

Autoscope® RackVision Terra Machine Vision Processor (MVP)

A cost-effective video detector card with exceptional performance, easy installation, and minimal maintenance

Description

The **Autoscope RackVision Terra MVP** is a video detection solution that features simple setup, robust color or B&W processing, and MPEG-4 video compression to a laptop at the cabinet or back at the office. **RackVision Terra** provides timely, high-quality traffic information required for today's sophisticated transportation systems.

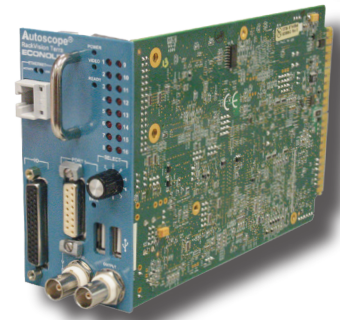
The **Autoscope RackVision Terra MVP's** single-camera video detector card is sized for a standard detector card rack. **Autoscope Terra Technology** combines state-of-the-art advances in digital image signal processing, EasyLink™ broadband communications, and System-on-Chip (SoC) processors to add versatility and boost performance.

EasyLink connectivity means simple installation into the traffic cabinet and integration into an agency's IP-based communications network. A standard CAT-5 cable connects **Terra Technology** products into a network providing access to video, traffic data, and the **Autoscope Solo® Terra** system.

For the **Autoscope** family of products, EasyLink connectivity offers:

- Simple integration into an IP-based communications system
- Simple integration with any traffic control cabinet configuration
- Simple setup and maintenance for the traffic equipment manager

The **RackVision Terra** detector card streams digital MPEG-4 video to view locally at the Traffic Management Center (TMC), or over the internet. **Terra Technology** displays the MPEG-4 streaming video via the **Autoscope** Video Player or any standard digital video player such as QuickTime at rates varying from 5 fps to 30 fps. In the traffic cabinet, the **RackVision Terra** detector card also provides standard NTSC or PAL full-motion video output to an analog video monitor. In addition, **Terra Technology** simply interfaces with common Internet browsers and



implements safe and secure password-protected access over the internet.

Terra Technology employs an **Autoscope Terra** dual-core processor with sophisticated Digital Signal Processing (DSP) image processing and Advanced RISC Machine (ARM) general-purpose processing in a small SoC package for low power consumption.

Multi-threaded software processes video images in real-time to detect traffic, extract data, identify incidents, and transmit detector outputs while simultaneously streaming full-motion MPEG-4 video.

Features

- EasyLink connectivity for IP addressable broadband communications
- Streaming digital MPEG-4 video output
- Password protection
- Vehicle detection, traffic data measurement, speed, and incident detection
- Dual-core processor for advanced image processing
- Fail-safe detector outputs
- Non-volatile memory data storage
- High-energy transient protection
- Local language support
- Connects to existing color or B&W **Autoscope** Image Sensor (AIS) cameras or other approved CCTV cameras
- Single-camera video processor channel (PAL, CCIR, NTSC, or RS170)
- Web server for easy set up using Internet browser
- Self-test on power-up
- LED indicators for power, data processing, video, and communications link/activities status
- Low power consumption

Setup & Operation

The **RackVision Terra** detector card is easy to set up and adapts to a user's detection objectives. The **Autoscope Configuration Wizard** quickly sets up intersection or highway incident detection applications. Simple mouse or keyboard operations allow custom positioning for up to 99 virtual detectors per field-of-view. Detection zones provide traffic count, presence, speed, and incident detection alarms. Incident types include freeway congestion, stopped vehicles, wrong direction vehicles, slow-moving vehicles, debris, pedestrians, or other customized alarms. Real-time polling or stored data include volume, occupancy, five vehicle classes by length, density, and other traffic data for selected periods or by phase.

The **RackVision Terra** detector card interfaces detector outputs directly to NEMA TS1/TS2, Type 170/179, or 2070 ATC controllers. The optional **Terra** Access point (TAP) can also assign detector outputs. For central systems, the optional

Software Developer's Kit (SDK) can quickly integrate traffic data into a proprietary database.

Benefits

- Cost-effective solution for traffic management
- Field-proven accuracy and reliability
- Easy to install and configure
- Superior to other detector system in value and performance

Applications

- Traffic incident management for highways, tunnels, and bridges
- Junction control
- Traffic data collection
- Work-zone safety and traffic control
- Traveler information systems
- Journey time (travel time)
- Remote video surveillance
- Central office processing

Power

- 12 to 24 VDC, 11W maximum
- Consumption, current
 - @12VDC: 6W, 500mA
 - @24VDC: 7W, 290mA

Video

- Input
 - PAL, CCIR, NTSC or RS170
 - 75Ω 1 Vpp, BNC connector on front
- Output
 - PAL or NTSC
 - 75Ω 1 Vpp, BNC connector on front
 - MPEG-4 digital streaming video via EasyLink

Communications

- RJ45 connector for EasyLink Ethernet 10/100 MB/s communications on front
- USB 2.0 connector for USB mouse

Detector I/O

- Outputs (open collector, selectable active low or high)
 - 4 Rear edge connectors (jumper selectable)
 - 24 Front connectors
- Inputs
 - 16 Front connectors
- Status output indicates card is processing and detector

- I/O is valid (open collector, active low)
- Serial I/O via EasyLink.com

Indicators

- 3 LEDs show per, video sync, and readiness status
- 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

Environmental

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

Dimensions & Weight

- 4.5 in H x 2.25 in W x 7 in L (114 mm x 57 mm x 178 mm)
- 0.5 lb (0.2 kg)

Warranty

- Two-year warranty
- Extended warranty package to five years

Regulatory

- NEMA TS2 compliant
- CE EN 55011
- EN 61000-6-2
- CE EN 60950
- FCC art 15, Class A

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