



## Command for Transit

The enterprise management platform that helps you manage your fleet's on-board and wayside environments like never before

## The leader in transit surveillance and security

March Networks® transit solutions have been the preferred surveillance and security choice of some of the largest public bus and rail transportation agencies around the world. With an extensive track record in robust automation through wireless-enabled remote monitoring, diagnostics, and automated video uploading, March Networks has set the standard for transit Video Management System Software: Command for Transit.



### Who benefits from Command for Transit?

Bus, passenger rail and other transportation authorities can rely on March Networks Command™ for Transit software for enterprise-class video surveillance monitoring and management. Thanks to the intuitive software, transit operators have complete oversight of their operations, allowing them to enhance passenger and employee safety, respond quickly to emergency situations and reduce liability costs dramatically. Command for Transit also provides critical features, such as GPS and vehicle data integration, for improved operational awareness and efficiency.

This scalable enterprise management solution supports both mobile and fixed video surveillance under the same umbrella, with the same user interface. The innovative software allows you to efficiently monitor all of your locations and assets — vehicles, platforms, stations, shelters, government properties, maintenance yards, transit headquarters, and more — seamlessly incorporating all surveillance operations within a single user interface. The results are conclusive: more flexible deployments, reduced staffing and training costs, and improved overall return on investment.



## Flexibility and scalability

Whether you're looking for a reliable, ruggedized mobile recording platform for a transit fleet, like the RideSafe Series Recorders, or a VMS solution to handle as many as 10,000 vehicles and 128,000 cameras, Command can scale to meet your requirements. The software is ideal for transit agencies and wayside commercial industrial installations, like those supporting Safe City initiatives.

Tens of thousands of our previous generation DVR/NVRs — including some installed almost a decade ago — can be fully integrated with the Command solution, with complete backward compatibility, to support an easy and cost-effective migration to the IP world. Who else can give you that level of future-proofing?

## Centralized client updates

Command for Transit software leverages advanced wireless networking technology and manages our portfolio of ruggedized RideSafe GT Series Hybrid Transit NVRs. It also integrates with March Networks Command Enterprise and 8000 Series Hybrid NVR platforms for high-performance IP video surveillance in depots, stations, park-and-rides, and other fixed transportation environments.

- March Networks IP cameras capture and stream.
- Our comprehensive portfolio of mobile and fixed recorders, and our Command Recording Servers (CRS) record and store.
- The Command Enterprise (CES) Server manages and authenticates.
- Command for Transit makes your experience smooth and effective.

Add to that one single point of contact for support and sales, and enjoy the benefits of a complete solution built for total manageability, scalability and reliability.

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**RIDESAFE**



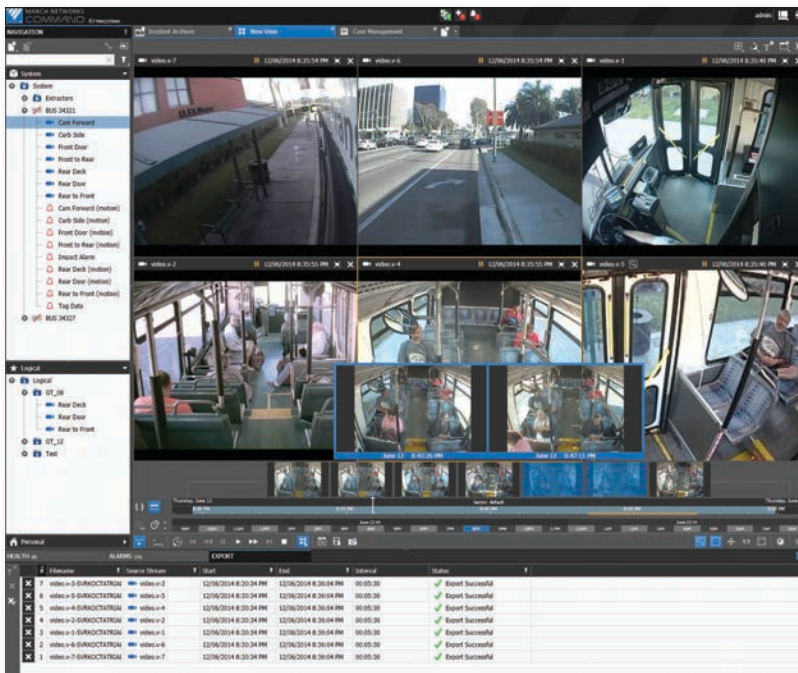
# Automatically retrieve video, perform health management, and initiate software updates — no manual intervention required

