



## Product Overview: D-Series Cameras

# Enterprise Connected Video Security



## OVERVIEW

Verkada offers simplicity and added protection to organizations looking to modernize their approach to physical security. The D-Series cameras—available in indoor and outdoor models—eliminates the need for local servers, firewall equipment and network video recorders (NVRs), reducing complexity and lowering operating costs.

In place of the NVR, each Verkada camera stores video footage on industrial-grade, solid-state storage. This fully encrypted and distributed design offers a number of unique benefits. It improves security by doing away with single points of failure and unencrypted NVRs. It minimizes bandwidth consumption by avoiding continuous video upload. And it greatly reduces the cost and complexity of extending the system—simply install new cameras, with no additional hardware equipment required.

Paired with Verkada's intuitive, web-based software, the D-Series cameras come with powerful capabilities. It's easy to grant, edit and revoke access permissions for any user—by camera, site or organization. Activity-based indexing and intelligent search features automatically identify incidents, reducing hassle and speeding response times.

Verkada even makes it possible to share real-time camera feeds via SMS. And because the cameras are web managed, software updates and upgrades occur automatically. Result: Verkada cameras are always up to date and secure.

## PRODUCT HIGHLIGHTS:

- ✓ Built with wall-to-wall encryption
- ✓ Up to 120 days of retained video
- ✓ Live stream access
- ✓ Works even on LTE
- ✓ Activity-based indexing and search
- ✓ Live video access
- ✓ No extra plugins or additional hardware required



## MODERN, SECURE ARCHITECTURE

Verkada eliminates local servers and NVRs, resulting in a system architecture that is simpler, more secure, and easier to operate and manage. Open ports—which introduce security vulnerabilities in traditional camera systems—are also omitted from the system’s design.

Out of the box, Verkada cameras are automatically self-firewalled. This safety layer prevents unauthenticated computers on the network from sending malware packets to the camera—even in the event that an attacker or virus is present on the same physical network.

Each camera communicates only via encrypted, outbound connections, underpinning an efficient and secure architecture. Video footage that’s stored on each camera is encrypted with public key infrastructure (PKI), which prevents unauthorized access—even in the unlikely event that the camera itself falls into the wrong hands.

Verkada software is developed by U.S.-based engineers. As part of a rigorous software development lifecycle, all firmware is cryptographically signed by Verkada to ensure that only authentic firmware can be loaded onto each camera.

Verkada works exclusively with datacenter operators that meet the highest industry standards for security and privacy, including ISO 27001, SSAE16/ISAE 3402 Type II: SOC 2, and SSAE16/ISAE 3402 Type II: SOC 3 certifications.

IN FOCUS
No NVRs
No insecure ports
Full HTTPs/SSL encryption



Footage fully encrypted and stored in a distributed fashion in on-camera, solid-storage.

Select video metadata and activity-triggered footage made available in Command via encrypted connection.

Video available for secure management and playback by users authorized via two-factor authentication.

## UNMATCHED PICTURE QUALITY—EVEN AT NIGHT

The Verkada D-Series product line includes multiple cameras, which have 3, 5 or 12 MP sensors. In addition to providing a minimum of 50% more detail than 1080 full HD, these cameras utilize a broad color gamut and wide dynamic range (WDR) to maximize clarity throughout the entire image. We also utilize a broad color gamut and wide dynamic range (WDR) to maximize clarity throughout the entire image.

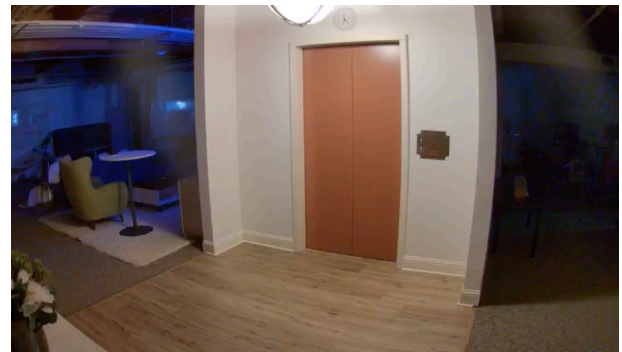
Once connected, the cameras automatically tune image parameters: exposure, iris, shutter speed, brightness, contrast, saturation, sharpening, tint and temperature. These parameters are continually adjusted by Verkada's algorithms, ensuring optimal image clarity. Each camera comes equipped with 7 infrared illuminators and a 1/2.8" Progressive CMOS sensor (1/1.7" for D80), a combination that enables unparalleled low-light camera performance—even in the dark of night.

