

## Ethernet Iteris Roadside Unit Layout Guidelines

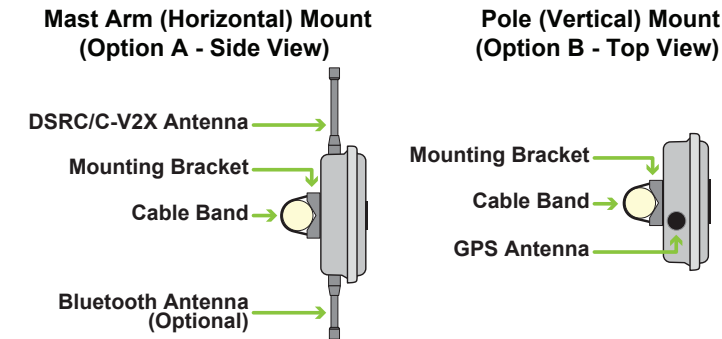
After selecting the target road segment for Connected Vehicle and Dedicated Short Range Communications (DSRC) / Cellular Vehicle to Everything (C-V2X) data collection and management, determine how many Iteris Roadside Units (RSUs) are necessary for the project by using the following guidelines:

The Iteris RSU has an effective 5.9 GHz frequency broadcast and detection range of up to approximately 3,000 feet radius from the antennas (with direct line-of-sight). Therefore, an RSU can be placed at each signalized intersection, or within 0.25 miles between devices. Power Control allows us to reduce the detection zone to minimize overlap.

## Iteris RSU Mounting Guide

### Mount Iteris RSU Enclosure to Structure

The BlueTOAD standard unit package includes one (1) "dual direction" mounting bracket and two (2) metal cable bands designed for mounting on mast arms, poles, I-Beams or support structures up to a 14" diameter.



### NOTE: Mounting Guide

**Mast Arm Installation** - To achieve optimal line-of-sight, RSU should be mounted near as possible to center of intersection.

**Pole Mount Installation** - To achieve optimal line-of-sight, RSU should be mounted at 45 Degree angle, pointed at center of intersection.

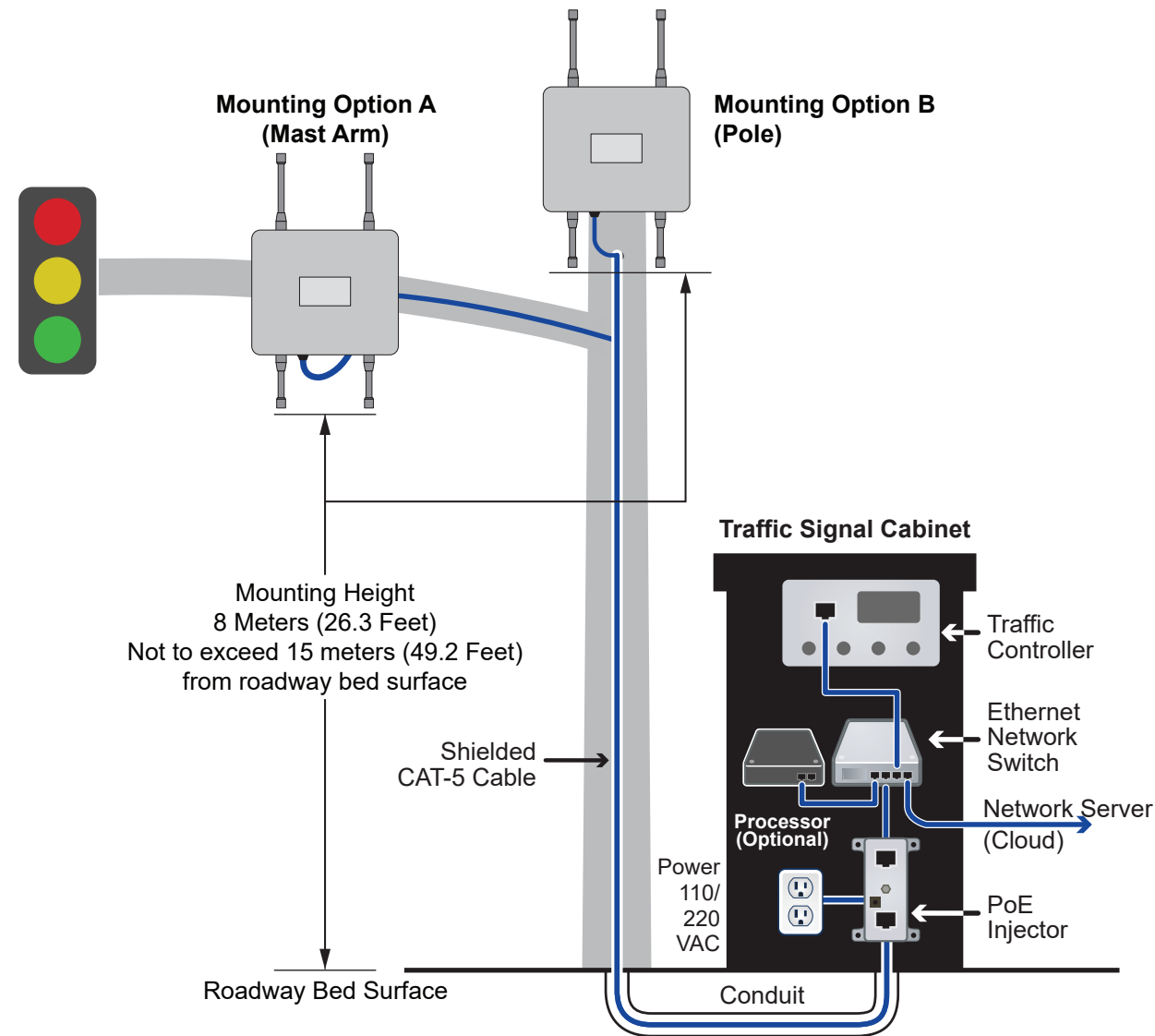
### NOTE: Iteris RSU ships with wrapped antenna connectors.

