# Quick Installation Guide

## Industrial Cellular PoE Routing Switch AP316

www.avcomm.cn

## · Overview

The LTE PoE router AP316 provides ultra-resilient network by latest G.8032 ERPS v2 ring technology with 6 Giga ports, 2-port 100/1000M fiber ports, and simultaneous supports high-speed LTE routing. The LTE can backup network in case of ring failure and works as a redundant gateway. Dual SIM standby enables auto switch to secondary cellular network if primary network disconnects. Moreover, the router offers 4 Gigabit PoE/PoE+ ports for feeding IP cam or wireless AP. Integrated firewall ensures safe data transmission. Compact size and ruggedized design bring reliable deployment under the harshest conditions.

| Model Name | Description |
|---|---|
| AP316-WLAN-SFP | Industrial Wireless Ring Network IIoT Routing POE Gateway,802.11 b/g/n WLAN Cat. 4. 2x2 MIMO,4G/3G/2G, 4-Port Gigabit POE Plus 2-Port Gigabit SFP,ITU standard ring redundancy protocol, under 50ms protection and recovery switch, dual power 46 to 57VDC, -40°C to 75°C, IP30 |
| AP316-LTE-SFP | Industrial Wireless Ring Network IIoT Routing POE Gateway,LTE CAT.4, 2x2 MIMO,4G/3G/2G, 4-Port Gigabit POE Plus 2-Port Gigabit SFP,ITU Standard Ring Redundancy Protocol, Protection and Recovery Switching below 50ms, Dual Power 46 to 57VDC, To 40 ° C to 75 ° C, IP30 |

## · Package Checklist

- 1 x Product Unit (Without SFP transceiver)
- 1 x 6-pin Removable Terminal Connector
- 1 x Attached Din Clip
- 2 x LTE Antenna, Black
- 1 x Quick Installation Guide

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

- Wall-mounting kit with 2 plates and 8 screws

## · Installation

### SIM Card Slot

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

⚠️ **Warning**: *Be careful when install the SIM Card, wrong installation procedure will cause damage. Make sure that pinhole of tray holder is facing up.*

SIM 1 ← → SIM 2

### DIN Rail mount

To mount the router on the DIN Rail track, insert the upper end of the DIN‑Rail clip into the back of the DIN‑Rail track from its upper side and lightly push the bottom of the DIN‑Rail clip into the track. The DIN Rail should comply with DIN EN50022 standard. Using wrong DIN rail may cause unsafe installation.

← DIN Rail
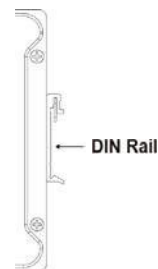
### Grounding Screw

The grounding screw is located on the bottom side of the router. For avoiding system damage by noise or electric shock, establish a direct connection between the ground screw and the grounding surface prior to connecting devices.

Grounding Screw
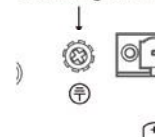
### Wiring the Relay Output

The relay output of the 2-pin terminal block connector 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 opened.
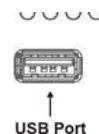
DO

### Wiring the Power Input

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.
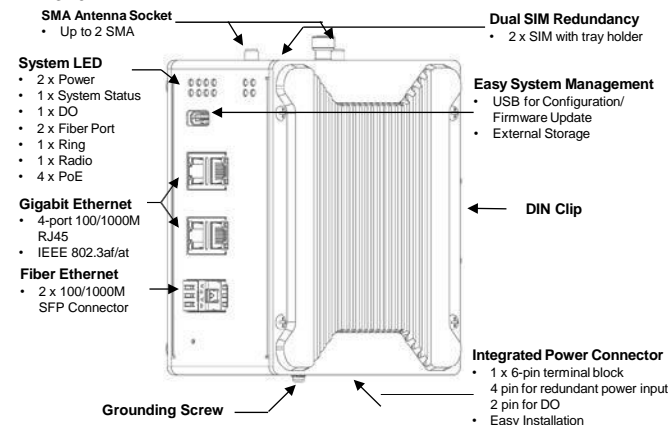3) Connect the power wires to suitable DC Switching type power supply.