## Wi-Fi technology is here to help

Command for Transit addresses the staffing, safety and responsiveness concerns inherent in monitoring and retrieving video from fleets, and offers several options for automated video extraction. As vehicles enter maintenance yards, fueling depots or other Wi-Fi areas, high-speed video extraction and automated maintenance functions (such as NVR health management or software updates), can be performed without manual intervention. There's no need to board numerous vehicles.

## THE 8 TOOLS YOU NEED

- Transportation Application
- Media Archiver
- Incident Export
- Synchronized GPS Mapping
- Case Management
- Legacy MDVR Management
- Health Monitoring Panel
- System Overview Tool



Agency operations or security personnel can view live or recorded video from any vehicle, on demand, via the RideSafe NVR or the vehicle's wireless router.

## Extract and upload video

The CES Media Archiver Module allows for flexible uploads and archiving of video evidence on a per-camera basis, and multiple depot archives can be supported. The tool communicates upload status, and in the event that an upload does not reach completion, the system can accommodate an incomplete upload via incremental extractions that continue at key frame level.

# Making it easy to manage your fleet

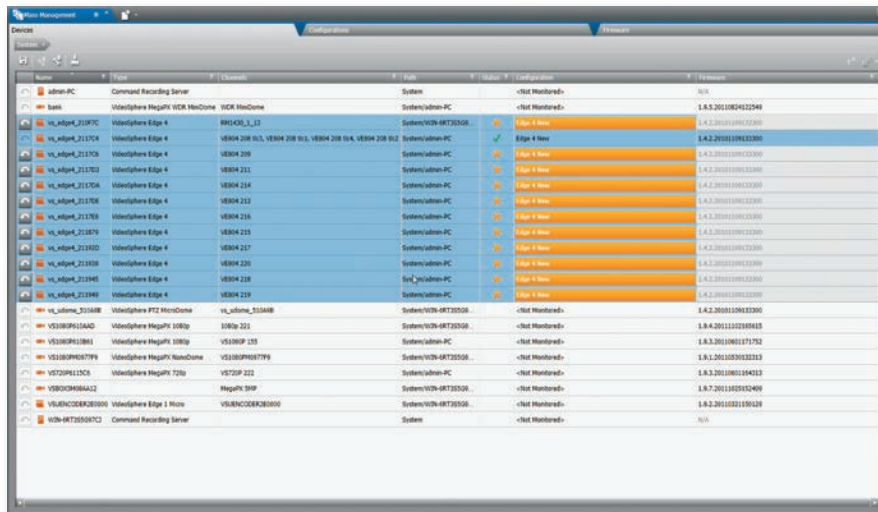
Thanks to the RideSafe Administrator's Console, it's never been easier to configure and manage your NVRs. You can even perform key administrative tasks via wireless access, including:

- Enable automatic connection optimization (Wi-Fi/cellular)
- Perform system installation, programming and maintenance tasks
- Customize peripheral settings
- Set up video capture frame rates
- Configure retention, GPS, and audio settings
- Configure camera operation settings
- Set up alarm monitoring and actions
- Perform camera checks
- Create action to copy video and data to USB

## Revision management

Setting and adjusting your device configuration is usually a time-consuming task. The Administrator Console gives you the tools you need to quickly push out configuration, new firmware and device settings.

