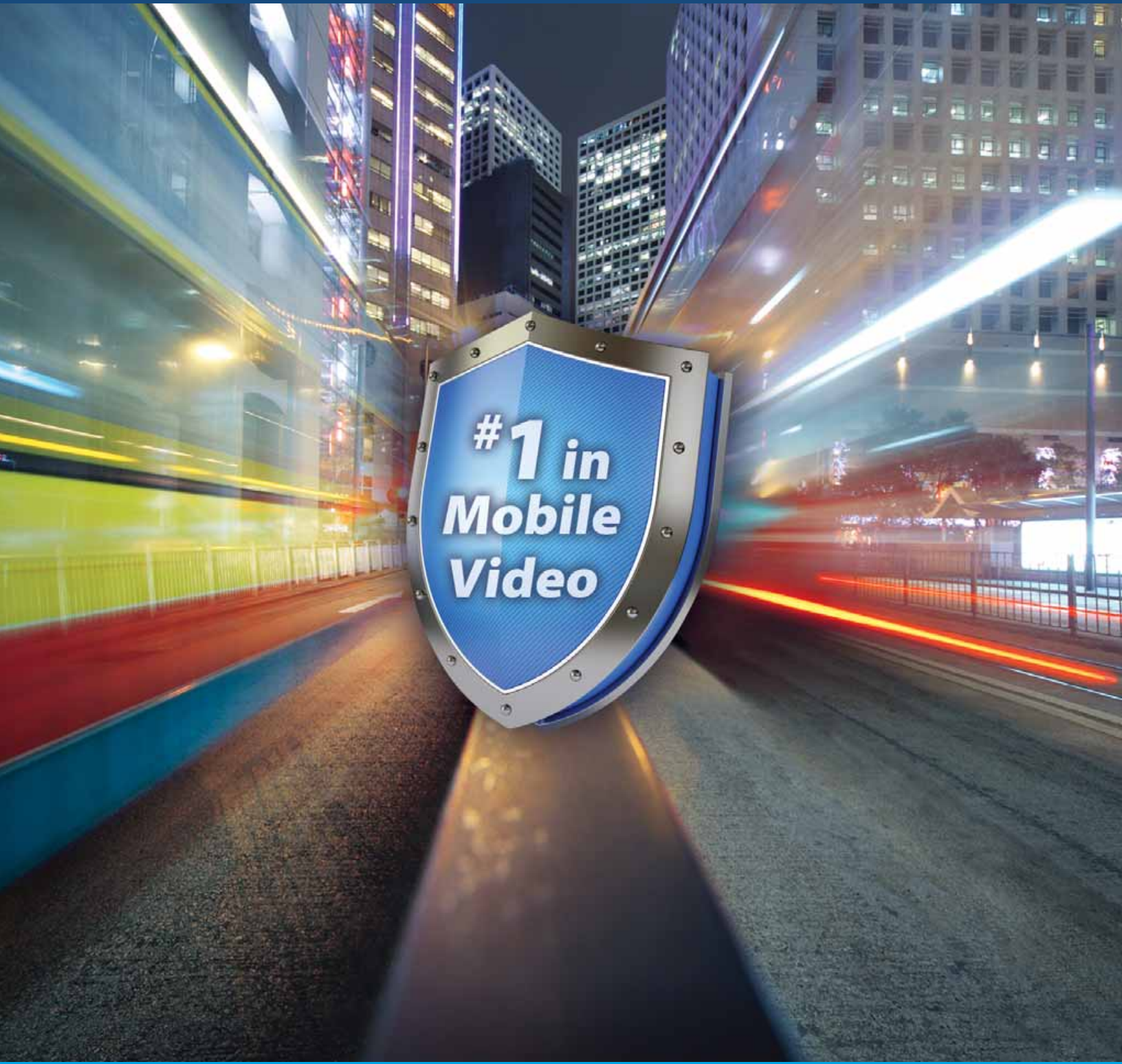


# Surveillance & Video Management Solutions for Public Transit



# The Ultimate Protection

## Safety

### Keep passengers and drivers safe

Public safety, incident management, risk reduction, and financial limitations — transit authorities today face many challenges, and Seon's mobile surveillance products can help. Whether you require video recording to provide protection against litigation, or want to monitor driver behavior to ensure passenger safety, our mobile video equipment can support your needs.

## Security

### Capture anything from every angle

Seon offers a selection of wedge, dome, and other specialized cameras designed for the transit industry. Each camera can be configured to meet your unique requirements, from wide-angle to telephoto views, offering audio and day/night capabilities. They also come pre-wired for audio and power, simplifying the installation process.



## Peace of Mind

### The real-time fleet management solution

All the tools you need to monitor and respond to safety concerns — anywhere, anytime. Get instant insight on any driver, vehicle, or route, with full DVR integration. Pinpoint the exact location of any bus in your fleet in real-time. Get the confidence that everything on your fleet is working well, and the power to identify when it isn't.

## Automation

### Easy video and recorded data management

Eliminate the hassle of video retrieval. Automatically download video when the bus returns to the yard with scalable software and an industrial WiFi solution. Easily manage video, monitor DVR, hard drive and camera health status, and configure camera systems at the click of a button — right from the comfort of your office.

## 5 Ways to Connect with Seon

Read, watch, like, share, and keep up to speed via Seon's social media outlets. Stay informed of the latest trends in mobile video and fleet management.



[www.youtube.com/user/SeonDesign](http://www.youtube.com/user/SeonDesign)



[linkedin.com/company/seon-design](http://linkedin.com/company/seon-design)



[www.facebook.com/Seon.Design.Inc](http://www.facebook.com/Seon.Design.Inc)



[blog.seon.com](http://blog.seon.com)



[twitter.com/seondesign](http://twitter.com/seondesign)



# Seon is #1

## *Seon is the world's #1 supplier of mobile video surveillance for the bus and coach industry*

Passenger safety, incident management, risk reduction, and financial limitations — transportation authorities face many complex issues on a daily basis, and Seon can help.

Seon is proud to be ranked by independent IMS Research as the world's #1 supplier of mobile video surveillance equipment for the bus and coach industry. Our premium quality mobile surveillance products have made Seon the partner of choice for transportation managers across North America.

Seon provides the ultimate, integrated video solutions to meet the challenges of today's transit environment — from high-resolution camera systems and automated video downloading, to live GPS-based fleet tracking and easy-to-use viewing software.

Seon understands the real-world challenges of passenger transportation. Feedback from our customers directly influences the design and engineering of our products, ensuring that we meet our customers' present and future needs.

But what's really helped us achieve our #1 status is our unique, partnership approach to our customers. We take the time to help you choose the right solution, provide professional, experienced installation services, and our after-sales support is second-to-none. We're here to support you every step of the way. A partnership with Seon will be one of the best investment decisions you'll ever make.



