



March Networks Command Enterprise

True Enterprise Management

Because your job is to use the system...not manage it

Flexibility and Scalability

March Networks Command™ supports multiple recording platforms, more than 600 IP edge devices through proprietary protocol, and thousands of IP edge devices through ONVIF integration.

Whether you're looking for a 4 to 128 channel recording platform or a video surveillance solution to handle as many as 10,000 recorders and 128,000 video channels, Command can scale to meet your requirements. The software is ideal for small branches, large corporate buildings and extensive distributed architectures.

Command is also the latest example of March Networks' well-established reputation for investment protection through innovation.

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

A true end-to-end solution

March Networks IP cameras capture and stream. Our hybrid DVRs, NVRs, and Command Recording Servers (CRSs) record and store. The Command Enterprise Server (CES) manages and authenticates. And the Command Client 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 architected for total manageability, scalability and reliability.

"The [March Networks Command] system is user-friendly and has massive scale and reliability, which keeps us prepared at all times."

— **Tim Morris**

Operations Manager, Christchurch International Airport Ltd.

600+
third-party IP devices
2000+
ONVIF devices



Lightning fast setup. Did you miss it? Lightning fast setup.

Technology is here to help

Setting and adjusting your device configuration is usually a time-consuming task. Command's mass management 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.

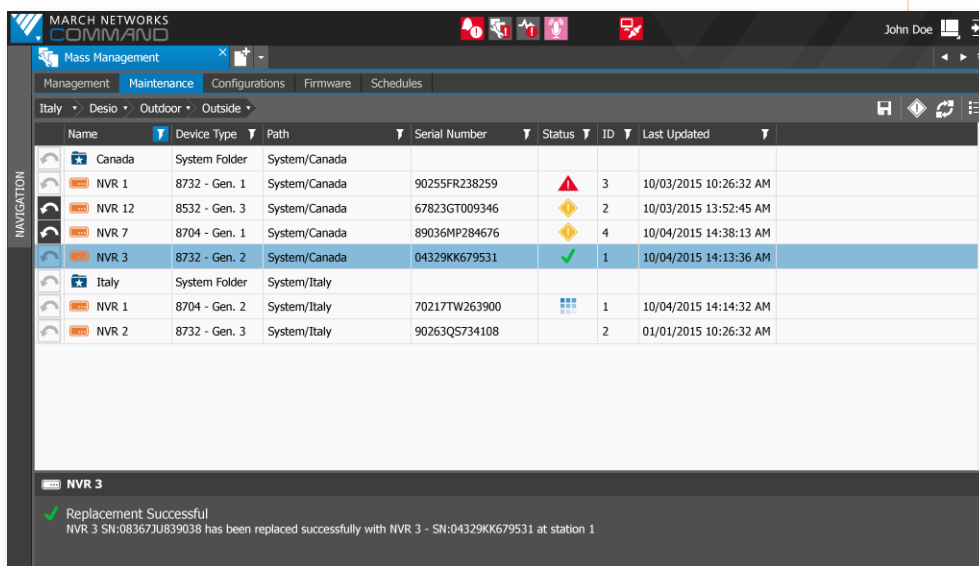


1 minute

to configure your encoder

1 minute

to push that same configuration out to an unlimited number of compatible devices



*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.*

True Enterprise Management



- To avoid interrupting daily operations, updates can be applied to groups of NVRs (or all NVRs) simultaneously, at whatever time works best for the customer, e.g., during the evening or on the weekend.
- Customers can certify a specific firmware release so that all new NVRs registered to Command Enterprise are automatically updated to that firmware.
- The CES regulates network traffic and minimizes bandwidth congestion by allowing customers to control the amount of bandwidth uploaded to the NVRs (outgoing from CES), as well as the amount of bandwidth the NVRs can receive (incoming at the NVR sites).

System Reliability and Monitoring

Command's health monitoring makes it easy to keep all of your devices working optimally. The health inbox pushes real-time warnings to an operator to alert them to a camera disconnection, a recording or disk issue, high processor or fan temperatures, and other potential problems. The operator is then able to quickly investigate and fix the issue by opening the device configuration page – or by contacting a service provider for maintenance – before the surveillance system is compromised.

