



Autoscope Solo[®] Terra[™] Access Point (TAP)

A detector port master with both TS1 and TS2 outputs, convenient user-selectable video viewing, and LED indicators for easy full-function monitoring

Description

The *Autoscope Terra Access Point (TAP)* is a robust *Autoscope* Detector Port Master (DPM) with EasyLink connectivity for up to eight *Autoscope Terra Technology* devices such as *Autoscope Solo Terra* video detection sensors or *Autoscope RackVision™ Terra* Machine Vision Processors (MVP). 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 *Terra Technology* 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 Solo Terra Interface Panel (TIP)*, and up to eight *Autoscope Solo Terra* 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 Terra Technology* 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 Terra 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.

Terra Technology products like the *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 *Solo Terra* 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)*.

When connected to *Autoscope Solo Terra* 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

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

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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