P2  P1
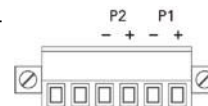
### USB Port

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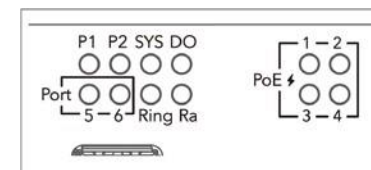
USB Port

## · Appearance

**AP 316**

**SMA Antenna Socket**
- Up to 2 SMA

**System LED**
- 2 x Power
- 1 x System Status
- 1 x DO
- 2 x Fiber Port
- 1 x Ring
- 1 x Radio
- 4 x PoE

**Gigabit Ethernet**
- 4-port 100/1000M RJ45
- IEEE 802.3af/at

**Fiber Ethernet**
- 2 x 100/1000M SFP Connector

**Grounding Screw**

**Dual SIM Redundancy**
- 2 x SIM with tray holder

**Easy System Management**
- USB for Configuration/ Firmware Update
- External Storage

**DIN Clip**

**Integrated Power Connector**
- 1 x 6-pin terminal block 4 pin for redundant power input 2 pin for DO
- Easy Installation

## · LED Indication

P1 P2 SYS DO   1—2
Port   5—6 Ring Ra   PoE 3—4

| LED | Status | Description |
|---|---|---|
| PWR (1/2) | Green On | DC-IN Power is On |
| | Off | No Power in DC-IN |
| System LED | Green On | Ready |
| | Green Blinking | Firmware Updating |
| | Off | Not Ready |
| DO | Red On | Any failures in port link by SW control |
| | Off | No failure occurs |
| Fiber Port | Green On | Links established |
| | Green Blinking | Packets transmitting/receiving |
| | Off | Link is inactive |
| Ring LED | Green On | Ring Normal (Not RPL Owner) |
| | Green Blinking | Ring Normal (RPL Owner) |
| | Amber On | Ring Abnormal |
| | Amber Blinking | Ring Port Fail |
| | Off | Ring is disabled |
| PoE LED | Green On | PoE delivering in progress |
| | Green Off | PoE is disabled / No Powered Device |

**Radio LED**

| LED | LTE Status |
|---|---|
| **Ra** | 4G Connection: Green On |
| | 2/3G connection: Green Blinking |
| | Disconnected: Off |

## · Antenna

The device supports up to 2 antennas sockets. AVCOMM provides the optional accessories, where the antenna color is black for the LTE.

| | AP316 |
|---|---|
| **Ant 1** | LTE-Main |
| **Ant 2** | LTE- Aux |

## · 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 router is designed for Industrial IoT, ITS, wayside surveillance 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, verify that device is properly installed in the network and that every PC of this network can access the router through the web browser (Google Chrome, Internet Explorer, Mozilla Firefox).

• Type **http://IP_address** in your browser (the default IP address is **http://192.168.10.1/**)
• Key in the username and password in login screen. The default username and password is *admin*.
• After you click OK, the Welcome page of the web-based management interface will appear.
• On the left side you can see the list of software features, on the right side – available settings.

◆ To link with the device, please make sure that the IP Address of the PC is located in the same subnet (**192.168.10.x**).

2. Preparation for *Telnet/SSH management*: You can connect to the device by Telnet and the command lines. Below are the steps to open Telnet connection to the router.

• Start -> Open Command prompt ->Enter
• Type the Telnet 192.168.10.1 (or the IP address of the router). And then press Enter.

**SSH (Secure Shell)**
The device also supports SSH console. You can remotely connect to the router to access command line interface. The SSH connection can secure all the configuration commands you sent to the switch.
SSH is a client/server architecture while the Router is the SSH server. When you want to make SSH connection with the switch, you should download the SSH client tool first.

**SSH Client**
There are many free, sharewares, trials or charged SSH clients you can find on the internet.

◆ **For further feature configurations, 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 sales@n-tron.com.cn if you encounter any problems.

## · Warranty

## · Disclaimer