An additional health history panel keeps track of past alerts for reporting and investigation purposes. Command Enterprise can also send email notifications of past health-related issues on an hourly, daily and weekly basis. Both the health inbox and the history panel support quick filtering based on device source, issue type and status, and date and time of the alert.

VMware High Availability



Command ensures uninterrupted system performance for all your critical security installations. Its March Networks Shadow Archive™ storage at the edge, combined with recording server failover and VMware high-availability services integration 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, as is access to live video for immediate verification and response.

Name	IP/Hostname	Status	Stream	Configuration	Recording	Channel Data Rate	Data Recording	Last 24 Hour Recordings
5 MP WDR Outdoor	10.31.4.45	✓ OK	OK	OK	OK	6.34 Mb/s	11.67 Mb/s	
CamPX 1 Demo area - 512Kbps	10.31.4.32	✓ OK	OK	OK	OK	0.54 Mb/s	0.62 Mb/s	
CamPX MicroDome Tunnel - 1 Mbps	10.31.4.38	✓ OK	OK	OK	OK	2.11 Mb/s	2.15 Mb/s	
Infinova HD PTZ Outdoor	10.31.9.213	✓ OK	OK	OK	OK	4.52 Mb/s	4.05 Mb/s	
LPR	10.31.8.112	✓ OK	OK	OK	OK	2.32 Mb/s	4.63 Mb/s	
MDome Demo area - 1 Mbps	10.31.4.31	✗ Error	Error	Error	Error	N/A	N/A	
MegaPX 360	10.31.4.46	✓ OK	OK	OK	OK	6.96 Mb/s	7.48 Mb/s	
MegaPX NanoDome 1 - 1 Mbps	10.31.4.36	✓ OK	OK	OK	OK	1.65 Mb/s	1.24 Mb/s	
MegaPX NanoDome 2 - 1 Mbps	10.31.4.35	✓ OK	OK	OK	OK	1.65 Mb/s	1.25 Mb/s	
MegaPX NanoDome 3	10.31.4.37	✓ OK	OK	OK	OK	2.37 Mb/s	2.65 Mb/s	
MegaPX WDR 3MP box 2Mbps	10.31.4.34	✓ OK	OK	OK	OK	2.13 Mb/s	2.36 Mb/s	
MegaPX WDR Hall	10.31.9.50	✓ OK	OK	OK	OK	2.40 Mb/s	2.14 Mb/s	
MegaPX WDR Outdoor	10.31.4.46	✓ OK	OK	OK	OK	2.64 Mb/s	3.68 Mb/s	
XDome 1 Outdoor - 512Kbps	10.31.4.43	✓ OK	OK	OK	OK	0.32 Mb/s	0.37 Mb/s	
XDome 2 Outdoor	10.31.4.44	✗ Error	Error	Error	Error	N/A	N/A	

Address	172.16.31.217	Edit Network Settings
Hostname	CRS	
Type	Command Recording Server	
Serial Number	Not Applicable	
Version	1.8.1.003	
Registration Status	Registered	

Stream	Data Incoming	Memory	CPU
✗ Error	37.35 Mb/s	1100.81 MB	1%
Configuration	Data Recording	Memory Total	CPU Total
✓ OK	44.28 Mb/s	1765.14 MB	4%
Recording	Data Outgoing	Memory Available	
✗ Error	3.06 Mb/s	2415.94 MB	

Command keeps an eye on the status of every device connected to the network and proactively alerts operators

THE 6 TOOLS YOU NEED

- Enterprise server VMware High Availability
- Command Recording Server redundancy
- Shadow Archiving edge storage and synchronization
- Health monitoring panel
- System overview tool
- Recorder diagnostics tab

No need to dispatch a tech just to replace an NVR

In the event that an NVR needs to be swapped out, the customer can **"mark NVR for replacement"** via CES. This means the replacement NVR is automatically updated to the appropriate firmware release and assigned the same configuration settings as the old NVR, dramatically simplifying maintenance and reducing downtime.

