

# INSTALLING IN|TIME TRAVEL TIME MEASUREMENT HARDWARE

## Required Hardware Components

### Rhythm Engineering

- In|Time Camera Kit (PN 800-00027) includes:
  - In|Time camera
  - In|Time power/network cable
  - Rhythm Universal Mounting Bracket
    - 1 x M6x1.0 x 8mm bolt
    - 2 x ¼NC20 x ½" bolts
- In|Time Equipment Panel (PN 800-00028)

### Pelco

- AB-3009-120
- AB-2003-74
- SH-0514

### Optional Components

**NOTE:** If the In|Time camera requires a cable of more than 10 meters (included with the kit), use the optional components listed below. Make the splice inside a sealed IP67+ rated junction box. For wire runs of more than 90 meters, use an Ethernet extender and injector.

- Ethernet cable
- Power cable (IMSA 20-1 Traffic Control Cable - 14-3 Stranded Copper)
- Ethernet coupler
- Junction box
- Enclosure
- Cable gland – four recommended
- Ethernet extender for 90m + runs
- PoE+ injector for 90m + runs

### Required Tools

- Depth-controlled cable jacket stripper for shortening the cable or removing more of the cable jacket
- RJ45 crimp tool for shortening the camera cable. We recommend using EZ-RJ45 connectors with the following crimp tools:
  - EZ-RJ45® Crimp Tool
  - EZ-RJPRO® HD Crimp Tool
- Wire stripper for stripping copper wire insulation
- Angle meter for measuring the downward tilt of the camera when installed

### Selecting a Lens

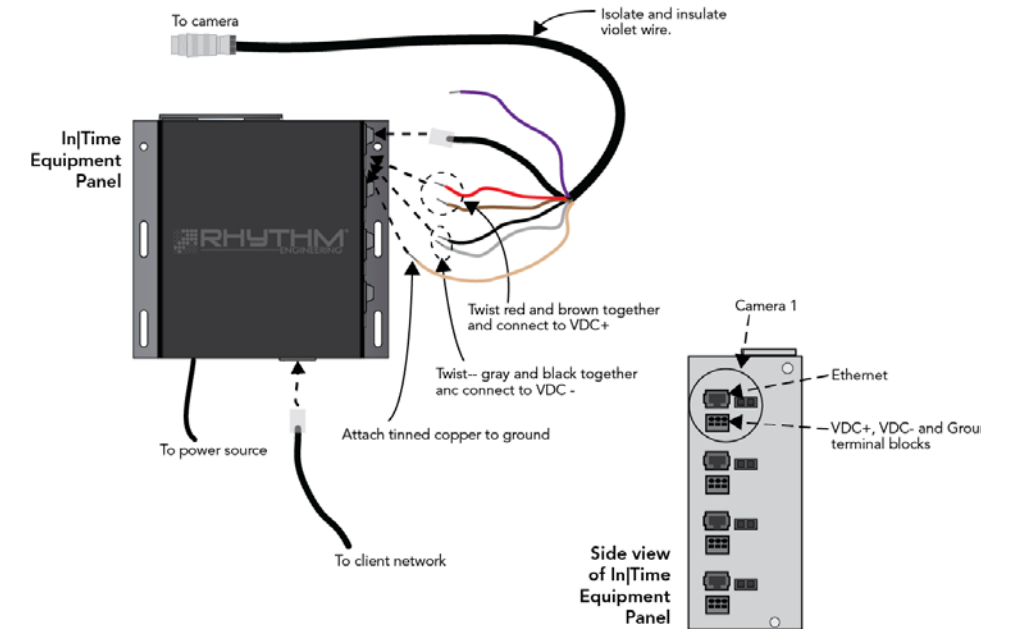
Rhythm generally recommends a 25mm lens on the In|Time camera to cover the vast majority of single lane installations. If attempting to cover an unusually wide two lane approach, a 16mm lens may be required. Please work with your Rhythm support representative for additional assistance in selecting the appropriate lens.

## Connect to power and network

**NOTE:** The In|Time cable can be shorted or extended. When extending, use only high quality Cat5e 24 AWG wire. Use an Ethernet repeater if the wire must be extended past 90 meters. Rhythm requires the use of 16 AWG or larger wiring when extending the camera power wires.

**NOTE:** Refer to the Genetec's *AutoVu Handbook* for detailed instructions on camera installation and positioning.

1. Connect the In|Time cable's Ethernet connector to one of the Ethernet ports on the side of In|Time Equipment Panel.
2. Twist together the red and brown wires on the In|Time cable.
3. Insert the twisted red/brown wires to the VDC+ terminal on the In|Time Equipment Panel's pluggable terminal block.
4. Twist together the black and gray wires on the In|Time cable.
5. Insert the twisted black/gray wires to the VDC- terminal on the In|Time Equipment Panel's pluggable terminal block.
6. Insert the tinned copper wire to the Earth ground terminal on the In|Time Equipment Panel's pluggable terminal block.
7. The violet wire is not used. Isolate and insulate it.