### IN FOCUS

3, 5 and 12 MP sensor cameras

Wide Dynamic Range (WDR)

Infrared illuminators and outstanding low-light performance



## POWERFUL ACCESS CONTROLS & SECURE REMOTE ACCESS

Command—Verkada’s secure web-based application—empowers administrators to easily and effectively manage access rights for their entire organization. Effortlessly restrict user access to an individual camera or location, and apply user roles to establish an access rights regime that fits your organization’s needs. Need to grant a new regional manager access to five office locations? Verkada makes it straightforward and painless.

This powerful software also makes it easy to securely share video footage with approved third parties, such as law enforcement and legal professionals. You can export footage or easily grant expiration-dated access by inviting these partners to your secure account. With Verkada, you can even remotely share a camera’s live feed in real time via SMS—a potentially life-saving feature during instances of active threats and prolonged security breaches.

IN FOCUS
Granular controls for user, site and organization
Time-restricted access
Detailed access logs
Automatic alerts for QA and tamper detection
User permissions and active directory integration with Microsoft Azure, Google and more



## WON'T KILL YOUR BANDWIDTH

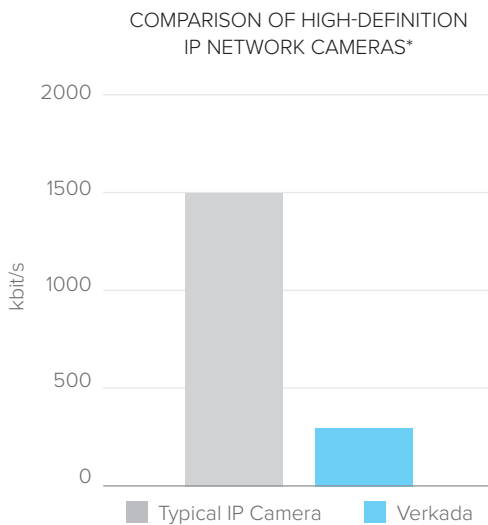
Compared to typical IP security cameras, which upload video footage continuously to the cloud, Verkada cameras have a reduced impact on the local area network. Viewers securely access the video after it is proxied through Verkada Command's cloud service. Multiple simultaneous viewers do not increase local area network (LAN) bandwidth use from the cameras. Result: Verkada cameras work even in areas where limited internet connectivity prevents cameras from other manufacturers from operating.

IN FOCUS

Works even on LTE connections

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Consumes as little as 20 kbit/s per camera in steady state



BANDWIDTH USE FOR VERKADA D30 AND D50 CAMERAS		
OPERATING MODE	UPLINK USAGE	NOTES
Steady state camera upload	50 kbit/s (regular) 20 kbit/s (low bandwidth mode)	Camera uploads only thumbnails and select metadata
View video stream from internet	300 kbit/s (low-res stream) 1000 kbit/s (high-res stream)	User can select low- or high-res stream within Command
View video stream from the LAN	0 kbit/s	Contact Verkada to enable local viewing

\*Actual performance may vary; comparison is between network cameras streaming 100% of footage to the cloud to Verkada cameras with split-path hybrid approach between on-camera solid-state storage and cloud. [Read report](#)

## BUILT TOUGH, WITH BACKUP (FOR THE BACKUP)

Engineered with cutting-edge technology and industrial-grade materials, Verkada cameras are designed to perform everywhere—and built to last. All D-Series cameras meet IK08 or IK10 certification requirements for vandal resistance. The D50 and D80 also have weather-proof ratings (IP67 and IP66, respectively). Uptime and reliability are ensured with quality assurance (QA) alerts and tamper detection notifications, which are generated automatically by Verkada's software.