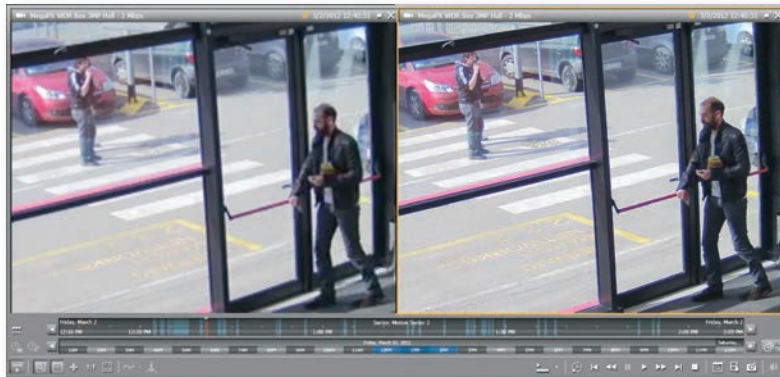
Infrastructure-Friendly Management

Command supports multiple digitized video streams from each IP camera and encoder, or hybrid recorder, connected to analog cameras. The client application selects the appropriate stream automatically to maximize system performance, while a manual override capability lets you select the parameters required for specific applications.

The advantages of Command's multi-encoding technology include:

STREAMING	RECORDING	DECODING
REAL-WORLD SCENARIO: 4 Mb/s video streaming from 3MP cameras, operator visualizing live video in a 3x3 grid for a total of 36 Mb/s	REAL-WORLD SCENARIO: video streaming from 3MP cameras is recorded continuously at 4 Mb/s	REAL-WORLD SCENARIO: operator's PC is decoding nine video frames streaming from 3MP cameras in a 3x3 grid for a total of 27 megapixels per set of frames
MULTI-ENCODING BENEFIT: given the small size of video cells, multi-encoding pushes only 256 kb/s CIF video resolution and uses 15x less bandwidth!*	MULTI-ENCODING BENEFIT: video streaming from 3MP cameras is recorded continuously at 256 kb/s for longer term retention, and at full 4 Mb/s quality on motion or analytics alarm only. Based on levels of motion/analytics, multi-encoding saves more than 50% storage space and preserves the video quality where it's needed most.	MULTI-ENCODING BENEFIT: given the small size of video cells, multi-encoding pushes only 256 kb/s CIF video resolution and therefore cuts client CPU usage up to 30x.*

**The stream can switch automatically to full quality video when in full screen or at an operator's request.*



Multi-encoding technology delivers the flexibility you need to optimize your low and high resolution streaming requests

"It would be cost-prohibitive to try to record high resolution video and monitor all of our [solar] farms on a 24/7 basis. With Command, we can selectively record and stream at high resolution on specific alarms."

— **Paolo Matarrese**

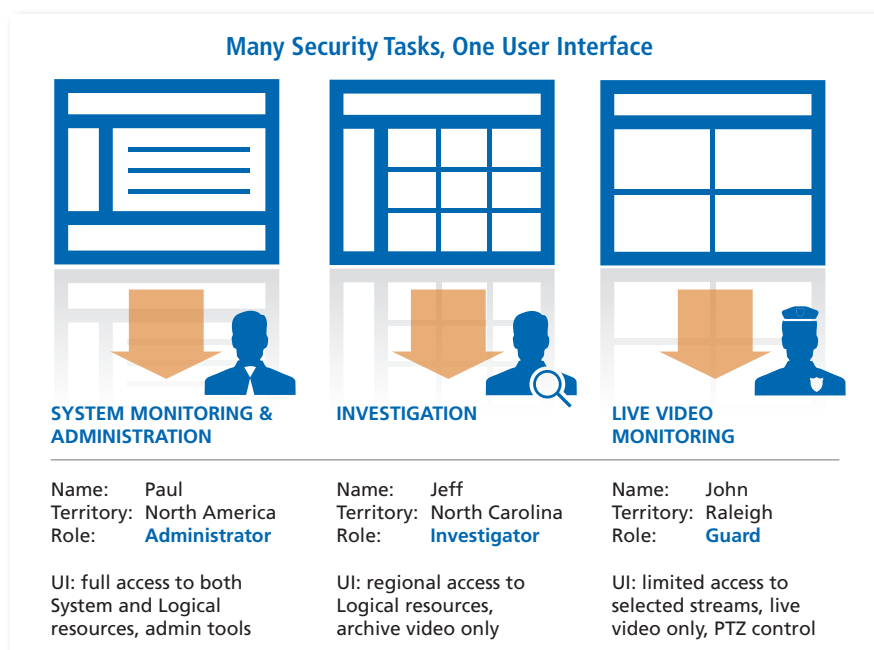
Campus s.r.l., a leading systems integrator responsible for more than 50+ solar farm surveillance installations in Italy

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 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 guard, for example, and differ again from the responsibilities of a network administrator. To accommodate this, the Command 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. This unique customization dramatically reduces a user's learning curve. Additionally, the multi-client/multi-monitor feature allows users to display different tasks (e.g., live monitoring, map, recorded video) on separate monitors simultaneously.



