



# Autoscope Terra Access Point (TAP)

## Description

The *Autoscope* Terra Access Point is a robust *Autoscope* Detector Port Master (DPM) with EasyLink connectivity for up to eight *Autoscope* devices. The TAP outputs vehicle detection events to the traffic controller. A well-organized user-selectable video output simplifies maintenance and monitoring. Its video switch provides standard National Television Standards Committee (NTSC) or Phase Alternating Line (PAL) analog video for access in the traffic cabinet.

EasyLink connectivity means simple installation within the cabinet for I/O recognition to the traffic controller. The *Autoscope* Configuration Wizard® promptly associates the TAP with other *Autoscope* devices. Point-and-click I/O assignments quickly configure the interface to the traffic controller.

The TAP is a four-channel video detector card that meets or exceeds the environmental and interface requirements of the NEMA TS2 standard. It is downward compatible to the NEMA TS1 standard. This small DPM, for a standard detector rack or stand-alone enclosure, is also compatible with the interface requirements in the Caltrans TEES (170/332) specification. In TS1 cabinets, the TAP can interface to select TS2 traffic controllers with a port 1 Synchronous Data Link Control (SDLC) communications cable.

EasyLink connectivity also allows broadband communications between the TAP, the *Autoscope* Terra Interface Panel (TIP), and up to eight *Autoscope* sensors. The robust 14 Mb/sec-rated transceivers have a remarkable 6 Mb/sec throughput—capable of transmitting traffic data, alarms, and MPEG-4 video simultaneously.

## Benefits

- Simple cabling and set-up
- Quick installation into any traffic cabinet configuration
- Time-saving maintenance features for the traffic equipment manager
- Surface-mount technology for increased reliability
- Efficient outputs
- Use in all cabinets with TS2 SDLC communications
- Use in all TS1 or Caltrans 332 cabinets
- Failsafe detector outputs to traffic controller
- Superior value when compared to previous detection systems
- Software-upgradeable

## Features

- Supports up to 8 *Autoscope* devices
- EasyLink IP-addressable connectivity
- 88 total simultaneous outputs
- 48 total simultaneous inputs
- 64 TS2 detector outputs
- 32 TS2 inputs for Phase/Load Switch status
- Emulates function of up to 4 Bus Interface Units (BIU)
- 24 contact-closure outputs
- 16 contact-closure inputs
- Rack or stand-alone installation
- Self-diagnostics on power-up
- High-energy transient protection

## Set-up & Operation

*Autoscope* Technology combines state-of-the-art advances in digital video, digital image signal processing, and EasyLink broadband communications to enhance performance. A standard CAT-5 cable connects the *Autoscope* system into a network to view video, collect traffic data, and maintain the system.

*Autoscope* products like TAP use Internet-standard, IP-based addressing with a unique Ethernet MAC address. Depending on the cabinet configuration, detector port communication to the TAP is conducted via a broadband link through the TIP to the *Autoscope* sensors or a standard RS-485 serial link to the *Autoscope RackVision Terra MVP*.

The Terra Access Point will interface detector outputs directly to NEMA TS1/TS2, Type 170/179, or 2070 ATC controllers. For central systems, traffic data can be quickly integrated into a proprietary database with the optional *Autoscope Software Developer's Kit (SDK)*.

### Connectors

- TIP interface connector for EasyLink communications
- TS2 port 1 connector 15-socket D-subminiature with latching blocks
- I/O connector 44-socket D-subminiature with jack screws
- Cinch Jones 50-44A-30M edge card connector with key slots between 2 & 3 and 11 & 12
- Video BNC connector
- Two USB 2.0 connectors for USB mouse

### Power

- 12 to 24 VDC or VAC, 11W maximum

### Video Output

- PAL or NTSC
- 75Ω, 1 Vpp, BNC connector on front

### Communications

- EasyLink broadband to TIP
- RS-485 detector port on edge connector (jumper-selectable)

### Indicators

- 5 LEDs show power and 4 LEDs show sensor readiness status (switch-selectable for other sensors)
- 2 LED indicators for network activity
- 16 LEDs show status of local and external inputs, outputs, and phase colors (switch-selectable)
- 2 LEDs show port 1 transmit and valid data status

When connected to *Autoscope* sensors and a TIP, the TAP converts streaming digital MPEG-4 video to standard NTSC or PAL analog video to view locally at the traffic cabinet. The toggle switch selects video output and the rotary switch selects which camera to view.

## Applications

- Intersection detection
- Highway data collection
- Automatic incident detection
- Bridge, tollway, and tunnel management
- Work-zone safety and traffic control
- Traveler information systems
- Remote video surveillance

### Detector I/O

- TS1 outputs (open collector, active low):
  - 4 on rear edge connector (jumper-selectable)
  - 24 on front connector
- TS1 inputs:
  - 16 on front connector
- TS2 SDLC port 1 connector:
  - 64 outputs, 32 inputs

### Environmental

- -29°F to +165°F (-34°C to +74°C)
- 0 to 95% relative humidity

### Dimensions & Weight

- 4.5 in. H x 2.34 in. W x 6.9 in. L (114 mm x 59 mm x 175 mm) (excluding handle)
- 0.5 lb (0.2 kg)

### Warranty

- Three-year warranty
- Extended warranty package to six years

### Regulatory

- NEMA TS2-2003 Compliant
- CE EN 55022
- EN 61000-6-1
- FCC Part 15, Class A

### Product Support

- Product support and training by a team of factory-trained *Autoscope* Technical Support Specialists

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