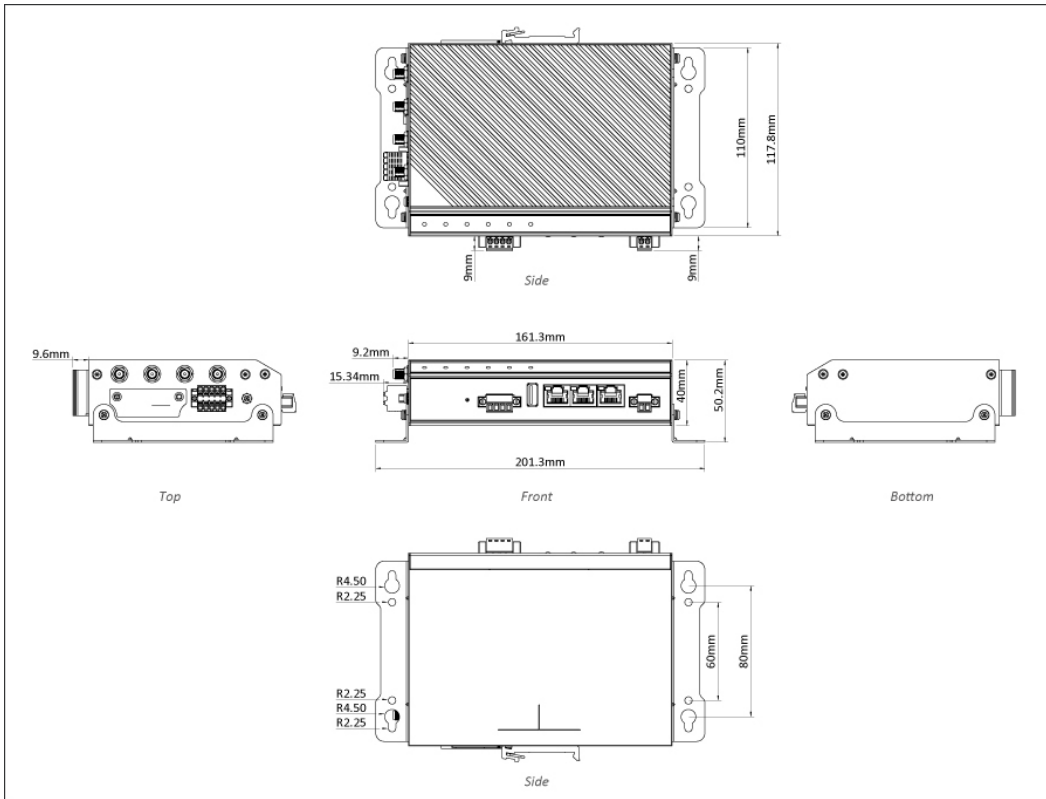
**Emissions/Immunity**

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