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.

Keep track of user rights and who is using the system

System Administrators can review a comprehensive summary of all system users, along with their respective rights and territories. They can also view, download, and query detailed reports on user activity, like specific operations executed, resources accessed and updates performed.

"Command's flexible system structuring and assigning of territories and user rights played a big role in our decision to lead with the software. User training is much easier and more effective than with traditional thick client applications."

— Bujar Marevci

President, RJ45 Technologies

Elementary, my dear Watson.

A car is stolen over the weekend. It's not the Monday morning you were looking forward to.

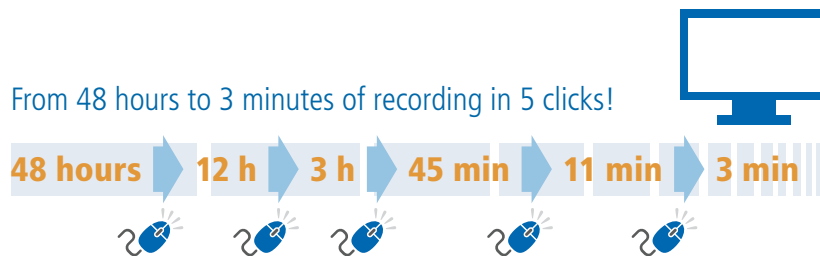
Post-incident investigations can consume a significant portion of your work day. Command delivers focused tools that help you rapidly gather and retrieve evidence. Hours spent searching through video archives can be reduced to minutes, thanks to Command's selective motion recording, smart search, Visual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

The Visual Finder helps you get to the recording you need in a few steps. Positioned at the bottom of the archive timeline, the 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 motion 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.



Motion Histograms

The Command Client timeline features a motion bar that allows users to quickly pinpoint motion events based on time and intensity levels, thus reducing the time needed to find suspicious activities.

Smart Search

Command's smart search capabilities allow you to set up specific motion detection windows when reviewing your recorded video, and receive a list of all events that occurred within that window. This allows you to search through the recorded video looking only for activity that matches your smart search settings. By searching only for motion in designated areas, and within a certain time period, you will reduce the amount of non-relevant video you watch.



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.

"Command's search capabilities are impressive and a huge advantage for organizations. The visual finder and thumbnails make it easy to get precisely the video you need in a fraction of the time typically required."

