Description

The *Autoscope RackVision Terra* MVP is a video detection solution that features simple setup, robust color or black and white processing, and MPEG-4 video compression to a laptop at the cabinet or Traffic Control Center (TCC). *RackVision Terra* provides timely, high-quality traffic information required for today’s sophisticated traffic management and Intelligent Transportation Systems (ITS).

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, 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 Terra* 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 TCC, 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 National Television Standards Committee (NTSC) or Phase Alternating Line (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 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
- Mouse & Monitor capability
- 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 RS-170)
- Web server for easy setup 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 and 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.

With the RackVision Terra you can also use SmartMouse™. SmartMouse allows the traffic engineer or signal technician to connect a mouse and monitor to the video output of the RackVision, without having to use a laptop. By using SmartMouse, you can configure stop-line and advance extension video detection zones in moments, without extensive training.

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

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)

Indicators
- 16 LEDs show status of local and external inputs, outputs, and phase colors (switch selectable)
- 3 LEDs show power, video sync, and readiness status
- 2 LEDs show Port 1 transmit and valid data status

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

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

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

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