To maintain the most secure and reliable deployments, Verkada includes redundant systems throughout each camera's design. In the unlikely case that a scheduled automatic firmware update fails, for instance, two redundant firmware partitions keep the camera secure and operational. To enable optimal retention and an excellent user experience for administrators, Verkada cameras capture video at two different bitrates—high-definition for retention, and a bitrate optimized for faster applications within Verkada Command. On-camera footage may optionally be fully backed up to encrypted cloud storage.

Finally, thanks to its on-camera storage, the Verkada camera will continue to record throughout a network outage. Paired with a continuous power solution, Verkada cameras will continue to reliably record even in the event of grid-power loss.

### IN FOCUS

2 redundant, failsafe firmware partitions

Camera records even in the event of network outage

Optional cloud-backup storage available for added redundancy



## VIDEO ANALYTICS & ACTIVITY-BASED INDEXING

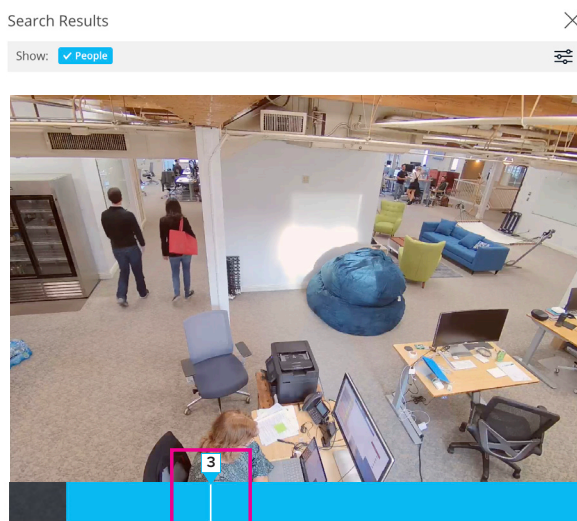
With intuitively-designed, activity-based indexing, Verkada's software automatically scans footage. It also logs and charts periods during which specific motion is detected. Using the web interface, it's easy to search a camera's historical footage by selecting areas of interest within the frame. Verkada then systematically surfaces all footage in video clips where motion has occurred in the selected area grid. Once you identify the footage you're looking for, you can easily export the clip as an MP4 or share the link via SMS or email.

IN FOCUS
Intelligent activity-based indexing
Activity search
Map view for easy management
Detection and counting of people and vehicles

## UNLOCKING THE POTENTIAL OF COMPUTER VISION

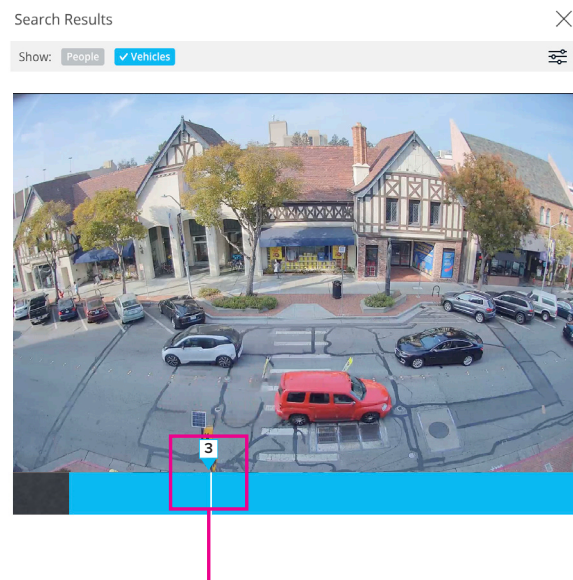
Verkada's cameras are constantly evolving. With object detection, you can filter event-motion footage by people or vehicle activity to accelerate incident resolution. Valuable analytics on the number of people and vehicles are available at any time. Cameras also optimize bandwidth usage with people and vehicle activity in mind. Finally, notifications can be configured to alert you when people or vehicles are detected, limiting false positive alerts from non-human activity.

### People Detection



Filter playback and alerts by people and vehicle activity.

### Vehicle Detection



Count the number of people and vehicles in motion in any given frame.