Device configurations and new firmware can be stored centrally in the Command Enterprise repository to make sure that your devices match your specified settings. You can also apply those same settings to a number of similar devices with just a few simple mouse clicks.



*Cut the time you spend on system setup and configuration by as much as 90%. The more devices in your network, the more time you save.*

## GURU's Mobile Asset Tracking feature

Available as a free download from the App Store and Google Play, this industry-first smartphone app enables you to trace the movement of your mobile hard drives. Following an incident, you can package all case information — including time, date and GPS location — right from your smartphone, and transfer the entire file in a PDF format.



## Evidence you can rely on

### Get the whole picture by integrating GPS and vehicle data parameters

In addition to RideSafe real-time video and audio capture, Command can integrate GPS information (speed, location, direction) and vehicle data alarms and parameters (e.g., bus number, operator ID, impact, hard brake, door open/closed). This gives you a comprehensive view of onboard activity, and this incident video and vehicle data can serve as reliable evidence in the event of an investigation. The Command environment allows for extracting, archiving and synchronizing this information for playback. Command supports GPS mapping showing vehicle route, in addition to GPS video cell text overlay of GPS data, which is included in archived incident video and can be used as evidence for cases.

In emergency situations, mobile pursuit allows responders to access critical, live, in-vehicle video and audio via wireless handheld or laptop computers, in conjunction with real-time mapping. All data can be archived for post-incident investigation and evidence preparation.

### System reliability and monitoring

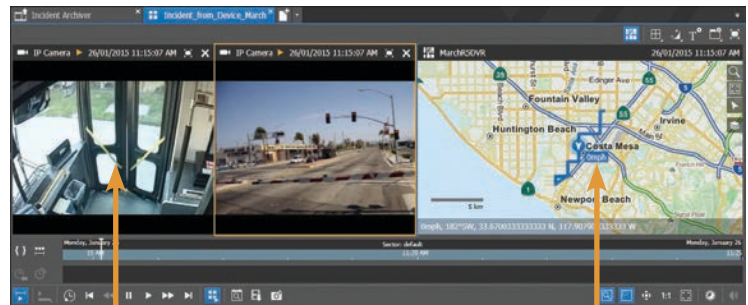
Command's health monitoring makes it easy to keep all of your devices working optimally, and will alert you to system events, in real-time. In the event of a camera disconnection, a recording or disk issue, high processor or fan temperatures, or other problems that can occur on the vehicle, the embedded RideSafe GT software sends real-time alerts to an operator. You can even set the threshold for how significant the situation must be before the system sends an alert. Command bi-directionally exchanges this system information when the vehicle is within wireless range at the depot. Optionally, 4G/LTE cell connectivity allows this fleet health information to be delivered real-time as well.

### With Command Enterprise Management and Administrator Console, you can:

- Manage and monitor all mobile and fixed wayside NVRs from one location
- Manage user accounts and security levels via Active Directory
- Review system summaries for all fleet (NVRs, disk, peripherals, power, connectivity)
- Schedule automated software updates
- Monitor alarms and events
- Search by date, time, camera or smart search
- Filter alarms
- Create a case by exporting multiple pieces of evidence, including video, audio and GPS data from an incident\*
- Export to USB, file path CD/DVD or case
- Synchronize camera playback
- Establish two-way audio communication
- View GPS data (latitude, longitude, speed) in maps or text
- GPS map shows route for incident time frame, clicking on map shows associated video at that time
- Option to view GPS data as text overlay
- View live media from central location or mobile pursuit
- Manage connections, services and e-mail alerts, and set up e-mail notifications
- Receive automatic NVR health status
- Receive automatic notification of camera obstruction, sync loss, drive errors, and recording status
- Add and configure cameras settings and monitor views
- Add NVRs and register to CES
- Configure GPS, audio, network and accelerometer settings
- Set up retention and incident actions
- Set up alerts and alarms including IP events and associated actions
- Set up alarm priorities, monitor health alerts
- Set up and apply configuration templates
- Keep track of past alerts for reporting and investigation purposes
- Filter alerts based on device, issue, status, and date and time of the alert

\* Case evidence can be from a single channel or a synchronized grid view, and can include snapshots and text notes. Export is done in a single, authenticated and protected format: the Command Multimedia Evidence format (.cme). Can also be exported as MP4 (H.264/AAC) or PDF.

