



GATEKEEPER IVUS-2VF

Intelligent Vehicle Undercarriage Scanner (IVUS)®

KEY FEATURES AND BENEFITS

- Creates two high-resolution digital images of a vehicle
- Identifies the vehicle by matching the image against a database
- Identifies foreign objects or modifications
- Offers IP68 environmental certification



The Gatekeeper IVUS compares the scanned image of the vehicle undercarriage to a historical record of the same vehicle and highlights anomalies.

The Gatekeeper Intelligent Vehicle Undercarriage Scanner (IVUS) scans a vehicle's undercarriage and uses advanced signal processing to generate two high-resolution images for detection of potential threats.

With the Gatekeeper IVUS-2VF, vehicles simply drive over the scanner that is embedded in the lane. The system generates a "digital fingerprint" that is used to retrieve and compare historical records of the same vehicle and then highlights anomalies. The two images offer different views to make it easier to see any threats or objects that may be hidden on top of an axle or crossbeam for superior foreign object detection. The system's high-resolution imaging and rapid anomaly detection make it an ideal solution for screening a wide range of vehicles at security checkpoints and border crossings.

When combined with the Gatekeeper Intelligent Vehicle Classification Analytics and Intelligent License Plate Analytics, the high-resolution IVUS image can also confirm the vehicle's make, model, and license/number plate, validating this data against the "digital fingerprint" in a matter of seconds for greater security.

SPECIFICATIONS

GATEKEEPER IVUS-2VF

BASE SYSTEM CONFIGURATION

- **Dual-View Camera:** Generates forward and rear scans of vehicle undercarriage using two 60° viewing angles to minimize blind spots
- **Embedded Frame Assembly:** Embedded in the roadway, the frame assembly houses the dual-view camera and light rails
 - **Load Rating:** Up to 9,070 kg per axle
- **LED Light Rails:** Illuminates vehicle undercarriage during the scan
- **Control Box:** Primary interconnect point for system components
- **Terminal**
 - **Operator Terminal:** Terminal with monitor for local or remote monitoring
 - **Headless PC:** Terminal only (no monitor) for local or remote monitoring
 - **Embedded Lane Control Unit (ELCU) Terminal:** Terminal embedded in control box for 3rd party data integration
- **Traffic Light:** Controls the flow of traffic through the system
- **Multi-Factor Intelligent Security (MFIS) Software:** Captures, processes, and transmits the data from the security devices within a single lane, allowing the analyst to make data-driven decisions

PRODUCT CONFORMANCE

- **Standards:** CE, IEC 60204-1:2016

OPERATION

- **Configuration:** Embedded
- **Inspection Speed:** 32 km/h (20 mph)
- **Throughput²:** 360 scans per hour
- **Power (in):** 110 VAC, 240 VAC
- **Frequency:** 50 Hz, 60 Hz
- **Power Consumption:** 800 watts (at full capacity)

ENVIRONMENT/SAFETY

- **Temperature:** -20 °C to 60 °C (-4 °F to 140 °F)
- **Environmental Protection:** IP68

¹Base system configuration may vary if purchased with an X-ray inspection system, radiation detection system, or additional optical solutions.

²Actual throughput may vary based on the system configuration and options selected.

STANDARD FEATURES

- Dual-view imaging
- Structurally integrated into the roadway or checkpoint
- Integrates easily with other security solutions such as weigh-in-motion scales, traffic control devices, and others

OPTIONAL FEATURES

- **Intelligent Vehicle Occupant Detection (IVOD)** provides facial recognition using biometrics
- **Intelligent License Plate Analytics (ILPA)** captures high-resolution number plate images even in extreme environmental conditions
- **Intelligent Shipping Container Detector (ISCD)** reads container codes, whether vertical or horizontal
- **Intelligent RFID Decoding (IRID)** reads and validates RFID tags found on vehicles or license plates

SOFTWARE PLATFORM

- **Gatekeeper Enterprise Management System (GEMS)** unifies and displays multi-lane, MFIS-generated data into a single view, allowing the analyst to make data-driven decisions

The performance characteristics and photos in this document are indicative and for information only and do not represent any specific system configuration. Specifications and features of individual systems will vary based upon customer requirements, operation, supplied options, and other factors. Customers must refer to the relevant quote, proposal, or contract for the definition of a system configuration, including specifications and optional items. Due to continual development of our products, we reserve the right to amend any of the information listed here without notice. Please note that due to U.S. laws and regulations, not all products are available for sale in all countries without restriction.

