



## Quick Installation Guide

### Industrial Vehicle/Wayside Cellular PoE Routing Switch AP329

www.avcomm.us

#### • Overview

The Innovative LTE routing switch AP329 combines functionalities of LTE/Wi-Fi router and 8-Port 8~32VDC Power boost PoE+ switch for Smart Bus applications. It can also be used in roadside cabinets or other industrial applications for high-speed Wi-Fi & multi-port Ethernet ports to LTE routing. The modular design allows project customizations of enable/disable POE ports, LTE/Wi-Fi. The embedded MQTT and RESTful API enables public cloud integration such as AWS or Azure.

Model Name	Description
AP329-LTE	Industrial Wireless IIoT Secure Routing Gateway, 1xGbE WAN+8xFE LAN, 1xUSB, 2xSIM, WLAN, LTE-E, GPS, FDD B1/3/5/7/8/20, TDD B38/40/41, 8-32VDC
AP329A-W-L	Industrial Wireless IIoT Secure Routing Gateway, 1xGbE WAN+8xFE LAN, 3xDI, 1xDO, 1xUSB, 2xSIM, 1xeSIM, WLAN 802.11ac/n, LTE-E, GPS, FDD B1/3/5/7/8/20, TDD B38/40/41, 8-32VDC
AP329-PoE-L	Industrial wireless IIoT secure routing POE gateway, 1xGbE WAN+8xFE LAN, 1xUSB, 2xSIM, WLAN, LTE-E, GPS, FDD B1/3/5/7/8/20, TDD B38/40/41, 8-32VDC

#### • Package Checklist

- 1 x Product Unit
- 1 x 4-pin Removable Terminal Connector
- 1 x 6-pin Removable Terminal Connector (A models only)
- 1 x Quick Installation Guide

**NOTE: Antennas are not included in the package.**

**Please check the optional accessories and contact our sales to order the antenna.**

*Optional Accessory (for detailed information please refer to the Datasheet)*

#### • Installation

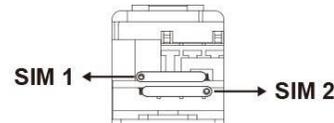
##### SIM Card

##### SIM Card Slot

The SIM Card Slot is used to insert the cellular card.



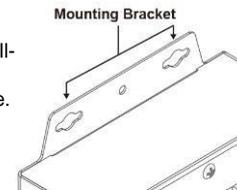
**Warning:** Be careful when installing the SIM Card, wrong installation procedure will cause damage. Make sure that pinhole of tray holder is facing to the right direction.



##### Wall mounting

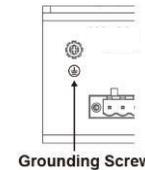
Follow the steps to install the device using wall-mounting plate:

1. The wall-mounting is installed on the device.
2. There are 4 hook holes, use the hook holes at the corners of the wall mounting plate to hang the switch on the wall.



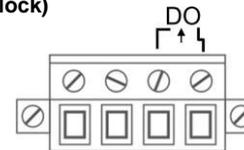
##### Grounding Screw

For models with PoE function, the grounding screw position is on the upper left corner of the front panel. For non-PoE models, it is on the lower left corner of the device front panel. For avoiding system damage from noise or electric shock, establish a direct connection between the ground screw and the grounding surface prior to connecting devices.



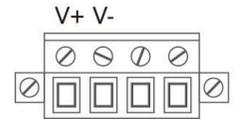
##### Wiring the Relay Output (4-pin Terminal block)

The relay output are used to detect user-configured events. The two wires attached to the fault contacts form a close circuit when a user-configured event is triggered. If a user-configured event does not occur, the fault circuit remains open.



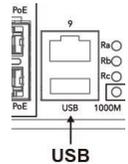
##### Wiring the Power Input (4-pin Terminal block)

- 1) Insert the positive and negative wires into the V+ and V- contact on the terminal block connector.
- 2) Tighten screws when the wire is connected.
- 3) Connect the power wires to suitable DC Switching type power supply.



##### USB Port

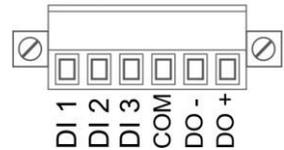
Use the USB port in order to save or restore the configuration and upload the firmware upgrade file. For further configurations, please refer to the User Manual.



##### A models only for Digital Input/output and Serial Port

##### Wiring the Digital Input / Output (6-pin Terminal block)

There are three digital inputs which share the same common ground and one digital output. To wire the DI / DO on the terminal block, loosen screws by screw driver on the terminal block connector, insert the positive and negative wires into connector and then tighten screws after the wires are connected.



##### Serial Port

Full Pin RS232, RS422, RS485 with DB-9 socket.

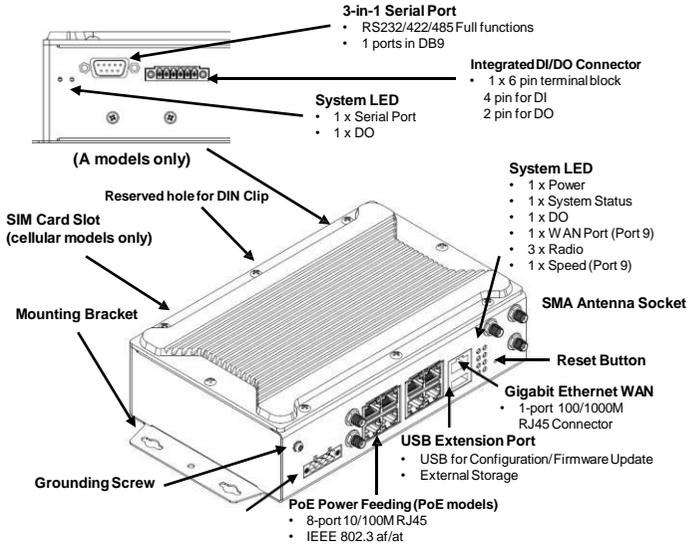
DB9 Female



PIN	RS232	RS485-4w/422	RS485-2w
1	DCD	TX-	Data-
2	TXD	RX+	-
3	RXD	TX+	Data+
4	DSR	-	-
5	GND	GND	GND
6	DTR	RX-	-
7	CTS	-	-
8	RTS	-	-
9	RI	-	-