### An Incident tab



Views from cameras at the time of the incident

GPS map showing the route at the time of the incident

# Customization and user management

Command’s user management platform is designed with two main objectives in mind: easy setup and complete customization.

Command provides you with all the graphical user interface (GUI) you need, and nothing you don’t need. The sophisticated user interface is easy to use.

Different system users often have very different job responsibilities and need to use their surveillance solutions in distinct ways. A system administrator’s daily tasks are not the same as those of a transit supervisor’s or security guard’s, for example, and differ again from the responsibilities of an agency risk manager. To accommodate this, the Command for Transit interface allows users to tailor their view so they only see the features and functions they need to perform their job, without the distraction of additional capabilities they will never use. Additionally, the multi-client/multi-monitor feature allows users to display different tasks (e.g., live monitoring, mapping, recorded video) on separate monitors simultaneously.

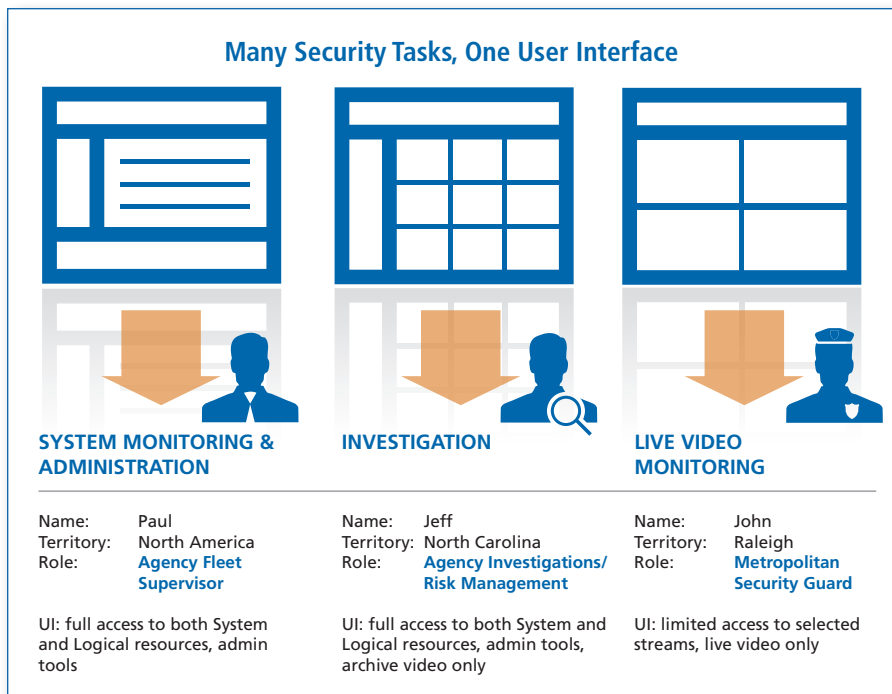
This unique customization dramatically reduces a user’s learning curve.

## Save time on user setup

Command supports setup via LDAP/Microsoft Active Directory integration, which collects user account information (e.g., privilege levels, passwords, domains) directly from an organization’s corporate network directory.

## VMware High Availability

Command for Transit ensures uninterrupted system performance for all your critical security installations. Recording server failover combined with VMware high-availability services at the Enterprise server level, make Command a rock-solid video management platform. Recorded video and associated data is always there when you need it.



# Elementary, my dear Watson

**A rider is attacked and robbed over the weekend. It's not the Monday morning you were looking forward to.**

Post-incident investigations can consume a significant portion of your work day. Command for Transit delivers focused tools that help you rapidly gather and retrieve evidence. Hours spent searching through video archives can be reduced to minutes, thanks to RideSafe and Command's tagged selective recording and thumbnails.