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US Operations
22720 Ladbrook Drive | 829 Middlesex Turnpike
Suite 100 | Billerica, MA 01821
Sterling, VA 20166

UK Operations
Prospect Way
Victoria Business Park
Biddulph, Stoke-on-Trent ST8 7PL

Contact
+1.703.673.3320
gatekeepersecurity.com
rapiscan-ase.com

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GATEKEEPER ILPA

INTELLIGENT LICENSE PLATE ANALYTICS (ILPA)®

KEY FEATURES AND BENEFITS

- Gatekeeper ILPA systems decode vehicle plates with the highest read accuracies in the industry
- All-weather IP67 rating
- Multi-language capability
- Color camera technology provides high-resolution images in challenging lighting conditions



The Gatekeeper Intelligent License Plate Analytics (ILPA) decodes vehicle plates with highly accurate LPR read rates thanks to our focus on capturing the highest quality plate images under all lighting and environmental conditions. With an all-weather IP67 rating, ILPA captures high-resolution images and decodes vehicle and truck plates under all challenging environmental conditions.

As a global leader in developing rugged intelligent optical systems, the Gatekeeper ILPA decodes vehicle plates with greater accuracy than competing systems. Our systems are designed to operate in extreme environments and provide highly accurate results that include not only alpha and numeric characters on license plates, but also plate color, country, and state of issue. As with all of our products, Gatekeeper ILPA delivers unsurpassed precision and efficiency.

SPECIFICATIONS

INTELLIGENT LICENSE PLATE ANALYTICS (ILPA)[®]

BASE SYSTEM CONFIGURATION¹

Multifunctional Camera Configuration	Model: GKR-7067	Number of Cameras	Distance Capture
Standard Range with White Light	1	1 or 2	4.5 m – 5.5 m
Standard Range with Near Infrared	2	1 or 2	4.5 m – 5.5 m
Long Range with White Light	3	1 or 2	5.5 m – 7 m
Long Range with Near Infrared	4	1 or 2	5.5 m – 7 m
Long / Standard Range with White Light	1 and 3	1 set	5.5 m – 7 m and 4.5 m – 5.5 m
Long / Standard Range with Near Infrared	2 and 4	1 set	5.5 m – 7 m and 4.5 m – 5.5 m
Control Box	Primary interconnect point for system components		
Multi-Factor Intelligent Security (MFIS) Software	Captures, processes, and transmits the data from the security devices within a single lane, allowing the analyst to make data-driven decisions		

SPECIFICATIONS

- **Camera Resolution:** 3 Megapixel
- **Camera Dimensions:** 426.6 x 152.40 x 324.76 mm (16.8 x 6.0 x 12.8 inches)
- **Camera Weight:** 3 kg (6.6 lbs.)

OPERATION

- **Power (in):** 12 to 24 VAC or VDC
- **Power Consumption:** 20 watts (with LED ring on)
- **Network Interface:** 10/100/1000 Mbps, Ethernet, RJ-45

ENVIRONMENT/SAFETY

- **Temperature:** -40 °C to 70 °C (-40 °F to 158 °F)
- **Humidity:** Up to 100%, non-condensing
- **Environmental Protection:** IP67

¹Base system configuration may vary if purchased with an X-ray inspection system, radiation detection system, or additional optical solutions.

OPTIONAL FEATURES

- Vehicle/traffic control devices with Lane Control Software
- IP Loudspeaker
- IP intercom
- IP Intercom with video
- Intercom camera for 1-way video and 2-way audio
- Supplemental cameras and/or illuminators

SOFTWARE PLATFORM (OPTION)

- **Gatekeeper Enterprise Management System (GEMS)** unifies and displays multi-lane, MFIS-generated data into a single view, allowing the analyst to make data-driven decisions

SECURITY SOLUTIONS

Intelligent License Plate Analytics (ILPA) is an effective standalone security system, which also seamlessly integrates with other security solutions, creating one comprehensive vehicle checkpoint security solution.

