



Product 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

- Modbus RTU, Modbus TCP
- MQTT

Optional LoRa Gateway with network server

- Accessing up to 300 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)

Fig 1

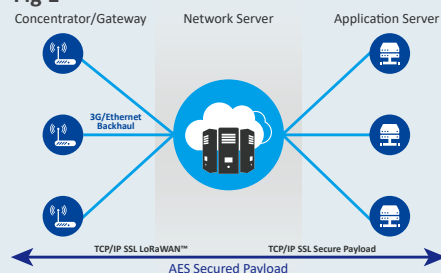
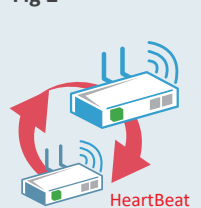


Fig 2



Overview

AiR PACE, the EtherWAN Industrial Smart IoT Edge Computing Gateway for Internet of Things (IoT), is a configurable and manageable wireless gateway. 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. AiR PACE is Microsoft Azure IoT Edge certified and AWS IoT Greengrass qualified. Quick-to-deploy, the AiR PACE can be tailored to any IoT application needs.

Ordering Information

4G LTE Gateway	Description	RF	Region
AiR PACE 1-TA-CX	Industrial Smart IoT Edge Computing Gateway	Cellular LTE Cat. 4	Taiwan & Australia
AiR PACE 1-EA-CX	Industrial Smart IoT Edge Computing Gateway	Cellular LTE Cat. 4	EU & APAC
4G LTE & LoRa Gateway	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

Frequency Bands Region Code Optional

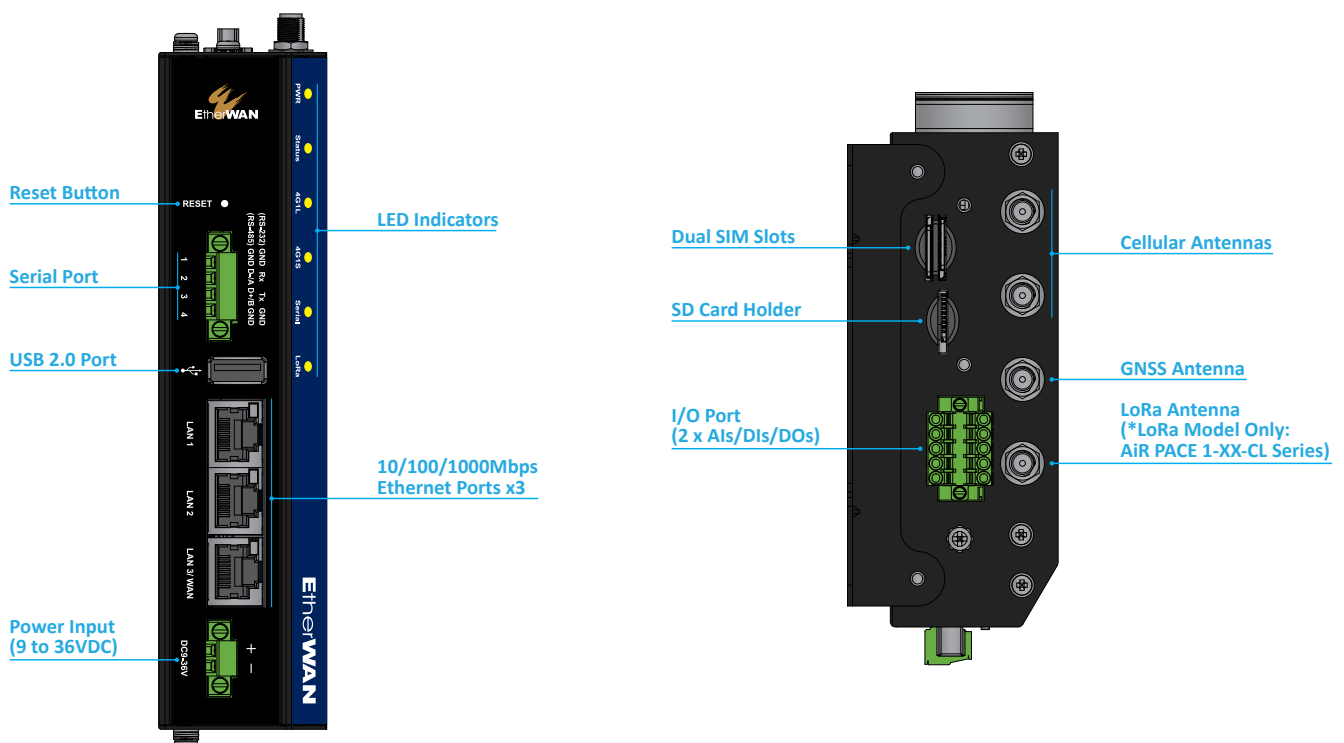
Cellular (*AiR PACE 1-XX-CX Series)