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# Security to Fit Every Situation



CA Outdoor Wedge



CHW Outdoor Wedge - HD Camera



CQ IR Dome



CJ Dome



**Advanced:** Explorer® MX-HD



**Essential:** Trooper® TL4



**Value:** Trooper® TL2



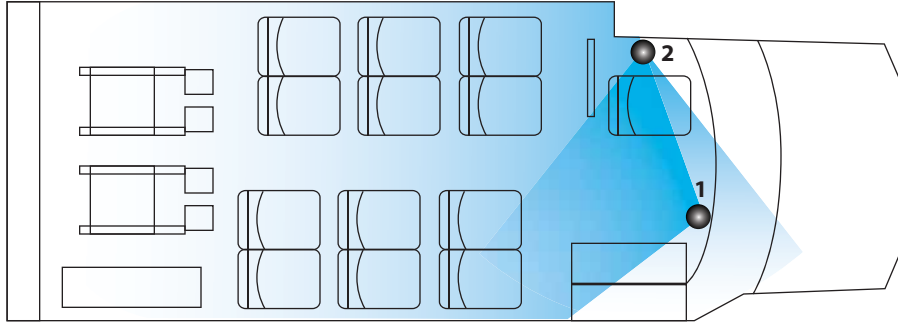
**Growth:** Explorer® TX8



**Ultimate:** Explorer® DX-HD

# Value, Essential, and Advanced Solutions

## Value: 2-camera solution example Trooper TL2 DVR plus CQ Cameras



**Camera 1** – 2.9 mm lens: rear facing



**Camera 2** – 2.9 mm lens: driver/stairwell

## Essential: 4-camera solution example Trooper TL4 DVR plus CQ and CJ Cameras



**Camera 1** – 3.6 mm lens: front outward-facing



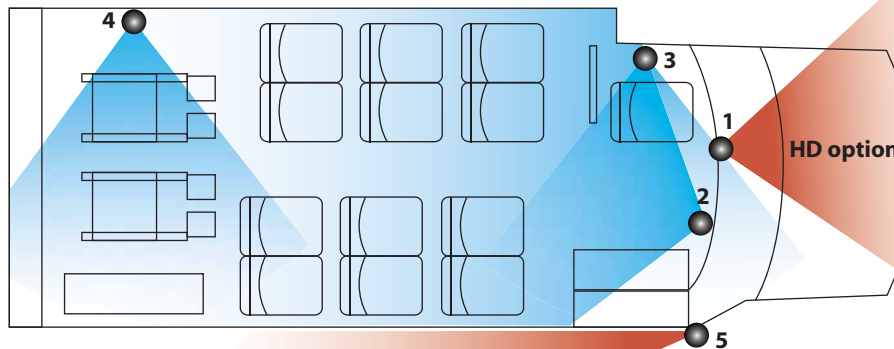
**Camera 2** – 2.9 mm lens: rear facing



**Camera 3** – 2.9 mm lens: driver/stairwell



**Camera 4** – 2.9 mm lens: wheelchair lift



## Advanced option: 5-camera solution

MX-HD DVR plus CQ and CHW Cameras  
(same as 4-camera solution plus 1 HD camera)



**Camera 1 HD** – 2.5 mm lens: front outward-facing



**Camera 5** – 3.6 mm lens: exterior front to rear, passenger's side



# Growth Solution

## Growth: 8-camera solution example Explorer TX8 DVR plus CQ, CJ, and CA Cameras



**Camera 1** – 3.6 mm lens:  
front outward facing



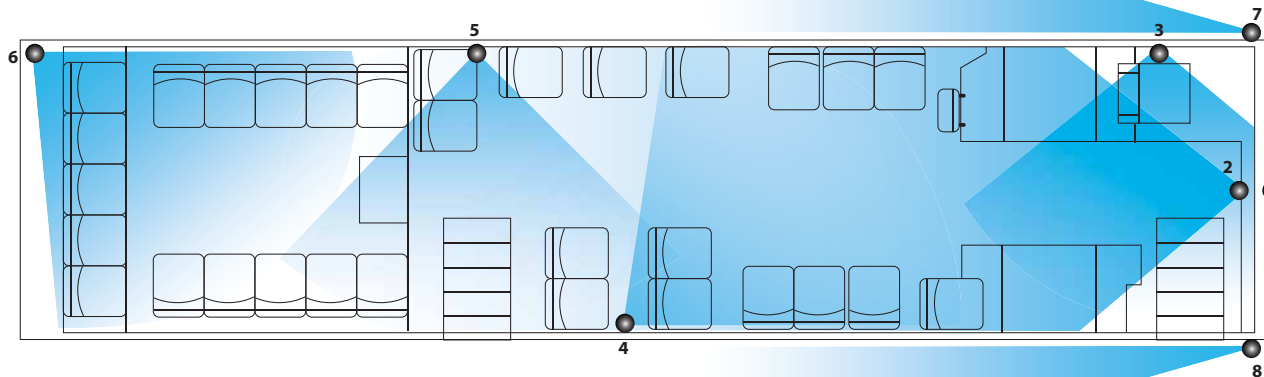
**Camera 2** – 2.9 mm lens:  
down aisle front to rear



**Camera 3** – 3.6 mm lens:  
driver/stairwell



**Camera 4** – 2.9 mm lens:  
up aisle middle to front



**Camera 5** – 3.6 mm lens:  
exit door/stairwell



**Camera 6** – 3.6 mm lens:  
up aisle rear to front



**Camera 7** – 6.0 mm lens:  
exterior front to rear driver's side



**Camera 8** – 6.0 mm lens:  
exterior front to rear passenger's side

# Ultimate Solution

## Ultimate: 13-camera solution example Explorer DX-HD DVR plus CQ, CJ, CA, and CHW Cameras



**Camera 1** – 3.6 mm lens:  
down aisle front to rear



**Camera 2** – 2.9 mm lens:  
driver/stairwell



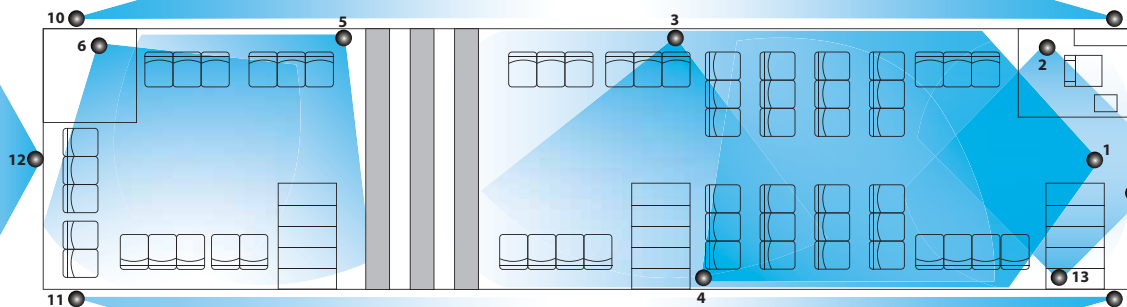
**Camera 3** – 2.9 mm lens:  
midship door



**Camera 4** – 2.9 mm lens:  
up aisle middle to front



**Camera 5** – 2.9 mm lens:  
exit rear door



**Camera 6** – 2.9 mm lens:  
rear seats



**Camera 7 HD** – 2.5 mm lens:  
front outward-facing



**Camera 8** – 3.6 mm lens: exterior  
front to rear, driver's side



**Camera 9** – 3.6 mm lens: exterior  
front to rear, passenger's side



**Camera 10** – 6 mm lens: exterior  
rear to front, driver's side



**Camera 11** – 6 mm lens: exterior  
rear to front, passenger's side



**Camera 12** – 3.6 mm lens:  
exterior rear facing



**Camera 13** – 3.6 mm lens:  
facing driver

More Power. More Sophistication. The Ultimate in Reliability.