## ALWAYS UP TO DATE, ALWAYS AHEAD

Say goodbye to legacy systems beset by outdated firmware and security vulnerabilities. Verkada cameras automatically receive software updates and upgrades. These updates—which include the latest security enhancements as well as new features and functionality—are made available to all Verkada software license holders via periodic scheduled maintenance windows.

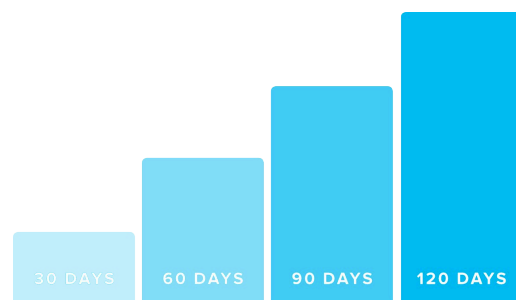
Verkada's secure, automated approach ensures seamless delivery of updates without interrupting camera operability. So it's easy for administrators to stay ahead of emerging security threats, while gaining access to all the latest features and industry-leading security camera capabilities.

IN FOCUS
Automated firmware and software updates
Access to all new features and functionality
No more delayed security patch updates

## OPTIMAL VIDEO RETENTION—30 DAYS & COUNTING...

IN FOCUS
Storage for up to 120 days of continuous recording
Data at rest encrypted with 128-bit AES encryption
Available options to support a variety of retention needs

Verkada applies a tiered, differentiated approach to meet your organization's video retention needs without hindering your local area network. Select data is encrypted, uploaded and made readily accessible to authorized users within Command, Verkada's secure web application. All video footage is stored on the camera, which has enough storage for up to 120 days of continuous recording.





# SECURITY CAMERA SYSTEMS FOR THE MODERN ENTERPRISE

Built to evolve and outperform, Verkada’s all-in-one systems are designed to break free from the constraints of conventional solutions. Simple to deploy and maintain, these cameras do not require NVRs, DVRs or on-premises servers. Additionally, there’s no need to configure VPNs, update firewalls or reset factory-default passwords. Verkada cameras work effortlessly from the moment they leave the box.

IN FOCUS
Engineered with industrial-grade materials
Unrivaled low-light performance
Retained encrypted video in unit
Tamper detection and alerts



## D30

Indoor Dome

DESIGNED TO WITHSTAND HIGH-TRAFFIC, INDOOR AREAS.



## D40

Mini Indoor Dome

ENHANCED RESOLUTION AND A SMALLER FORM FACTOR.



## D50

Outdoor Dome

WEATHER AND TAMPER RESISTANT IN THE ROUGHEST ENVIRONMENTS.



## D80

Fisheye Camera

GET A PANAROMIC VIEW OF YOUR INDOOR OR OUTDOOR ENVIRONMENT.

4.2" x 5.7"  
DIMENSIONS

2048 x 1536  
MAX RESOLUTION

51° ~ 113°  
DIAGONAL FIELD OF VIEW

98ft.  
IR ILLUMINATORS

IK08  
VANDAL RESISTANCE

3.94" x 2.48"  
DIMENSIONS

2688 x 1944  
MAX RESOLUTION

128°  
DIAGONAL FIELD OF VIEW

49ft.  
IR ILLUMINATORS

IK08  
VANDAL RESISTANCE

6.1" x 6.1"  
DIMENSIONS

2048 x 1536  
MAX RESOLUTION

51° ~ 113°  
DIAGONAL FIELD OF VIEW

98ft.  
IR ILLUMINATORS

IK10  
VANDAL RESISTANCE

6.1" x 2.67"  
DIMENSIONS

4000 x 3000  
MAX RESOLUTION

180°  
DIAGONAL FIELD OF VIEW

65ft.  
IR ILLUMINATORS

IK10  
VANDAL RESISTANCE



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# About Verkada

Verkada builds enterprise security cameras that combine cutting-edge camera technology with intelligent, cloud-based software—all in a secure, user-friendly solution. Unlike legacy systems, Verkada's technology offers the protection of full encryption and is easy to install, configure, upgrade and expand.