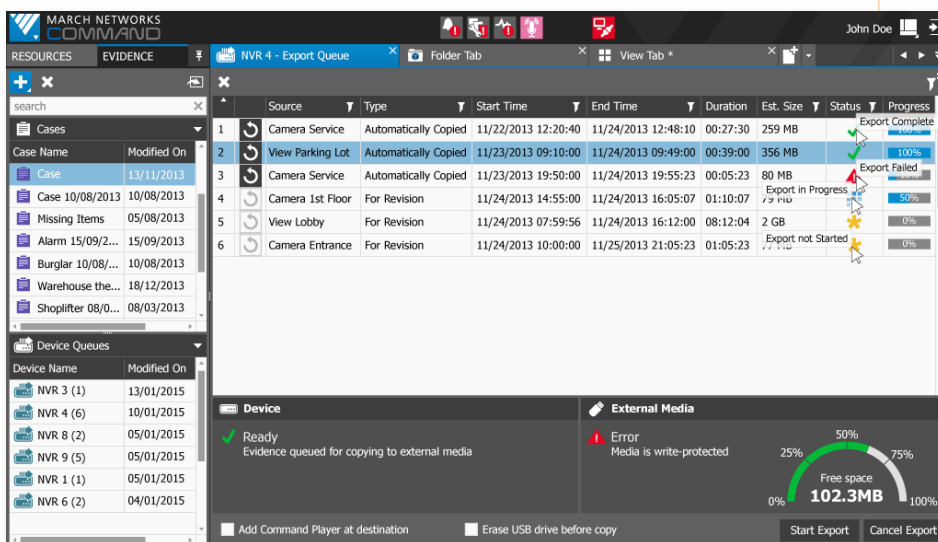
— Kimmo Luoto

Managing Director, Tele-Projekti Oy

Evidence Export: Get the right information into the right hands

1. **Build your case evidence.** Gone are the days where you need to sift through numerous CDs to create or review evidence on a case. With Command's powerful Case Management tool, you can put multiple clips and images, from multiple cameras and NVRs, into a single case folder that includes detailed alarm information and customized notes. Each case is compiled in Command, and the evidence is kept within Command, so no data is being extracted or removed, no bandwidth is consumed, and the evidence remains secure.
2. **Export your evidence.** Once your case file is complete, you can export your evidence to a .pdf, CD, DVD, file system of the PC, or the USB port of an NVR. Evidence can also be queued on NVRs for local USB export; evidence can be automatically added to the queue based on the NVR's configuration, or queued up manually from a remote site. No technician required.
3. **Equip investigators with tools to review the evidence.** The exported clips, snapshots and transaction information can be reviewed with the March Networks proprietary Command Player. The Player allows users to authenticate and play back recorded cases exported from Command in the proprietary Command Multimedia Evidence (.cme) file format. This file format ensures that sensitive video evidence cannot be easily shared over the Internet, and provides fast export of large archive files, as well as advanced functionalities such as video de-warping, digital zoom, and support for the Command Case Management.

To ensure that third-party investigators or law enforcement authorities can review evidence copied to external media, the Command Player can be automatically included when evidence files are exported.



Queue audio/video evidence for local export to a USB connected to a March Networks recorder

"The quality of the video and the intuitive software allow our staff to find specific video clips in minutes, rather than hours."

— **Cyril Leeder**
President, Ottawa Senators

Alarms and Events

Spending long periods of time watching video on a monitor can be a serious test of a person's attention span.

Statistics indicate that it takes just 20 minutes, on average, before an operator loses their focus. That's why automated alarms are so important.

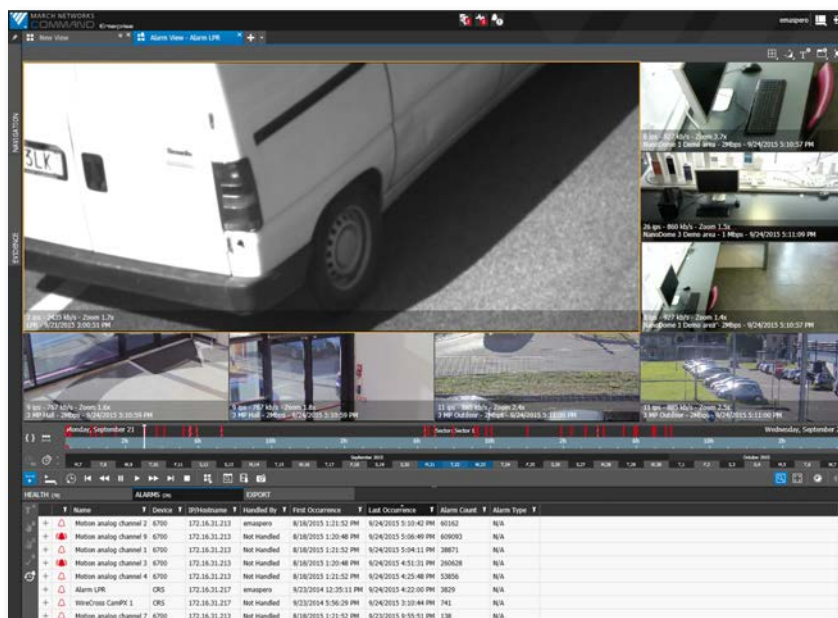
Command offers sophisticated alarm monitoring to help operators respond immediately and more effectively to critical situations. Real-time processing means that several alarms coming in from different recording platforms can be handled simultaneously with the help of pre-programmed actions for video,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

Automated alarm workflow setup

Thirty-five customizable actions allow you to configure an unlimited number of events and associated responses that will automatically provide operators with the correct corporate procedure to follow for a specific event.