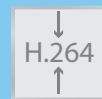
# Ultimate

## Advanced

## Value



Explorer® DX-HD



Explorer® TX8



Trooper® TL2|TL4



Common features of all Seon DVRs:





# DVR Comparison

	Trooper® TL2/TL4	Explorer® TX8	Explorer® MX-HD	Explorer® DX-HD
Cameras	2 / 4	8	4 + 1 HD	12 + 1 HD
HD (1 channel)			✓	✓
Storage Capacity†	1 TB**	Up to 2 TB	1 TB	Up to 2 TB
Total Frame Rate (Aggregate at D1)	60	120	150	480 (with dual stream)
Resolution	720 x 480 D1	720 x 480 D1	720 x 480 D1 1280 x 720 HD	720 x 480 D1 1280 x 720 HD
Dual Hard Drives		✓		✓
Maximum Resolution at 30 FPS	✓††	✓††	✓	✓
Smart Features	✓*	✓*	✓	✓
Audio Channels	2 / 4	8	4	12
GPS	✓	✓	✓	✓
WiFi (Smart-Reach®)	✓	✓	✓	✓
Geo-fencing†††		✓	✓	✓
Dual Streaming††††			✓	✓

\* Excluding Smart-Link™ (not required for Trooper TL2 | TL4, Explorer TX8).

\*\* TL2 Storage Capacity is up to 500 GB.

†Storage Capacity – Solid state hard drive available upon request.

††Maximum Resolution – 30 FPS (frames per second) at full D1 resolution not available on all video channels simultaneously.

†††Geo-fencing – using GPS technology, geo-fencing allows the administrator to set a designated geographic radius; if the vehicle deviates from this area, it will provide an alert.

††††Dual Streaming – Enables two video streams; one for high resolution video capture, and one for transmission of video in low bandwidth conditions.

#### Smart Features:

Smart-Temp™ — ensures the DVR stays at its optimal operational temperature.

Smart-Start™ — safeguards the DVR against electrical spikes with vehicle start-up voltage protection.

Smart-Speed™ — records vehicle speed with a built-in monitor.

Smart-Link™ Module — makes DVR installation quick and easy using a wiring consolidator.

# Value/Essential: 2/4-Channel DVRs



## Just starting out with video surveillance?

Available in two or four channels, the TL series offers safety, security, and control in one compact, high-performance package. Get the simplicity of an integrated lock-box design, easy mounting system, and point-and-click graphical user interface. Plus it works seamlessly with Seon's Smart-Reach WiFi solution for managing video data remotely.



### Key Features & Benefits

- **Record 2 or 4 video channels with audio** with premium image quality (720 x 480 at up to 30 FPS per channel)
- **Plenty of recording space** with 500 GB to 1 TB of storage
- **Enhanced video viewing experience** with an on-screen display of up to five signals (alarms, braking, turns, etc.)
- **Compact, integrated lock-box design** for quick and easy installation
- **Eliminate camera system down-time** by monitoring DVR and HDD status with Health-Check
- **Record vehicle speed & location and easily download footage** with this GPS- and WiFi-ready DVR
- **Panic and diagnostics buttons** provide an easy way to indicate an incident or verify the system is functioning

### Included features:



### Optional add-ons:



Use with easy viewing video management software:



vMax® View

### Accessories:



Media Cartridge with Hard Drive

Inertia Sensor

GPS4

# Growth: 8-Channel DVR



## Want value from every angle?

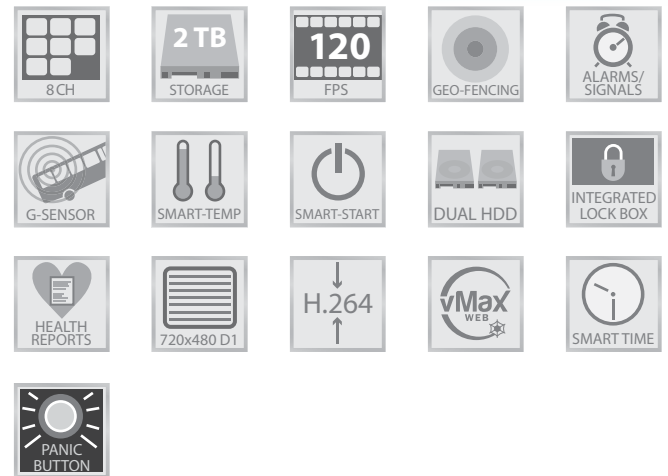
Don't let your budget compromise camera coverage. This 8-channel DVR offers dual hard drives for a fail-safe design and double the recording capacity. Get solid image quality plus a few extras to ensure event capture — like DVR Health-Check, a built-in inertia sensor, and geo-fencing.



### Key Features & Benefits

- **Record up to 8 video channels with audio** with smooth motion (720 x 480 resolution and up to 30 FPS per channel)
- **Eliminate camera system down-time** by monitoring DVR and HDD status with Health-Check
- **Maximize your video retention time** with up to 2 TB of storage
- **Get incident alerts and critical data on vehicle handling** with a built-in inertia sensor — ideal for accident reconstruction or driver monitoring
- **Fail-safe design for added reliability** with dual hard drives
- **Supports geo-fencing**, which delivers alerts when a vehicle deviates from a geographic boundary
- **Record vehicle speed & location and easily download footage** with this GPS- and WiFi-ready DVR
- **Panic and diagnostics buttons** provide an easy way to indicate an incident or verify the system is functioning

### Included features:



### Optional add-ons:



Use with easy viewing video management software:



vMax® Commander

### Accessories:



Media Cartridge with Hard Drive

Hard Drive Reader

GPS4



# Advanced: 5-Channel High-definition DVR



## Picture clarity your chief concern?

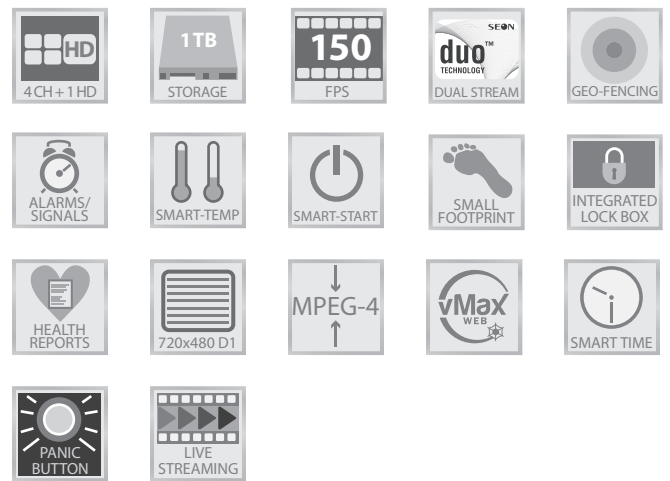
For smaller security installations where image quality is paramount, the MX-HD is the ideal choice for high quality digital recording. See what you've been missing with unmatched image detail — in high-definition.

## Key Features & Benefits

- **Record up to 4 video channels with audio plus 1 high-definition channel** at 30 FPS on all channels simultaneously (D1 resolution on analog channels; premium image quality at 1280 x 720 on HD channel)
- **Plenty of recording space** with up to 1 TB of storage
- **Dual streaming technology records two information streams;** one for hi-res playback and one for real-time viewing over a cellular network
- **Supports geo-fencing,** which delivers alerts when a vehicle deviates from a geographic boundary
- **Activate DVR recording in response to vehicle break-in** (with optional sensor) with built-in wake-on alarm
- **Panic and diagnostics buttons** provide an easy way to indicate an incident or verify the system is functioning



### Included features:



Use with easy viewing video management software:



vMax® View

### Optional add-ons:



### Accessories:



Smart-Link

Hard Drive Reader

GPS4

XELR-8

Media Cartridge with Hard Drive

# Ultimate: 13-Channel High-definition DVR



## Serious about bus surveillance?

This top-of-line mobile digital video recorder is packed with powerful features for bus operators who need real-time viewing or have future plans to expand their on-board security operations. Plus, you get the benefit of one high-definition video channel for applications where image quality is essential.