When the driver hits the integrated panic button, the RideSafe NVR can deliver pre- and post-tagged recording of video at customized intervals. This video is extracted during the next trip to the depot, or can be requested remotely. Once video is accessed — either via archive, local NVR, or NVR caddy investigation station — Command Video Player or Command Portable Player clients help you quickly locate the video you need in a few steps.

Positioned at the bottom of the archive timeline, the Command Visual Finder allows you to move quickly from months to minutes in your archive and zero-in on the exact timeframe you need to investigate. The ability to selectively record on panic button events lets operators swiftly bypass unrelated video. It also reduces time spent in front of a monitor looking for evidence.

## Command archive thumbnails

Command also features video preview thumbnails, which are of critical help when searching for changes and differences in the recorded scene. You can refine your search time range easily by clicking the thumbnail that's closest to the relevant evidence.

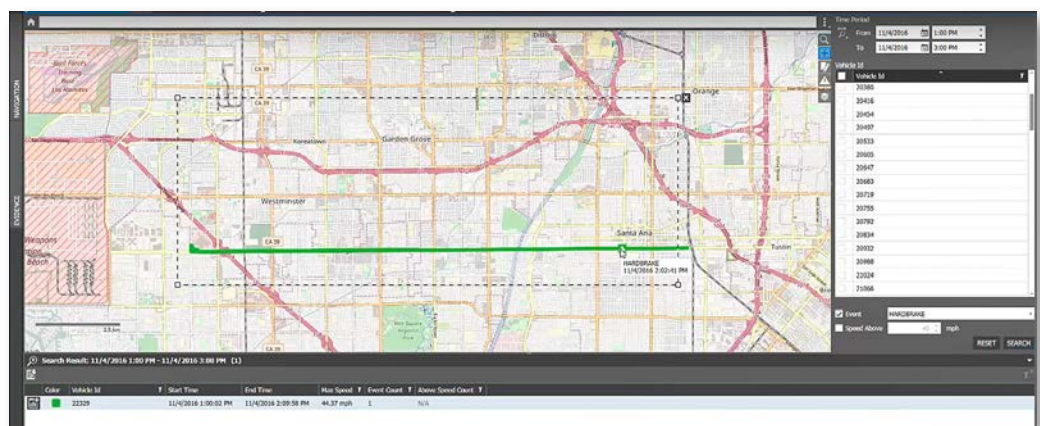
## Find evidence quickly with Command's Incident Search

This innovative investigation tool for transportation agencies lets fleet operators find event evidence quickly, using integrated HD video and vehicle metadata. It provides a visual overview of what's happening on all routes, complete with details on recorded events such as speed, hardbrakes, door malfunctions, impacts, and panic buttons. You can search by date, time, event, speed and geography to find the evidence you need, quickly and cost-effectively, then download the pertinent video evidence. With Incident Search, you'll never have to pull hard drives from vehicles or spend hours searching for the right video clip.



## March Networks Command Mobile

*Save time and money by monitoring your business remotely with the Command Mobile smartphone app. Free from the App Store and Google Play, the app provides convenient access to live and recorded surveillance video from your personal smartphone or tablet. Conveniently manage operational issues, monitor location cleanliness, review signage and displays — all from your mobile device.*