## Configure network settings

**NOTE:** To access the camera's settings, your Web browser must have the Microsoft Silverlight plugin installed.

1. Find the label containing the words "PC Name" located under the camera's sun visor and write it down
2. Check with your system administrator to determine the gateway and subnet address on which the In|Traffic data repository resides.
3. Verify that the camera is connected to power and a network.
4. On a laptop that is connected to the same network, open a web browser and type **http://<PC Name>/portal** in the Address Bar, replacing the words <PC Name> with the name listed on the camera's label.
5. Type the default password **Genetec** and press [Enter].
6. Go to the **Configuration** tab and set the camera to the static IP assigned to the camera in the **IP address** field.
7. Change the **Gateway** and **Subnet** fields to the gateway and subnet IPs used by the In|Traffic data repository.

### Network Settings for In|Time cameras

Network settings

Mode: **Static**

IP address: 10.103.70.13

Subnet mask: 255.255.255.0

Gateway: 10.103.70.254

DNS:

## Configure Camera Settings

While In|Traffic configures the majority of the In|Time camera settings, you must manually set the Context field within Analytics settings. Set the **Context** field to the state in which the camera is being deployed.

### Set the Analytics section

Analytics

Context: **Iowa**

Read strategy: **Fast moving vehicle**

Read plate state

Read vehicle make

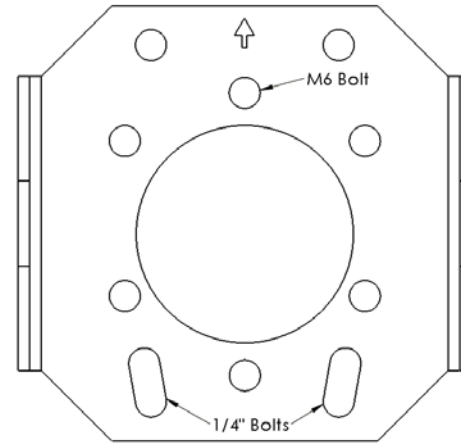
Estimate vehicle speed

Give a confidence score

Optimize for fixed install

1. Mount the In|Time camera to the Rhythm Universal Mounting Bracket using the three bolts supplied in the In|Time Camera Kit. Verify that the arrow on the bracket faces the front of the camera, and attach according to the diagram below.

### Attach mounting bracket using three supplied bolts



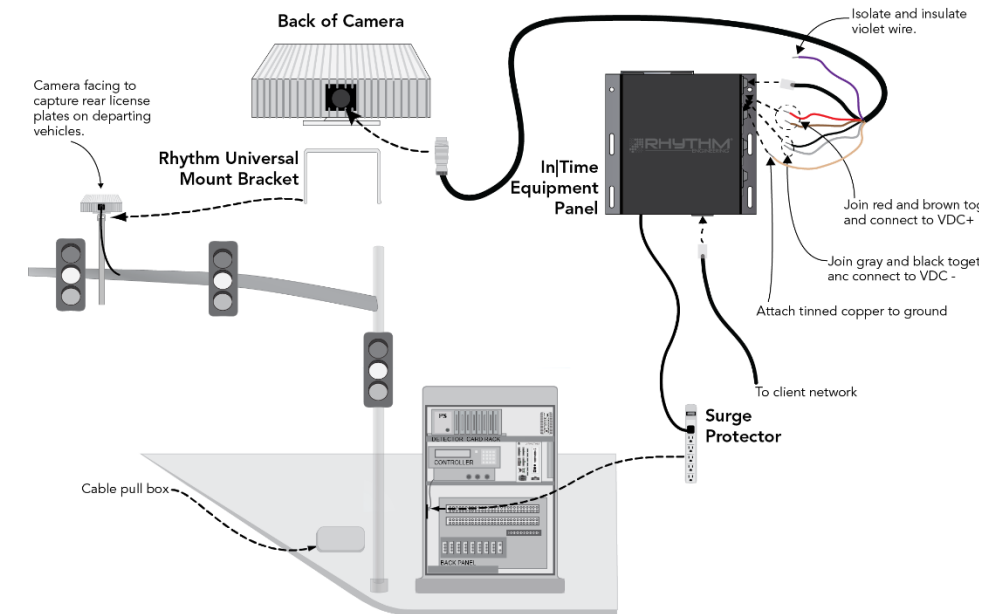
2. Attach the combination Rhythm Universal Mounting Bracket/In|Time camera to the Pelco Astro-Brac mount.
3. Mount the camera on the mast-arm opposite to the approach you want to capture.
4. Position the camera so that the camera captures the rear license plates of vehicles leaving the intersection.

Attach the In|Time cable to the back of the In|Time camera using the following guidelines:

1. Put dielectric grease on the cable connector threads.
2. Tighten the cable connector by turning the connector ring clockwise. Do not tighten the cable by turning the cable cord.
3. Do not turn the cable from behind the outer ring.
4. Do not use any tools to tighten the cable. Tighten by hand only.

Once you determine the camera is working correctly, apply weatherproof sealant where the conduit cable meets the camera to help prevent damage from the elements or vandalism.

### Final wiring of In|Time camera



## Positioning the camera

Position the camera to minimize the horizontal and vertical angles as much as possible relative to vehicle traffic. Ideally, the camera should be placed within 30° from horizontal and at the center of two lanes of traffic. Use the camera's LPR view to facilitate proper positioning.

### In|Time camera placement