### Key Features & Benefits

- **Record up to 12 video channels with audio plus 1 high-definition channel** at 30 FPS on all channels simultaneously (D1 resolution on analog channels; premium image quality at 1280 x 720 on HD channel)
- **Eliminate camera system down-time** by monitoring DVR and HDD status with Health-Check
- **Maximize your video retention time** with up to 2 TB of storage
- **Get incident alerts and critical data on vehicle handling** with a built-in inertia sensor — ideal for accident reconstruction or driver monitoring
- **Dual streaming technology records two information streams;** one for hi-res playback and one for real-time viewing over a cellular network
- **Fail-safe design for added reliability** with dual hard drives
- **Supports geo-fencing,** which delivers alerts when a vehicle deviates from a geographic boundary
- **Record vehicle speed & location and easily download footage** with this GPS- and WiFi-ready DVR
- **Panic and diagnostics buttons** provide an easy way to indicate an incident or verify the system is functioning



### Included features:



### Optional add-ons:



Use with easy viewing video management software:



vMax® Commander

### Accessories:



Media Cartridge with Hard Drive

Hard Drive Reader

GPS4

# Mobile Video Surveillance Software

At the heart of Seon's bus camera systems are easy-to-use software solutions, designed to help transit agencies locate and view video quickly and efficiently. From standard viewing and archiving software to sophisticated

video management and automatic wireless downloading — Seon's software solutions help ease the burden of managing today's transit security challenges.



## *Easily view & archive video — protecting passenger privacy*

### **vMax View**

Investigate on-board incidents at the click of a mouse. View video footage synchronized with GPS and other vehicle data and easily create clips for video evidence. Protect privacy by blurring the faces of innocent bystanders using SmartBlur™. Easily find video by date, time, or even GPS location.



## *Simplified video management with automatic wireless downloading*

### **vMax Commander with SmartReach Wireless**

Take away the hassle of video retrieval. When paired with SmartReach wireless, vMax Commander lets you automatically download and easily manage video, monitor DVR health, and adjust DVR settings from the comfort of your office.



## *Basic web browser DVR access*

### **vMax Web**

Secure DVR access using any PC with web browser and wireless or Internet connectivity. Remotely configure DVRs, download health-check reports, or view recorded or live video from the bus.





## Easily view & archive video — protecting passenger privacy

This easy-to-use software simplifies the viewing, archiving, and retrieval of video data, and allows easy searching by video clip, alarm, or date and time. Retrieve key details about on-board incidents or pinpoint the exact time and location a passenger exited the bus. Create archives for video evidence while maintaining the privacy of passengers and drivers with our innovative blurring feature — SmartBlur™. Transit security is made easy with vMax View software.

### Key Benefits

#### Easily View and Archive Video

Quickly locate the on-board incident and easily create a video clip for evidence. It's as easy as Point-Click-Save.

#### See What Really Happened — and When

Video synchronized with vehicle telemetry data, such as GPS location, vehicle speed, turn signals, and braking, in one software interface.

#### Protect Passenger and Driver Privacy

The innovative SmartBlur feature blurs faces across an entire video clip to protect the privacy of innocent bystanders.

### Key Features

#### Multiple Views

View 1, 4, 6, 9 or more video channels simultaneously.



#### Simple Video Navigation

Easy to use play, forward & rewind buttons, and timeline with zoom and scroll.



#### Map Vehicle Path and Speed

Display exact vehicle location and speed synchronized with video playback. Requires Internet connection.



#### SmartBlur Feature

Blur faces of innocent passengers throughout the video to protect privacy.



#### Event/Alarm/Telemetry Search

Search video by alarms, speed, GPS location, hard braking, or date/time.



#### Archiving Options

Archive multiple camera views in proprietary .avr or readily available .avi formats.



#### Timeline Navigation

Easily navigate video by clicking on the timeline to jump to a specific event or time.



#### Second Stream Playback

Play back a second stream of video within the playback software.

#### GPS Advanced Search

Find relevant video easier than ever. Click on the GPS track to view video from a specific location on your route.



#### Digital Zoom

Zero in on key details in the video, such as faces or license plate numbers, for more in-depth analysis and review.



# vMax® Commander – Video & Data Management



## Scalable, multi-site, multi-user enterprise management software

vMax Commander provides hassle-free video retrieval by eliminating the guesswork and footwork of removing hard drives. When combined with the Smart-Reach Wireless solution, video with marked events can be automatically downloaded from a bus as it enters the yard and is ready for viewing from a central location. The software also lets you efficiently manage video footage, monitor system health status, and configure DVRs — all from the comfort of your office from one convenient application.

### Key Benefits

#### Hassle-free Video Retrieval

Eliminate hard drive handling costs and free up labor resources with automatic video downloading.

#### Ensure All On-board Events are Captured

Advanced DVR health status virtually eliminates camera downtime reducing the liability risk of lost footage.

#### Protect Video Evidence

Centralized access and advanced user permissions ensure that the chain of custody for important video footage is protected.



### Key Features

#### Automatic Wireless Video Downloading

Schedule automatic video downloads, or perform ad hoc requests when an incident is reported.



#### Remote DVR Configuration

Conduct remote firmware updates and adjust DVR settings from the comfort of your office.



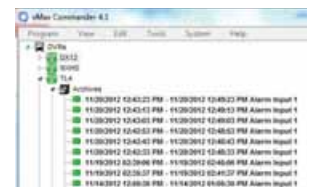
#### Advanced DVR Health Status

Monitor and report on camera system health right down to individual camera loss. Graphical icons change color to highlight immediate problems.



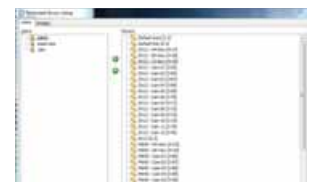
#### Search for and Manage Video

Maintain a 'digital paper trail' of your video archives. Easily search for video by date, time, bus or yard.



#### Control Video Access

Control access to critical video by restricting and assigning access permissions.





# From the Bus Yard to the Office in 1, 2, 3...



## 1. WiFi-ready Mobile DVRs

Eliminate the hassle of manual hard drive retrieval. Capture with confidence and easily download footage wirelessly.



## 2. Industrial Wireless Technology

Guaranteed to deliver the signal strength, power, and bandwidth necessary for reliable download of video and other data from the bus.



## 3. Scalable Video Management Software

Easily locate video by date, time, bus, or yard, monitor camera system health, and configure DVRs — all from the comfort of your office.





# Smart-Reach® Wireless



## Wireless networking like no other

Smart-Reach is an effective industrial-grade wireless solution designed to meet the unique challenges that mobile environments present. Working in combination with vMax Commander, Smart-Reach provides a robust wireless infrastructure for automated video downloading.

Every Smart-Reach network implementation is carefully engineered to ensure a strong wireless signal, as well as sufficient power and bandwidth, to efficiently and reliably download video and other data from the bus from anywhere in the yard. The system also works seamlessly with other on-board technologies while not conflicting with existing IT infrastructure.