- **IVUS** – Vehicle undercarriage scanners
- **IVOD** – Vehicle occupant detection
- **IVCA** – Vehicle classification (make, model, and color) scanner
- **ISCD** – Shipping container code detection
- **IRID** – RFID scanner

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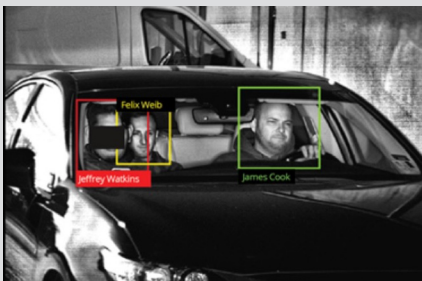


GATEKEEPER IVOD

INTELLIGENT VEHICLE OCCUPANT DETECTION (IVOD)®

KEY FEATURES AND BENEFITS

- High-resolution camera optimized for day and night
- Powerful LED arrays that see through tinted windows, ballistic glass, and heavy glare
- Produces cropped facial image for each vehicle occupant
- Performs advanced facial matching for rapid identification
- Identifies persons-of-interest against pre-defined watch lists



Gatekeeper IVOD integrates into your security framework, all visible with real-time analytics through GEMS® (RESTful) WebAPI.

The Gatekeeper Intelligent Vehicle Occupant Detection (IVOD)

recognizes and authenticates the identity of all vehicle occupants under challenging environmental conditions in real time. Gatekeeper IVOD matches occupants in vehicles against watchlist photos, employee databases, or other large customer databases of individuals of interest.

With Gatekeeper IVOD's patented vehicle and passenger screening technology, security officers can see inside vehicles as they approach entry gates and identify the occupants with accuracy and speed. The high-resolution machine vision camera is optimized for day and night operation; the camera is paired with a powerful targeted array of LED lights that illuminate the driver and other occupants even through tinted glass, sun glare, and at night. Advanced image processing highlights the driver and passengers, while computer vision algorithms remove windshield glare from sunlight or overhead area lighting.

SPECIFICATIONS

INTELLIGENT VEHICLE OCCUPANT DETECTION (IVOD)

BASE SYSTEM CONFIGURATION¹

- **Horizontal Camera Configuration**
 - IVOD M1: Captures image of driver only, using 1 camera
 - IVOD M2: Captures images of driver & front passenger, using 2 cameras
 - IVOD M4: Captures images of driver, front passenger, & rear passengers, using 4 cameras
- **Control Box:** Primary interconnect point for system components
- **Multi-Factor Intelligent Security (MFIS) Software:** Captures, processes, and transmits the data from the security devices within a single lane, allowing the analyst to make data-driven decisions

SPECIFICATIONS

- **Minimum Distance Between Eyes:** 50 px
- **Camera Dimensions:** 446.97 x 257.65 x 352.12 mm (17.6 x 10.14 x 13.86 inches)
- **Camera Weight:** 11 kg (24.25 lbs.)

PRODUCT CONFORMANCE

- **Standards:** CE and IEC 62471

OPERATION

- **Power (in):** 24 VDC
- **Power Consumption:** 108 watts (with heater, required for cold climates)
- **Network Interface:** 1 Gb Ethernet
- **Supported Protocols:** NTP

ENVIRONMENT/SAFETY

- **Temperature:** -40 °C to 70 °C (-40 °F to 158 °F)
- **Humidity:** Up to 80%, non-condensing

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OPTIONAL FEATURES

- Vehicle/traffic control devices with Lane Control Software
- IP Loudspeaker
- IP Intercom
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SOFTWARE PLATFORM (OPTION)

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Intelligent Vehicle Occupant Detection (IVOD) is an effective standalone security system, which also seamlessly integrates with other security solutions, creating one comprehensive vehicle checkpoint security solution.

- **IVUS** – Vehicle undercarriage scanners
- **ILPA** – License plate analytics
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