## Three ways you can respond to events more quickly:

### 1 Configure automatic system responses to alarms

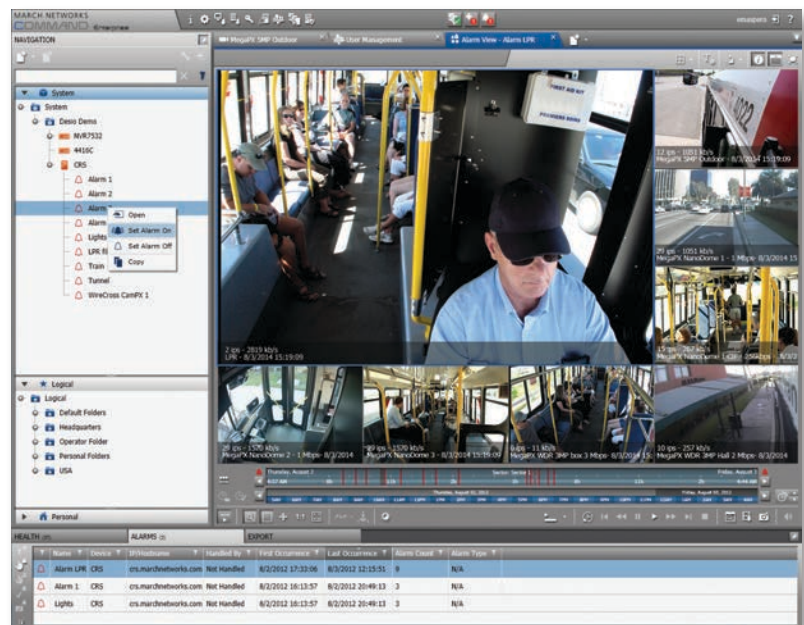
Command offers sophisticated alarm monitoring to help operators respond immediately and more effectively to critical situations. Real-time processing means that several alarms coming in from different recording platforms can be handled simultaneously with the help of pre-programmed actions for video, audio and event data. For example, camera displays on different monitors, spot monitor camera sequences, and email notifications to critical responders, can ensure fast and appropriate responses.

#### CUSTOMIZABLE ACTIONS

To provide operators with step-by-step instructions automatically so they can respond quickly and properly to any event.

### 2 Provide real-time, step-by-step instructions for how operators should respond to alarms

Customizable actions allow you to configure events and associated responses that will automatically provide operators with the correct procedure to follow in the event of an alarm. Alarm inputs and relay outputs displayed in Admin Console can manually trigger in response to critical situations. You can configure an alarm to automatically initiate an action. All alarm activity is instantaneously uploaded to Command upon connectivity at the depot. It is recorded in the CES database, providing your organization with a record of events, the associated video, and subsequent operator actions.