## Key Features & Benefits

- **Secure, industrial-grade wireless** networking solution designed for mobile applications.
- **Custom-engineered solution** to meet the specific needs of your environment.
- **Dedicated, on-demand IT** installation and support.
- **Guaranteed to deliver** sufficient signal strength, power, and bandwidth for efficient and reliable download of video and other data from the bus.



## Components

### Smart-Reach Lite Mobile Wireless Bridge

This mobile wireless bridge allows you to connect to Seon's family of mobile DVRs and retrieve data over a wireless LAN — with simplicity and security. The Smart-Reach Lite Mobile Wireless Bridge features a signal strength LED meter for antenna alignment, a low-loss integrated N-type RF connector, and a robust weatherproof design.



Smart-Reach Lite



Antenna

### Smart-Reach Access Point

This industrial-grade wireless access point delivers scalable, seamless wireless access when and where you need it. Smart-Reach AP is a multi-service access point that features plug-and-play automatic configuration, rock-solid WLAN security, and delivers high-performance wireless access.



# Typical Network Scenarios

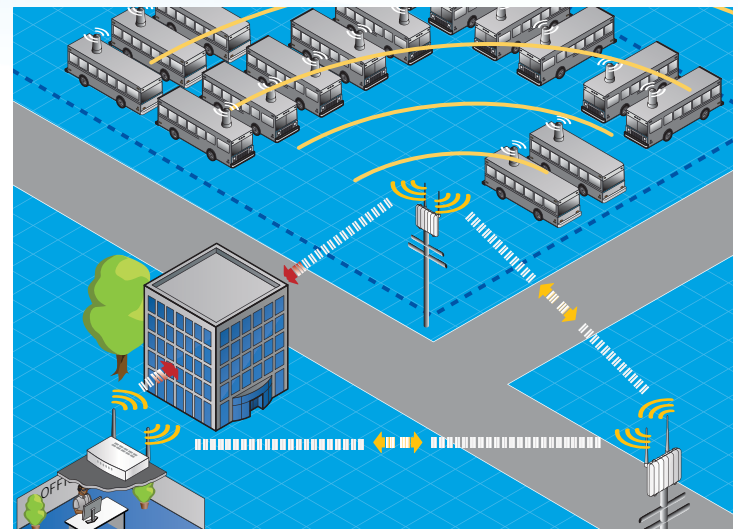
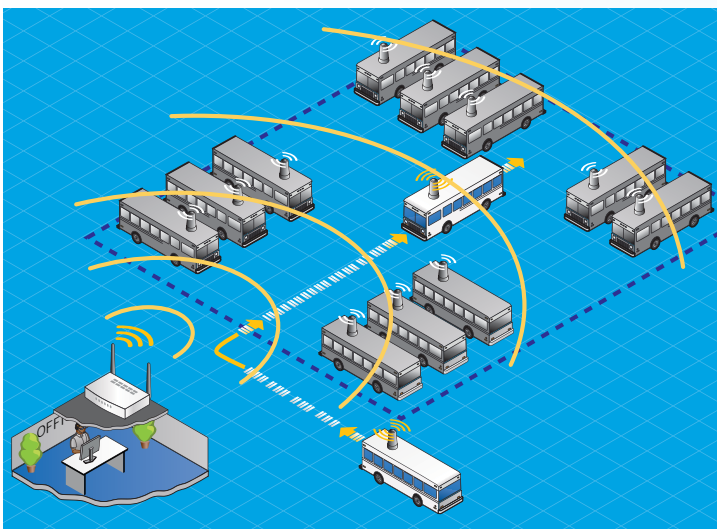


## Smart-Reach wireless network scenarios

Smart-Reach WiFi networks can be configured to suit your needs and your transit yard environment. Whether you have one yard with designated parking spaces accessible from a single access point, to multiple yards with multiple offices downloading video data, Seon's Engineering Services team can customize a solution that's right for you.

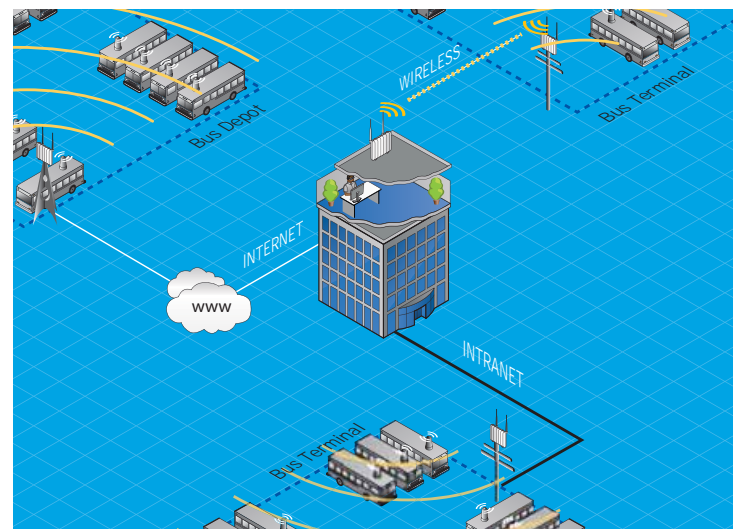
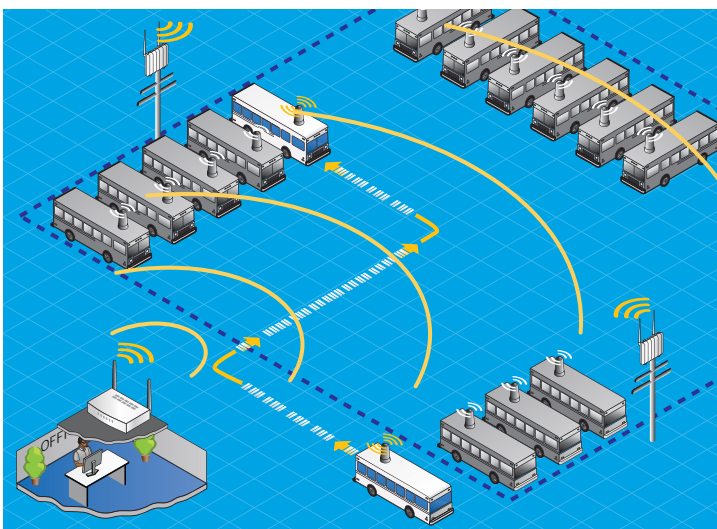
**Basic Configuration (One Access Point):** This scenario is most common in yards with designated parking spaces where the entire transit property is in range of a single access point. When a bus returns to the yard, it picks up the signal and logs on.

**Standard Configuration (Directional Access Points):** In transit yards where there are objects that block the wireless signal, a directional access point is installed that will direct signals to another access point which then communicates with the yard's multiple access point network.



**Advanced Configuration (Multiple Access Points):** To improve roaming capabilities, multiple access points can be installed to ensure sufficient coverage as the bus moves around the property. When a bus enters the yard, it connects to the strongest signal it can detect. The system is intelligent enough to drop a weaker signal and pick up the stronger one.

**Complex Configuration (One Office, Multiple Yards):** In this situation, a central office can communicate with multiple yards, regardless of their location. This solution can be implemented through the Internet, through wireless technology, or through an existing intranet network, and it can accommodate all the other networking scenarios.