Sku Code	4G LTE		3G	2G	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)	Taiwan & Australia
EA	B1(2100)/3(1800)/7(2600)/8(900)/20(800)/B28A(700)	B38(TD 2600)/40(TDV 2300)/41(TD 2500)	B1(2100)/5(850)/8(900)	B3(1800)/8(900)	EU & APAC

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)/5(850)/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)/5(850)/8(900)	B3(1800)/8(900)	863-870MHz (EU868)	EU & Vietnam

Appearance



Software 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

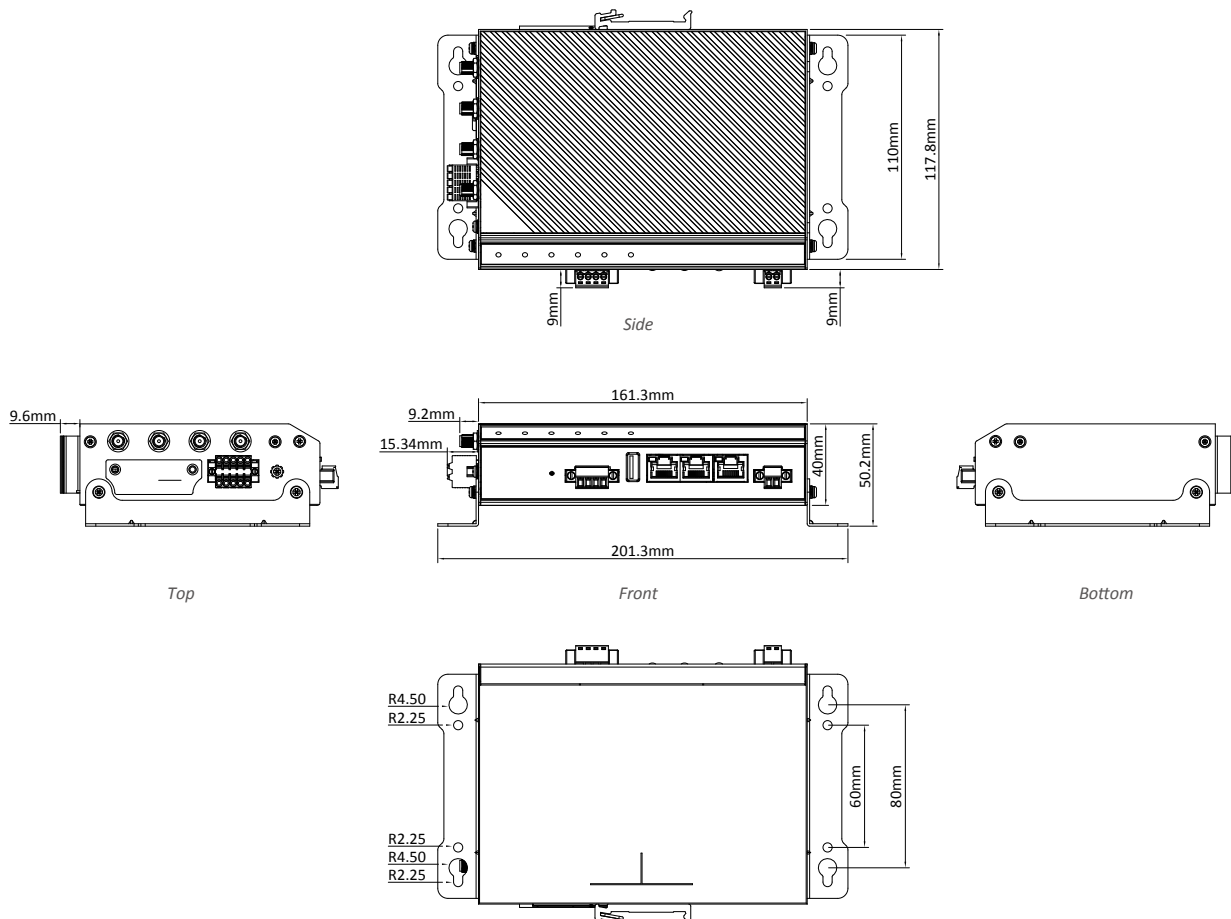
Field Communication +	
Virtual COM	RFC2217, TCP Client, TCP Server, UDP
Modbus	Gateway for Modbus TCP, Modbus RTU/ASCII Master/Slave Access Slave for Device Status/Information Access
Data Interchange	MQTT Broker, MQTT Client
Data Logging	Sniffer, Off-line/Full-time Proxy, Mixed modes
Service +	
Cellular Toolkit	Data Usage, SMS, SIM PIN, USSD, Network Scan
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 300 nodes) Device Classes: Class-A and Class-C 3 in 1, build in Gateway, Network Server and Application Server in one LoRaWAN Network Server Redundancy
GNSS	GPS Location Tracking
Application Software +	
EW Remote Manager	Optional of EtherWAN Wireless Monitoring & Management Software, for mass configuration, mass FW upgrade and device monitoring

Hardware 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)
CellularSignal	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
Dimensions	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 +	
Safety	EN 60950-1 EN 62368-1: 2014
Emissions/Immunity	CE/NCC BSMI/iDA

Dimensions



Application