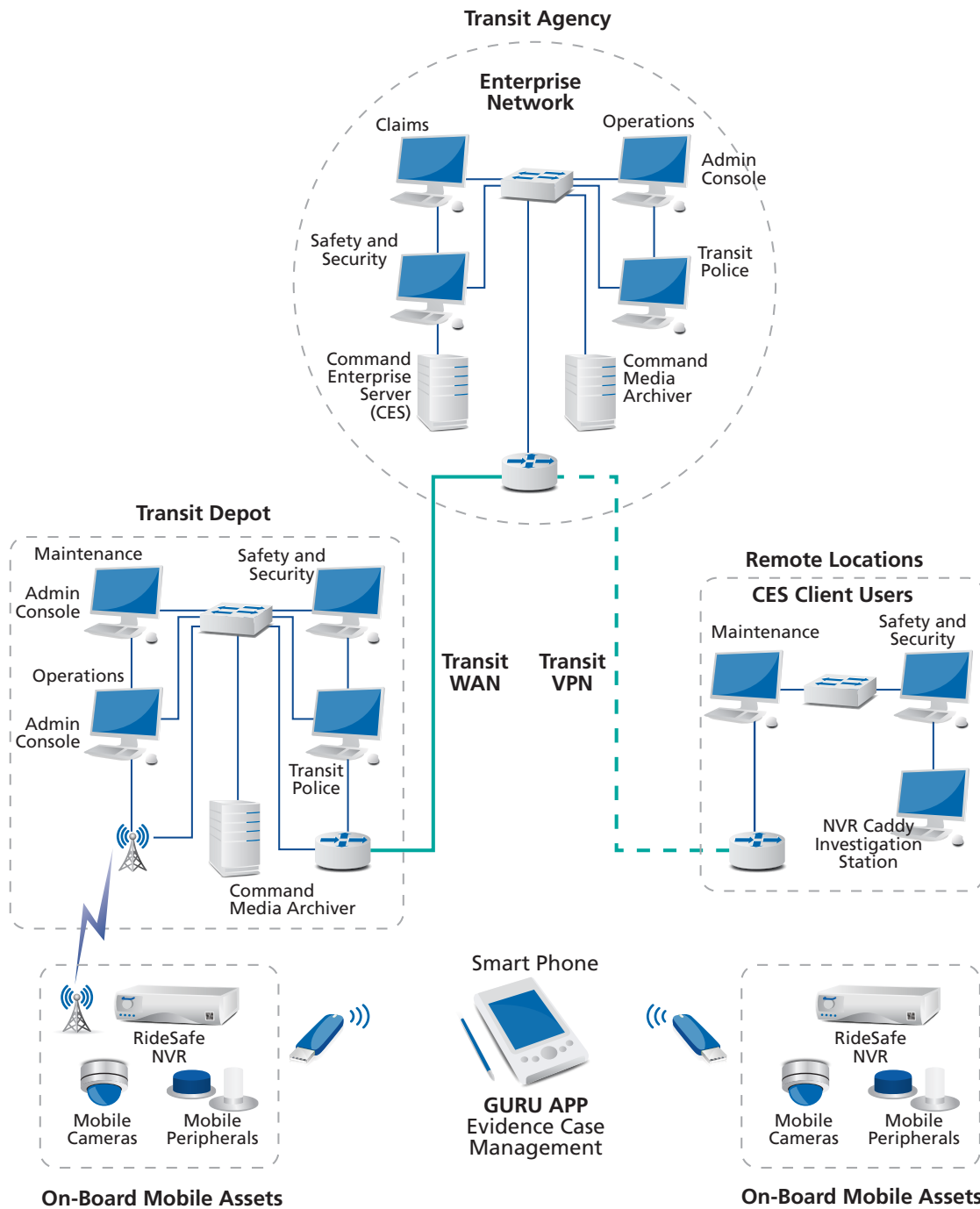


### 3 Instantly find and export critical video onboard and in wayside environments

Command's frame-by-frame playback speeds the identification of a potential suspect, as well as the selection and export of recorded video and any associated vehicle metadata, GPS, and audio evidence from single or multiple cameras. In addition, its synchronized playback permits video replay from an entire site, enabling you to follow the movements of individuals across multiple cameras simultaneously, including fixed wayside and on-board clips. Still image snapshots can also be easily included as part of an investigation case file. All gathered evidence is digitally signed to avoid tampering, and can be verified with the Command Authentication tool. This guarantees that the evidence you share with authorities can be used reliably.

The Command environment allows for exporting a collection of videos and metadata as a case and storing this case for further investigation.

# The Command for Transit Solution



## General Technical Specifications

### Command Client Interface

<b>Operating Systems Supported</b>	Windows 7, Windows 8, Windows 8.1, Windows 10
<b>Multi-Camera Viewing</b>	Up to 36 cameras per browser connection
<b>Active Directory Support</b>	Yes
<b>Security</b>	Multi-level password protection via Microsoft® Active Directory authentication

### Enterprise Server Specifications

<b>Operating Systems Supported</b>	Windows Server 2008 R2 SP1, Windows Server 2012, Windows Server 2012 R2
<b>Native Enterprise Database</b>	MS SQL Server Express
<b>Certified SQL Databases</b>	MS SQL 2008, MS SQL 2012, MS SQL 2014
<b>User Management Server</b>	Microsoft® Active Directory

### Video

<b>Video Compression</b>	H.264, MPEG-4, M-JPEG
<b>Frame Rate</b>	Up to 30 fps
<b>Maximum Resolution</b>	Device dependant

### IP Camera Support

<b>ONVIF Compliant Device Support</b>	Yes
<b>Third-Party Device Support</b>	List available on <a href="http://marchnetworks.com">marchnetworks.com</a>

## Recommended System Requirements

Please contact your March Networks Sales Engineer for specific project sizing. The recommended system requirements are estimated for a typical usage, under the assumption that the cameras are configured to consume 2-4 Mb/s of bandwidth each. The HDD space listed on the next page is the amount of free space required before install. After install, remember that if the remaining free space is exhausted by other applications, or by the operating system, your system may become unreliable. The memory requirements listed on the next page reflect the amount of free memory recommended to run the individual application, not the total amount of memory for the system. If you run multiple applications, ensure that each application has the recommended amount of free memory for that application.