## Know what's happening on your fleet – anytime, anywhere.

vMax Live Plus is a real-time fleet management solution that gives you instant insight on any route, driver, or vehicle in your fleet.

Unlike other fleet management systems, vMax Live Plus integrates both video and vehicle data into one simple-to-use, web-based application. Track not only important vehicle data, but also the health of your bus camera system. Get valuable up-to-the-minute information on driver behavior and passenger safety for your peace of mind.



## The peace of mind in real-time fleet management solution.

### Ensure Passenger Safety

**DVR Health Check** – Be confident you're capturing everything that's happening on the bus.

**Live Snapshot** – See what's happening on the bus right now — just as if you were in the driver's seat.

**Alarm & Event Notification** – Get live alerts and emails on any problems on the bus.

### Act Faster

**Instant Vehicle Locate** – Pinpoint the location of any bus immediately.

**Easy Dispatch and Route Management** – Quickly re-assign drivers and routes in case of illness, breakdowns, or vehicle maintenance.

**Odometer Readings** – Track mileage to facilitate vehicle maintenance.



### Save Time & Money

**Fuel Savings** – Timely reports to reduce excessive idling and speeding.

**Time Savings** – Critical vehicle data at your fingertips.

**Efficiency Savings** – Built-in reports to optimize routes.

### Track What Counts

**Live Tracking** – Get instant peace of mind knowing the status of any bus in the fleet.

**Zone Management** – Identify a specific geographical boundary and create a zone of interest for future reporting.

**Ghost Trail** – Recreate the movement of any vehicle at any point in time — stops, speed, and direction.





# Bus Cameras

## See what happened from every angle

Two key factors in every successful bus camera implementation are: 1) Image Quality and 2) Camera Placement. Image clarity is particularly important at night in low-light conditions, or for surveillance applications where you want to capture fine details like license plate numbers. Having enough cameras placed strategically around the bus will ensure you capture everything that happens on the route, inside and outside the bus. Durable, fully adjustable and tamper-proof, Seon offers a selection

of wedge, dome, and other specialized cameras specifically engineered to withstand all the rigors of the road — complete with audio and day/night capabilities. Each camera can be configured to your unique requirements with a selection of lens sizes from 2.9 to 25 mm for wide angle to telephoto coverage. And our continued investment in product development and commitment to research ensure you get the image clarity and reliability you need for any situation.



CA Outdoor Wedge



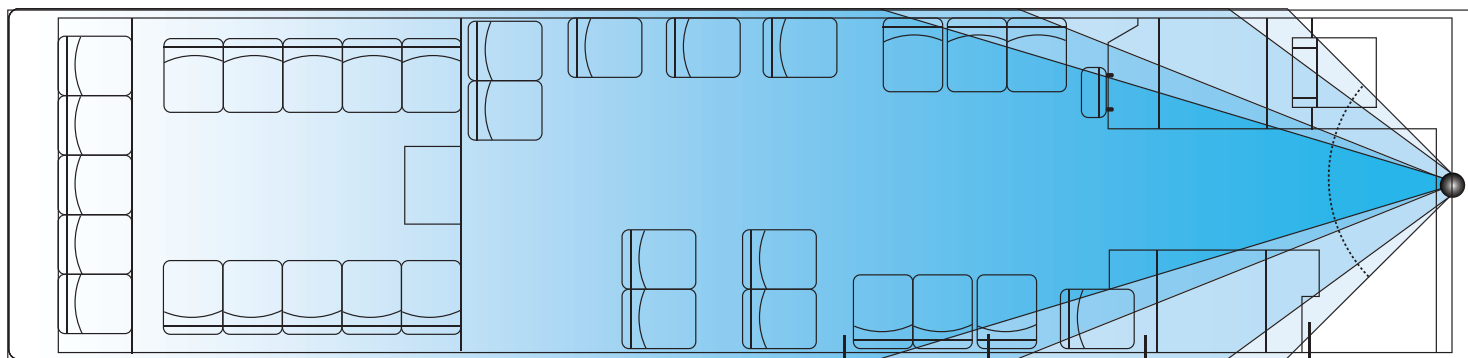
CHW Outdoor Wedge - HD Camera



CQ IR Dome



CJ Dome



8 mm lens: 32° 6 mm lens: 42° 3.6 mm lens: 74° 2.9 mm lens: 90°

## See the Difference with Seon's HD camera

### Typical Analog Camera

540 TVL



### HD Camera

HD 720P



Visit [www.seon.com/hd](http://www.seon.com/hd) to see the difference

# Cameras: Indoor Applications

## *CJ Windshield Camera*

Designed for forward facing applications through the windshield, the compact, easily adjustable CJ dome camera is ideal for accident reconstruction and driver monitoring.

### Key Features

- 3.6 and 6.0 mm lens for wide angle coverage through the windshield
- Local video out connector for quick set-up of field of view and focus
- Back light compensation (BLC) for improved image quality in back-lit conditions
- High fidelity microphone to enable audio recording
- Vandal-resistant metal housing to prevent tampering
- Mounting post available
- 3D rotating gimbal



## *CQ Interior Dome Camera*

Customized to suit any indoor surveillance applications, this compact and vandal-resistant camera includes infrared LEDs for high-quality images in low-light conditions.

### Key Features

- Available in variety of lens sizes: 2.9, 3.6, 6.0, 8.0, 12.0, and 16 mm
- Includes Infrared LEDs with two levels of intensity for improved night vision
- Local video out connector for quick set-up of field of view and focus
- Back light compensation (BLC) for improved image quality in back-lit conditions
- High fidelity microphone to enable audio recording
- Vandal-resistant metal housing to prevent tampering
- Mounting post available
- 3D rotating gimbal



# Cameras: Outdoor Applications

## CA Outdoor Wedge

A high resolution camera, designed for exterior vehicle surveillance, the outdoor CA Wedge is durable and versatile with a rugged, vandal-resistant housing that is both dust and water-resistant.

### Key Features

- Available in 2.9, 3.6, and 6.0 mm lens for wide-angle to telephoto coverage
- Supports infrared illumination with adjustable intensity for improved night vision
- Local video out connector for quick set-up of field of view and focus of the camera
- Provides anti-glare protection and scratch resistance to ensure image clarity
- Rugged, IP67 weather-proof, and vandal-resistant metal housing
- Features a 350° rotating gimbal for vertical and angular mounting
- Mounting post available



## CHW High-definition Camera

A ground-breaking development in camera resolution, the CHW next-generation camera uses progressive scan technology to deliver a clear, crisp image with 3x the resolution of a typical analog camera — for applications where picture quality is paramount.

### Key Features

- 720p progressive scan resolution — 3x a typical analog camera
- Available in 2.5, and 16 mm lens for wide-angle to telephoto coverage
- Local video out connector for quick set-up of field of view and focus of the camera
- Rugged, IP67 weather-proof, and vandal-resistant metal housing
- Features a 350° rotating gimbal for vertical and angular mounting
- Mounting post available



Works with Explorer® DX-HD or Explorer® MX-HD



## Rear Vision Camera System

This camera system allows a driver to monitor events in difficult to see areas in and around the vehicle in real-time. A programmable multi-view monitor helps increase safety and prevents costly rear-backing collisions.





