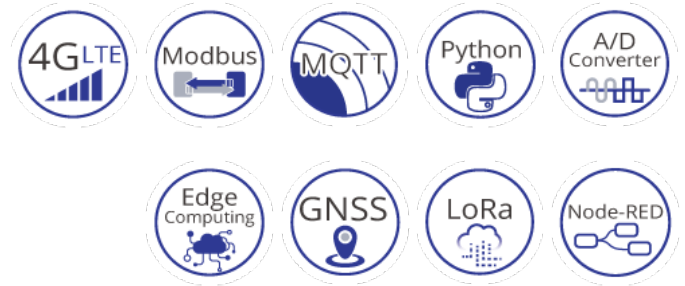


AiR PACE CL Series

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

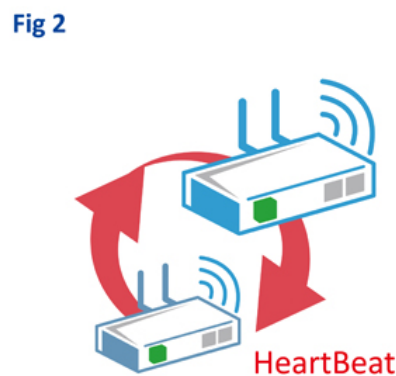
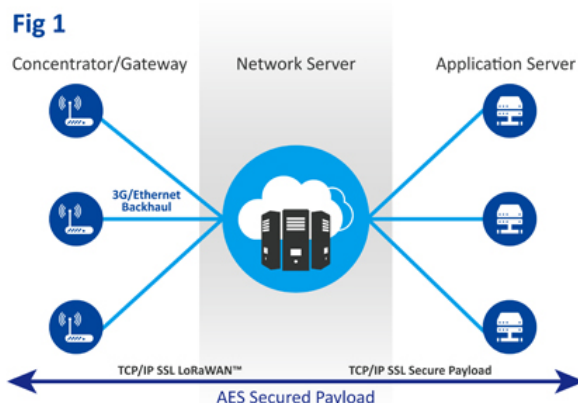
- » ARM Cortex-A53 processor, 1GHz main frequency, up to 1GB DDR3 RAM and 8GB eMMC FLASH give the gateway powerful Edge computing capabilities to perform data optimization, real-time response, agile connection, smart applications, security and privacy protection at the IoT Edge

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)

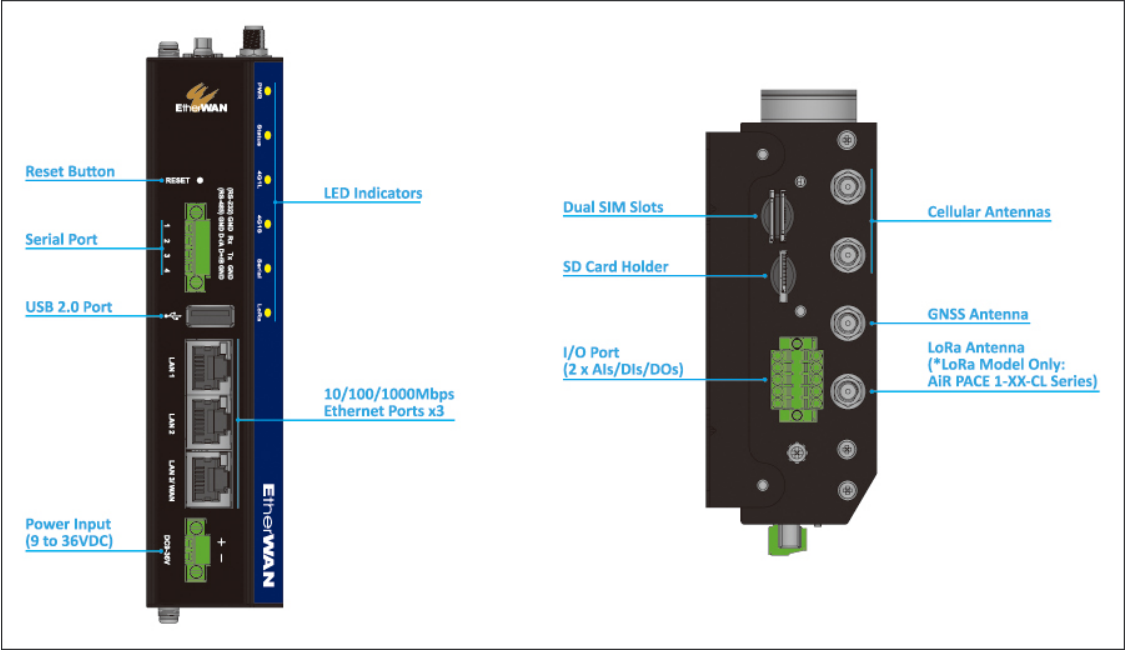
Relative Humidity
5% to 95% (non-condensing)