It is required to wrap antenna metal "lightening-suppression" connectors with Hand Moldable Plastic COAX-SEAL to protect from moisture and corrosion. ALL Iteris RSU installations will utilize Plastic COAX-SEAL for antenna connectors.



# BlueTOAD<sup>®</sup> Spectra CV

## Mounting Detail



### Ethernet-based Communications Power over Ethernet (PoE)

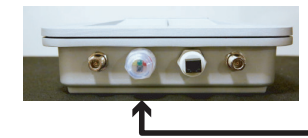
## ROADSIDE UNIT MOUNTING DETAIL

### ELECTRICAL DETAILS NO SCALE

## Ethernet Iteris RSU Pre-Installation

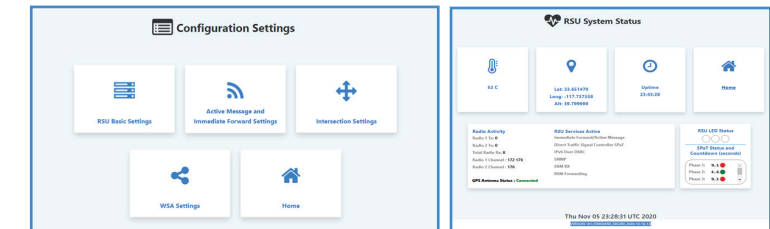
- STEP 1** - Confirm site survey checklist has been completed for all locations. Important to confirm all required inbound/outbound network ports have been setup.
- STEP 2** - Notify Iteris support team to schedule remote support for installation date.
- STEP 3** - Power up unit and confirm all LEDs are normal after the unit initializes

### Iteris RSU (Bottom View)



**LED Indicators**  
Green – Device operational  
Amber – Device ON  
Red - Fault

- STEP 4** - Configure network settings using Iteris Setup Utility (Web-Browser based Application) Upload unique MAP file to Iteris RSU for each designated intersection.



- STEP 5** - Call Iteris\*, communicate the Iteris RSU device number, indicate that the unit has been powered up, LEDs are normal, and await Iteris to confirm the network is seeing SPaT and MAP data from this unit.

\* **Customer Support Number: 608-713-9299 (Iteris will schedule installation appointment)**

- STEP 6** - After confirmation from Iteris, Power OFF the unit before installation.

## Roadside Unit Installation Guide

- STEP 1** - Mount Iteris RSU as required (See Iteris Mounting Guide left of page and reference BlueTOAD Spectra RSU User Guide).

- STEP 2** - After the Iteris RSU enclosure has been mounted, thread Ethernet Cable Coupler and terminate Ethernet Cable, follow RJ45 Pinout T-568B wire layout. Connect Ethernet cable to RSU.

- STEP 3** - Plug the main CAT5 cable from the PoE injector into the PoE splitter. See PoE Injector installation instructions below.

#### Install PoE Injector in Roadside Cabinet

- Secure PoE injector onto flat surface inside roadside cabinet
- The PoE injector has two (2) RJ-45 ports  
**Data** – connects to network Ethernet switch, router, or hub  
**Data & Power** – connects to the BlueTOAD unit (PCB)
- Connect AC power supply to PoE Injector and "plug" the 110V cord to AC power outlet receptacles.

PoE Injector  
AC Power Supply

#### RJ45 Pinout T-568B

1. White Orange 5. White Blue  
2. Orange 6. Green  
3. White Green 7. White Brown  
4. Blue 8. Brown

- STEP 4** - Power ON RSU, confirm all LEDs are normal (See LED Guide above).

- STEP 5** - Before leaving the location, call Iteris\* after the unit is Powered ON, communicate the device ID number and that the LEDs are normal, and confirm from Iteris that the network is transmitting the SPaT and MAP data from this unit. Also access Iteris RSU status using BlueARGUS software (see instructions below).

- STEP 6** - Add each installed Iteris RSU unit to a compiled list of unit location data (keep a list of device ID, location, and installation date for each unit).

Each Iteris RSU can be monitored using the web-based BlueARGUS software. Login credentials (Username and Password) are provided to each User, based on their predetermined Role (Admin or User) when the Account was initially setup.

BlueARGUS Website: <https://bluetoad.trafficcast.com/>

Iteris Support Website: <https://trafficcast.zendesk.com>