## Enterprise Server Requirements

**IMPORTANT:** For installations consisting of more than 2500 CRS or recorders, please contact March Networks Sales Engineering or Technical Support for specific system requirements.

	Small Less than 10 CRS or recorders	Mid 10 - 100 CRS or recorders	Large Up to 2,500 CRS or recorders
<b>Operating System (OS)</b>	Windows Server 2008 R2 SP1 Windows Server 2012	Windows Server 2008 R2 SP1 Windows Server 2012	Windows Server 2008 R2 SP1 Windows Server 2012
<b>Processor (CPU)</b>	Dual Core Intel Xeon	Quad Core Intel Xeon	Dual Quad Core Intel Xeon
<b>HDD Space</b>	4 GB	6 GB	4 GB - add 2 GB per 100 CRS or recorders
<b>Storage</b>	RAID 5 or better is recommended (SAS drives recommended for more than 10 recording servers). The network connection to external storage must provide the peak bandwidth required by the application.		
<b>Infrastructure</b>	If you are integrating LDAP with the Command Enterprise Server, a Microsoft Active Directory Server is required (provided with Windows Server). If your system is managing more than 250 CRSs/recorders, March Networks recommends that you use a Microsoft SQL Server 2008 or 2012 as the external database, instead of the pre-configured Microsoft SQL Server Express 2012 included with Command Enterprise.		
<b>Network Interface</b>	Gigabit Ethernet	2 x Gigabit Ethernet	2 x Gigabit Ethernet
<b>Memory</b>	4 GB	4 GB 1333 MHz	8 GB 1333 MHz

## Client Applications

	Command Config and Client	Command Player	Visual Intelligence Client Suite
<b>Operating System (OS)</b>	Windows 7, Windows 8 and Windows 8.1, Windows 10	Windows 7, Windows 8 and Windows 8.1, with Microsoft .NET Framework 4 installed, Windows 10	Windows 7, Windows 8 and Windows 8.1, Windows 10
<b>Processor (CPU)</b>	Dual Core Intel Core 2 or better	Dual Core Intel Core 2 or better	Dual Core Intel Core 2 or better
<b>HDD Space</b>	50 MB	50 MB	up to 50 MB
<b>Network Interface</b>	Gigabit Ethernet	N/A	Gigabit Ethernet
<b>Memory</b>	2 GB (minimum) 4 GB (recommended)	2 GB (minimum) 4 GB (recommended)	2 GB (minimum) 4 GB (recommended)
<b>Video Card</b>	Any video card (128 MB per monitor minimum) capable of 24-bit color depth (true color).	Any video card (128 MB per monitor minimum) capable of 24-bit color depth (true color), compatible with Microsoft DirectX 11 and Direct3D.	Any video card (128 MB per monitor minimum) capable of 24-bit color depth (true color).

## Command Media Archiver

<b>Operating System (OS)</b>	Windows Server 2008 R2, Windows Server 2012
<b>Processor (CPU)</b>	Dual Core Intel i5
<b>HDD Space</b>	25 GB (minimum)
<b>Storage</b>	In addition to the storage used by the OS, you will require internal or external storage (DAS, NAS, SAN) with the space and bandwidth capacity suitable for the application that is both recording and playing back video. The network connection to external storage (NAS, SAN) must provide the peak bandwidth required by the application.
<b>Network Interface</b>	Gigabit Ethernet
<b>Memory</b>	8 GB