+ Regulatory Approvals

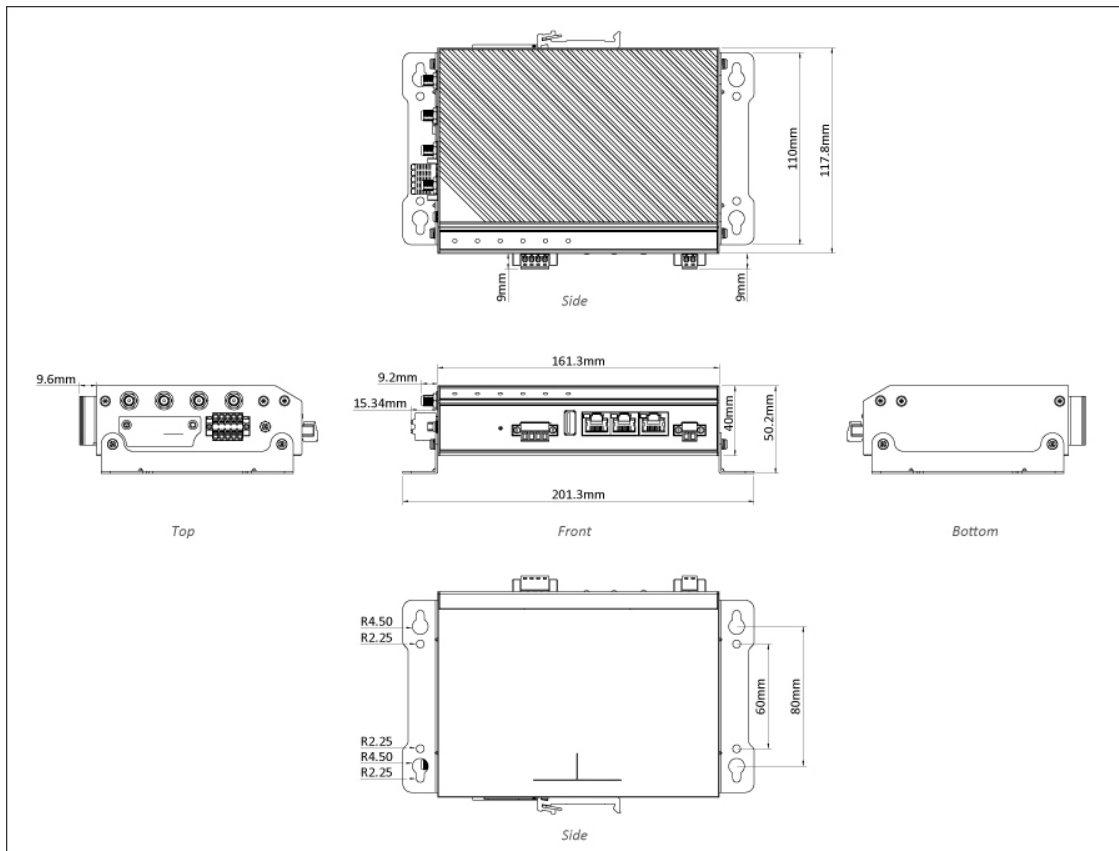
Safety
EN 60950-1
EN 62368-1: 2014

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 EdgeCellular LTE Cat. 4 & LoRa Computing Gateway with 4G LTE Backhaul & Network Server		Taiwan & Australia
AiR PACE 1-EA-CL	Industrial Smart IoT LoRa EdgeCellular LTE Cat. 4 & LoRa Computing Gateway with 4G LTE Backhaul & Network Server		APAC
AiR PACE 1-EU-CL	Industrial Smart IoT LoRa EdgeCellular LTE Cat. 4 & LoRa Computing Gateway with 4G LTE Backhaul & Network Server		EU & Vietnam



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