



# Autoscope® RackVision™ Pro 2 (RVP2)

## Description

The need for a simple, reliable and cost-effective dynamic video-based detection solution at vulnerable intersections and roadways is becoming more important in maintaining mobility and safety. As a result, agencies are leveraging the state-of-the-art video image processing and broadband communications capabilities of video detection, including *Autoscope* – a critical first step in any ITS program.

The *Autoscope* RackVision Pro 2 MVP is a dual-channel Machine Vision Processor designed to meet intersection detection objectives of vehicle detection and signal actuation in a typical traffic cabinet. This cost-effective detection solution utilizes the same algorithms that have established *Autoscope* video detection as the global leader for wide-area video vehicle detection.

The RVP2 fits into a detector rack or shelf-mount unit. Quality sources of video signal include the *Autoscope* Image Sensor (AIS) or existing CCTV cameras that meet minimum performance standards. Multi-threaded software processes video images in real-time to detect traffic. Addressing the needs of video intersection detection and signal actuation, RVP2 is a cost-effective traffic machine vision processor solution. Leveraging the same algorithms as other *Autoscope* products, RVP2 processes video images into real-time to detect traffic and provide local traffic actuation, as well as collect valuable traffic data. RVP2 supports AIS-V, as well as existing CCTV cameras to address varying traffic detection objectives and scenarios.

## Set-Up & Operation

The RVP2 detector card is easy to install/configure and adaptable to meet an agency's detection requirements. *Autoscope* Mouse & Monitor functionality quickly sets up intersection detection applications without the use of a laptop.

Simple Mouse & Monitor setup enables stop lines and advance extension detection zones to be drawn as needed. Users can also easily assign detector outputs to interface with NEMA TS1/TS2, Type 170/179 and 2070 ATC controllers.

With mouse and keyboard operations, users can backup work, troubleshoot with the operations log, and modify the detection layout with the configuration Wizard™ or other tools in the *Autoscope* Toolbox. The optional *Autoscope* Access Point (TAP) or *RackVision Terra MVP* can also assign additional detector outputs.

## Features

- Provides basic video vehicle detection for intersection stop-line and advance extension applications
- Processes input from two (2) video cameras per RVP2 unit
- Bicycle Detection
- Setup with simple Mouse & Monitor interface or configuration Wizards
- Installs in a standard detector rack or self-contained shelf-mount unit
- LED indicates status for communications and valid video sync
- IP-addressable into *Autoscope* network
- Outputs via either card-edge connector or front-panel DB15 connector
- Password protection
- Electrical and optical failsafe detector outputs
- High-energy transient protection
- Self-test on power-up
- Software installation by USB flash drive
- Comprehensive traffic data collection
- Bicycle detection

## Benefits

- No laptop required
- Reliable performance
- Interchangeability with existing solutions
- Compatibility with standard loop detector racks
- Low power consumption
- Minimal maintenance
- Cost-effective solution for traffic detection
- Easy to install and configure
- Field-proven *Autoscope* accuracy and reliability
- Built on proven *Autoscope Terra™* Technology
- Connects to existing *Autoscope AIS* or other CCTV cameras
- Compatible with color or monochrome cameras
- Native language graphical user interface support

## Applications

- Fully-actuated intersection detection
- Semi-actuated intersection detection
- Temporary construction and work zone safety
- Traffic studies
- Bicycle detection

## Power

- 12 or 24-VDC 11 Watts maximum

## Video

- 2 Input Channels
  - Color: NTSC or PAL
  - Monochrome: RS-170 or CCIR
  - Composite 75Ω 1 Vpp, BNC connector
- 2 Output Channels
  - Same as input NTSC or PAL
  - Composite 75Ω 1 Vpp, BNC connector

## Detector I/O Indicators

- Outputs (open collector, selectable)
  - 4 Rear edge connectors (jumper selectable)
  - 8 Front on DB-15 connector
- Inputs
  - 4 Front on DB-15 connector
- Status output indicates card is processing and detector I/O is valid (open collector, active low)
- LEDs show current state of 8 outputs
- Inputs and Outputs (optional):
  - RVP2 Detector Port Data (Inputs and Outputs) can connect to optional DPM module through rear edge connector, providing additional I/O capabilities.

## Communications

- 2 Mini-B USB connectors for mouse or supervisor PC
- RS-485 half-duplex serial for DPM on edge connector (for speed quality outputs)

## Environmental Ambient Temperature Limits

- -29°F to +165°F/-34°C to +74°C

## Humidity Limits

- 0 to 95% relative humidity (non-condensing)

## Dimensions and Weight

- 4.5 in. (H) x 2.3 in. (W) x 7 in. (D) (11.4cm x 5.7 cm x 17.8 cm) plus handle
- 0.5 lb (0.2 kg)

## Regulatory

- NEMA TS2 2003 Standard
- FCC Part 15, Subpart B, Class A

## Warranty

- Three-year standard warranty
- Extended warranty available (up to six years)

## Product Support

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

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