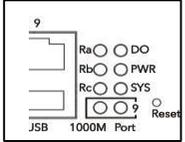
## • Appearance

### AP329

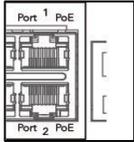


## • LED Indication

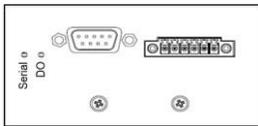
### Front Panel/Radio LED



### RJ45 LED



### Back Panel LED



### Front Panel LED

LED	Status	Description
DO Alarm (Relay)	Red On	Any failures in port link by SW control
	Off	No failure occurs
PWR	Green On	DC-IN Power is On
	Off	No Power in DC-IN
SYS	Green On	Ready
	Green Blinking	Firmware Updating
	Off	Not Ready
Port 9 (WAN)	Green On	Link is established
	Green Blinking	Packets transmitting/receiving
1000M (WAN)	Green On	WAN port speed is 1000M
	Off	WAN port speed is not 1000M

### RJ45 LED

Port(1~8)	Green On	Link is established
	Green Blinking	Packets transmitting/receiving
	Off	Link is inactive
PoE (by model)	Amber On	PoE power feeding
	Off	PoE power not feeding

## Radio LED

Model	Ra	Rb	Rc
AP329/329 P/329PA-2xWLAN	Reserved	AP: Green On STA connected: Green Blinking STA disconnected: Off Radio Disable: Off	AP: Green On STA connected: Green Blinking STA disconnected: Off Radio Disable: Off
AP329/329 P/329PA-WLAN+LTE	SIM detected: Green On SIM not detected: Off	4G : Green On 2/3G : Green blinking Disconnected: Off	AP: Green On STA connected: Green Blinking STA disconnected: Off Radio Disable: Off

## Back Panel LED

LED	Status	Description
DO Alarm (A Models Only)	Red On	Any failures in port link by SW control
	Off	No failure occurs
Serial (A Models Only)	Green Blinking	Packets transmitting/receiving

## • Antenna

The device supports up to 5 antennas sockets. Below is the placement of antennas.

	AP329-LTE	AP329-WLAN	AP329-2xWLAN	AP329-WLAN+LTE
ANT 1	LTE-Main	Wi-Fi 1	Wi-Fi 1	LTE-Main
ANT 2	LTE-Aux	Wi-Fi 2	Wi-Fi 2	LTE-Aux
ANT 3	GPS	-	-	GPS
ANT 4	-	-	Wi-Fi 1	Wi-Fi1
ANT 5	-	-	Wi-Fi 2	Wi-Fi2

## • Safety Precautions

- Turn off DC power input source before connecting the DC Power supply module to the terminal block connectors. Do not turn-on the source of DC power module and make sure all connections were well established, then power on the DC source to powering the device.
- Do make sure that models connect to the corresponding supply voltage. The device is to be supplied by Limited Power Supply. The relay contact supports 0.5A current, DC 24V.
- The router is designed for Industrial IoT, ITS, Railway track side application.
- Never install or work on/with the equipment or the cabling during the period of its lightning activity.

## • Management

This device supports both in-band and out-of-band network management. The user can either configure the device through the user friendly Web/HTTPS management or remotely manage the device through the network Telnet/SSH.

1. Preparation for **Web management**. First of all, verify that device is properly installed in the network and that every PC of this network can access the router through the web browser
2. Type [http://IP\\_address](http://IP_address) in your browser (the default IP address is <http://192.168.10.1/>)
3. Key in the user name and password in login screen. The default user name and password is **admin**.

◆ For further information, please refer to User Manual.

## • Support

At AVCOMM, you can use the online service forms to **request the support**. The submitted forms are stored in server for AVCOMM team member to assign tasks and monitor the status of your service. Please feel free to write to [info@avcomm.us](mailto:info@avcomm.us) if you encounter any problems.

## • Warranty

**5-year Global warranties** are available for AVCOMM products assuring our customers that the products shall remain free from defects in workmanship or materials and conform in all material respects to AVCOMM specifications, or Purchaser's supplied and accepted specifications. The warranty is limited to the repair and/or replacement, at AVCOMM' sole discretion, of the defective product during its warranty period. The customer must obtain a **Return Merchandise Authorization (RMA)** approval code prior to returning the defective Product to AVCOMM for service. The customer agrees to prepay shipping charges, to use the original shipping container or equivalent, and to ensure the Product or assume the risk of loss or damage in transit. Repaired or replaced products are warranted for ninety (90) days from the date of repair or replacement, or for the remainder of the original product's warranty period, whichever is longer.

## • Disclaimer

AVCOMM reserves the right to make changes to this QIG or to the product hardware at any time without notice. It is the user's responsibility to determine whether there have been any such updates or amendments herein. Defects, malfunctions, or failures of the warranted Product(s) caused by damage resulting from unforeseeable incidents (such as lightings, floods, fire, etc.), environmental and atmospheric disturbances, other external forces such as power line disturbances and surge, host computer malfunction and virus, incorrect power input, or incorrect cabling, incorrect grounding and damages caused by misuse, abuse and unauthorized alteration or repair are not warranted.