You can use alarm inputs and relay outputs displaying in the Command system navigation to manually trigger in response to critical situations, or configure them to initiate events automatically on any other client application.

All alarm activity is recorded in the software's innovative, interactive database, providing your organization with an events record complete with associated video and operator actions.



Command's automated event alarms help operators respond immediately and more effectively to critical situations

Alarm monitoring made easy

Use Command's Alarm Inbox to:

- View live alarm video, archived video, or a combination of both
- Choose from 5 unique sounds for different types of alarms
- Display a visual cue for incoming alarms
- Review details about an alarm's type and severity
- Enter additional details about an alarm — e.g., who was involved, property incidents, and customized notes — all of which will be automatically transferred to the corresponding case file

Get a complete view of your business
through video

Combine Command's reliable video management with the powerful search and investigation tools of March Networks Searchlight™ to target fraud, speed investigation time, oversee operations, improve customer service, and increase profits. Searchlight integrates high-quality surveillance video and business analytics with transaction data from your POS systems, tellers and ATMs, to alert you to instances of potential theft, and reduce investigation time from hours to minutes.

Searchlight for Banking

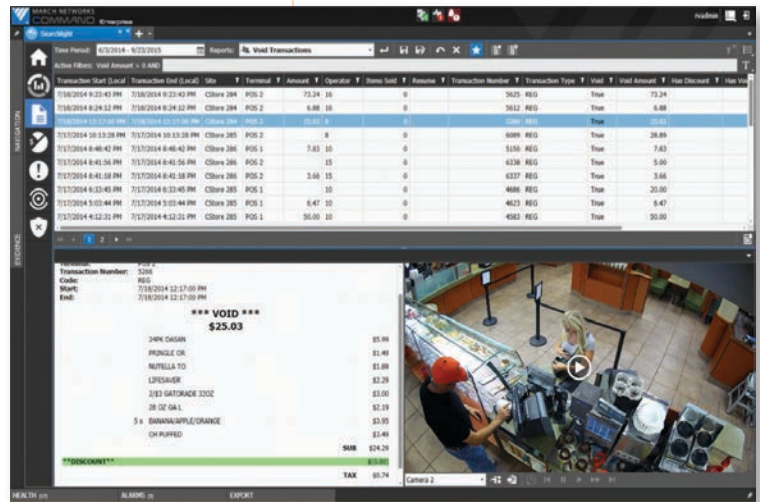
Investigate fraud and improve customer service with Searchlight for Banking

- Detect ATM skimming, cash harvesting, and suspicious withdrawal patterns faster
- Reduce investigation time and costs, and gather stronger case evidence for successful resolution and prosecution
- Uncover customer service metrics and the need for possible staffing changes

Searchlight for Retail

Protect profits and improve store operations with Searchlight for Retail

- Optimize business results and improve customer satisfaction with insights into consumer and employee behavior
- Drive profitability by leveraging analytics on marketing, operations and merchandising
- Minimize loss and shrinkage and reduce investigation times with alerts on suspicious activity



Powerful business analytics via the FLIR Brickstream® 3D Analytics Sensor

- people counting
- queue length monitoring
- service arrivals/service times

Convert your data into meaningful insights that will help you analyze and improve your business.



Interactive Mapping

Command enables operators to easily import graphical maps for any location. These maps serve as virtual replicas of the environments being monitored, and provide convenient zoom functions and navigation.

You can quickly position interactive camera, alarm and auxiliary output icons by dragging and dropping them into your desired location. You can also easily resize the icons to match your map layout and reflect their respective positions and fields-of-view.

Interact with your system resources

When overlaid on site maps, these icons provide you with intuitive system resource management and an outstanding overview of the monitored locations. System resources, including output and alarm controls, multiple camera views, single streams and PTZ controls, can all be accessed from your installation graphical map.

In addition, you can organize the maps in layers and link them together for even faster navigation between different environments, while maintaining their individual interactive resources.

You can organize the maps in layers and link them together for even faster navigation between different environments.



Integrated maps with interactive resource icons provide a convenient graphical environment for monitoring your surveillance infrastructure

Command Solution for Multiple Distributed Sites