# Why Choose Seon?

## #1 in Mobile Video

Independent, UK-based research firm, IMS Research has ranked Seon as the World's #1 provider of mobile surveillance solutions (2007, 2009 and 2011). Working with a true industry leader you'll benefit from our years of

research & development and hands-on implementation expertise.



has  
acquired

IMSresearch

## Trusted for our Service and Expertise

We've been providing (and supporting) camera systems for mobile applications since 1999. Seon is built on a team of highly skilled product developers, programmers, and technical support specialists who ensure we are positioned at the forefront of the industry's latest trends. Along with our sales, marketing, and operations staff, Seon is committed to providing customers with unrivaled expertise, service, and support.



## Flexible Financing Options

No budget? No problem. Seon offers a leasing program exclusively through Alliance Funding Group (AFG). Financing your surveillance solution means you can equip your whole fleet at the same time without a large up-front cash investment, improving your cash flow. You also receive added protection against technological obsolescence giving you the flexibility to update equipment every three years.



## Quality Products = Reliability

When the unthinkable happens, you don't want to leave the capture of events on the bus to chance. Seon has invested millions in R&D and operates a state-of-the-art engineering facility based in North America to ensure our products stand the test of time and the rigors of the road. And our customers reap the rewards, citing failure rates of less than .01%.

## Customer Satisfaction — Guaranteed

Right from your first contact with Seon, you'll see a big difference in our approach. We take the time to help you choose the right solution, provide professional, experienced installation services, and our after-sales support is second-to-none. Ask any of our over 3,800 customers across North America and they'll tell you — if you ever have a problem with a Seon system, we'll make it right. Period.



# Customer Support

Whether you need help choosing a surveillance system that's right for you, assistance in writing bid specifications, experienced installation advice, or insight on how to operate equipment, we're here to support you every step of the way. Our technical services call center is staffed by a

dedicated team trained to diagnose and resolve issues over the phone, regardless of the problem, providing valuable advice and hands-on expertise on application, installation, and equipment operation.

## Our Dedicated Support Team

### Dedicated Sales Consultant

Recommend solutions to meet your needs



### Engineering Expertise

Team of 20+ engineers based in North America



### Installation Services

Field support technicians install to your timelines



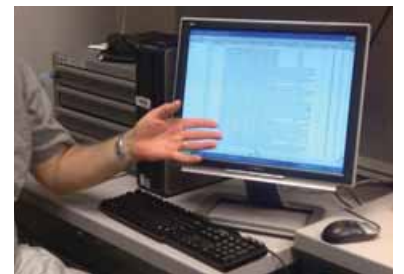
### Technical Support

Dedicated, knowledgeable people advise on equipment operation



### In-depth Training

From online webinars and how-to videos to in-person software training



*Get more info online at [www.seon.com](http://www.seon.com)*

### Technical Support — [seon.com/support/technical-support.html](http://seon.com/support/technical-support.html)

For everything from software updates, spec sheets, and technical documents to user manuals, installation diagrams, configuration guides, and bid specs.

### Industry Trends & Advice — [blog.seon.com](http://blog.seon.com)

Stay up-to-date on the latest trends and technology in mobile surveillance and fleet management, and learn best practices on Seon's blog.

### Product Knowledge — [seon.com/products](http://seon.com/products)

Find out more details on all of the products highlighted in this catalog including spec sheets, product brochures, and bid specs.

### Equipment Financing — [seon.com/finance](http://seon.com/finance)

Learn more about how you can eliminate your up-front investment and make annual, quarterly, or monthly payments.

# Seon Product Warranty

Seon Design Inc. (Seon) warrants the cameras and components listed below against defects in workmanship and materials provided that such defects appear or are discovered within the respective periods specified below and provided further that the purchaser of such products notifies Seon of such defects within thirty (30) days of the appearance or discovery of such defects:

- Three (3) years from date of purchase, parts and labor on all Cameras
- Three (3) years from date of purchase, parts and labor on the Explorer® DX, TX, MX, and Trooper® TL series mobile DVR Systems
- One (1) year from date of purchase, parts and labor on the Smart Reach® Wireless systems and other Wireless products
- One (1) year from date of purchase, parts and labor on the VML Controller and other vMax Live Plus hardware products
- One (1) year from date of purchase, parts and labor on all other products and accessories

All service/replacement parts and repairs are warranted for a period of 90 days.

Subject to the terms and conditions listed below, during the relevant warranty period, Seon will repair, replace, or refund the purchase price for the defective product, whichever Seon considers to be appropriate in the circumstances, in Seon's sole and arbitrary opinion, free of charge, any defective products returned prepaid. In the event purchaser has a problem with any Seon product, please call and request a RETURN AUTHORIZATION (RA) NUMBER from the Service Department. Please call 877-630-7366 or (604) 941-0880 and ask for the Service Department. Be sure to have the model number, serial number and the nature of the problem available for the customer service representative. Prior authorization **MUST** be obtained for all returns, exchanges, or credits. **ITEMS SHIPPED TO SEON WITHOUT A CLEARLY IDENTIFIED RA NUMBER MAY BE REFUSED.**

Products returned will be tested to verify the defect. Upon verification of the defect, the product will be repaired or exchanged, or the purchase price will be refunded or credited to the customer's account, at the sole option of Seon. In the event of replacement, the returned product will be credited to the customer's account and a new invoice issued for the replacement item. Seon reserves the right to refund the purchase price or to issue a credit only in lieu of replacement. Seon may use new or refurbished replacement parts for repairing its products, at its sole and arbitrary discretion. Seon may replace an entire unit

with an equivalent model, at its sole and arbitrary discretion. If a unit is exchanged, the returned product shall become the property of Seon and the exchange product becomes the property of the purchaser, and the remainder of the warranty that applied to the original unit purchased shall apply to the exchanged product. Exchange units may be new units, or units that have been repaired to full factory specifications, at Seon's discretion. If the product is found to be in good working order or its inability to function properly is not covered by this warranty, the product will be returned in the same condition as received unless repair is possible and requested by the customer. Repairs of such nature will incur a charge for parts and labor and will proceed only by agreement with the customer to accept the charge.

This warranty shall not apply:

- (a) to equipment not supplied by Seon;
- (b) to equipment, including, any components, which shall have been operated in excess of rated capacity, subject to negligence, accident, or damage by circumstances beyond Seon's control, or to improper installation, operation, maintenance, servicing, alterations or storage, modification without Seon's written authorization, misuse, vandalism, fire, floods or acts of nature so as, in Seon's exclusive and arbitrary judgment, to affect the same adversely;
- (c) if the serial number for the product has been altered in any way; or
- (d) if the product has been operated outside of the specified Operating Environment specified in the Seon Users Manual for such product.



# Disclaimer

**THIS WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER REPRESENTATIONS, WARRANTIES, GUARANTEES AND CONDITIONS, EXPRESS OR IMPLIED, STATUTORY OR OTHERWISE AND WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, SEON EXPRESSLY DISCLAIMS AND EXCLUDES ANY IMPLIED WARRANTY OF MERCHANTABILITY, DURABILITY OR FITNESS FOR PURPOSE AND ANY WARRANTIES OR MODIFIED WARRANTIES ARISING FROM USAGE OF TRADE OR COURSE OF DEALING.**

Any description of the goods or services, whether in writing or made orally by Seon or Seon's agents, specifications, samples, models, bulletins, drawings, diagrams, engineering sheets or similar materials used in connection with customer's order are for the sole purpose of identifying the goods and/or services and shall not be construed as an express warranty. Any suggestions by Seon or Seon's agents regarding use, applications or suitability of the goods and/or services shall not be construed as an express warranty unless confirmed to be such in writing by Seon. Purchaser assumes full responsibility for selecting products to achieve purchaser's intended purposes, for properly installing and using those products, and for verifying the results obtained therefrom.

**PURCHASER'S EXCLUSIVE REMEDY AND SEON'S ENTIRE LIABILITY ARISING FROM OR IN CONNECTION WITH PURCHASER'S USE OF THE PRODUCTS AND/OR THIS AGREEMENT SHALL BE REPAIR OR REPLACEMENT OF DEFECTIVE PRODUCTS, OR REFUND OR CREDIT OF THE PURCHASE PRICE OF THE PRODUCTS AS SET FORTH ABOVE. SEON SHALL NOT BE SUBJECT TO AND DISCLAIMS: (A) ANY OTHER OBLIGATIONS OR LIABILITIES ARISING OUT OF BREACH OF CONTRACT OR OF WARRANTY, (B) ANY OBLIGATIONS WHATSOEVER ARISING FROM TORT CLAIMS (INCLUDING NEGLIGENCE, AND STRICT LIABILITY) OR ARISING UNDER OTHER THEORIES OF LAW WITH RESPECT TO GOODS SOLD OR SERVICES RENDERED BY SEON, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATING THERETO, AND (C) ALL CONSEQUENTIAL, INCIDENTAL, SPECIAL AND CONTINGENT DAMAGES WHATSOEVER, EVEN IF SEON HAS BEEN SPECIFICALLY ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.**

Without limiting the generality of the foregoing, Seon specifically disclaims any liability for property or personal injury damages, penalties, special or punitive damages, damages for lost profits or revenues, loss of use of goods or any associated equipment, cost of capital, cost of substitute goods, facilities or services, down-time, shut-down or slow-down costs, or for any other types of economic loss, and for claims of customer's customers or any third party for any such damages. Some jurisdictions do not allow limitation or exclusion of incidental or consequential damages, so this limitation or exclusion may not apply to purchaser. In no event shall Seon's total liability for any damages to purchaser or any other person in connection with the products or this agreement exceed the lower of the suggested list price or the actual price paid for the products, regardless of whether such liability arises from contract, tort, warranty or any other form of claim. If any provision of this agreement is found to be void, invalid, or unenforceable, that finding shall not affect the remaining provisions, all of which shall be enforced to the full extent permitted by law. If any remedy hereunder is determined to have failed of its essential purpose, the limitations of liability and exclusion of damages set forth above shall remain in full force and effect. This agreement may be modified only by a writing signed by a duly authorized representative of Seon.

## **Provisions Applicable to American Customers**

For those customers whose mailing address is in the United States, Seon's offer and any agreement of sale resulting therefrom shall be governed by and construed in accordance with the internal and domestic laws of the State of WASHINGTON without giving effect to the conflict of laws rules thereof. The Superior Court of Washington for Whatcom County and U.S. District Court for the Western District of Washington ("the U.S. Closed Courts") shall have exclusive jurisdiction to entertain and determine all disputes and claims, whether for specific performance, injunction, declaration or otherwise arising out of or in any way connected with the construction, breach, or alleged, threatened or anticipated breach of the contract resulting from this offer and shall have jurisdiction to hear and determine all questions as to the validity, existence or enforceability thereof. Customer specifically consents

to such Court's exercise of jurisdiction over it. The purchaser attorns to the exclusive jurisdictions of the jurisdiction of the U.S. Closed Courts, waives any obligation to venue in any action or proceeding regarding Seon Products and waives any objection that the U.S. Closed Courts are an inconvenient forum or do not have jurisdiction over the purchaser of Seon. The United Nations Convention On Contracts For The International Sale Of Goods shall not apply.

## **Provisions Applicable to Canadian Customers**

For those customers whose mailing address is in Canada, Seon's offer and any agreement of sale resulting therefrom shall be governed by and construed in accordance with the internal and domestic laws of the Province of BRITISH COLUMBIA and the laws of Canada applicable therein without giving effect to the conflict of laws rules thereof. The courts of British Columbia (the "Canadian Closed Courts") shall have exclusive jurisdiction to entertain and determine all disputes and claims, whether for specific performance, injunction, declaration or otherwise arising out of or in any way connected with the construction, breach, or alleged, threatened or anticipated breach of the contract resulting from this offer and shall have jurisdiction to hear and determine all questions as to the validity, existence or enforceability thereof. The purchaser attorns to the exclusive jurisdictions of the jurisdiction of the Canadian Closed Courts, waives any obligation to venue in any action or proceeding regarding Seon Products and waives any objection that the Canadian Closed Courts are an inconvenient forum or do not have jurisdiction over the purchaser of Seon. The United Nations Convention On Contracts For The International Sale Of Goods shall not apply.

The information contained herein is subject to change without notice.

## **Extended Warranty for Certain Products**

The following extended warranty ("Extended Warranty") provisions apply to the products ("Extended Warranty Products") listed in the attached Schedule A if the purchaser thereof has purchased the Extended Warranty from Seon. If any provisions of the Extended Warranty conflict or are inconsistent with the provisions of the basic warranty set forth above, the provisions of the Extended Warranty shall govern.

Seon warrants the Extended Warranty Products against defects in workmanship and materials provided that such defects appear or are discovered within the extended warranty period set forth in Schedule A for the relevant Extended Warranty Product and provided further that the purchaser of such products notifies Seon of such defects within 30 days of the appearance or discovery of such defects.

Under the Extended Warranty:

- (a) Seon will provide repairs to the Extended Warranty Product at no extra charge during the Extended Warranty period;
- (b) normal wear and tear IS covered, including replacement of hard drives if necessary;
- (c) the parts and labor required to complete all warranted repairs are included;
- (d) Seon will arrange and pay the cost of ground freight between Seon's service facilities in Blaine, Washington, U.S.A. (or such other location as may be designated by Seon) and purchaser's location; and
- (e) Seon will pay freight, brokerage and duty costs to bring the goods to Canada, if required, in the sole and arbitrary opinion of Seon.

In addition to the telephone numbers provided above for reporting a warranty matter, purchasers of Extended Warranty products may report warranty matters by e-mail to Seon at: [service@seon.com](mailto:service@seon.com).

The purchaser reporting an Extended Warranty issue may request Seon to arrange for pick up of the Extended Warranty Products and shall provide information as to the number of parcels and shall request a RETURN AUTHORIZATION (RA) NUMBER.

Seon will only be responsible for the cost of ground freight. Any additional costs for express modes of freight will be paid by the purchaser of the Extended Warranty Product. Advance replacements will not be provided.

A renewal or extension of the Extended Warranty is not automatic and will only be offered at the sole discretion of Seon and must be verified by Seon in writing.

At Seon, our solutions are designed to meet the real-world challenges of the transportation industry. Understanding these challenges means listening is fundamental. Feedback from our customers directly influences the design and engineering of our products, ensuring that we meet our client's present and future needs. Built right here in North America, Seon's solutions are designed to meet the specific needs of customers, and they are serviced by teams of dedicated specialists. When you partner with Seon, our

experts are available on-demand to handle every aspect of the installation and support process. We have WiFi and IT specialists standing-by to train your employees and address your networking and software needs.

At Seon, our knowledgeable office support staff are always waiting to pick up the phone. Customer satisfaction is paramount, making Seon the most trusted partner in the mobile surveillance industry.

## Seon

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