Impeccable Detail at Distance and in Any Conditions



Overview

Verkada's Bullet Series is designed to withstand harsh conditions and its visible form factor helps deter potential threats. There are two CB52 models: the CB52-E, which has a wide-angle field of view and the CB52-TE, which has a powerful zoom. Additionally, the cameras feature powerful long-range IR LEDs that enable them to produce clear images even at a distance of up to 50 meters at anytime of day.

Bullet cameras are designed for use in exposed outdoor environments. They are constructed with a robust aluminum unibody that encloses hermetically sealed internal electrical components. The camera's design includes a built-in pigtail connector that allows for easy insertion of an ethernet cable without needing to remove the outer body. The external housing offers IP67 protection against dust and heavy rain and IK10 protection against damage from vandals, hail and flying debris.

All 2nd generation Bullet cameras are outfitted with a cutting-edge system on a chip (SOC) which features a dedicated computer vision co-processor. Powered by Ambarella CV25 chipsets, these cameras can accurately capture license plates from vehicles traveling at speeds of up to 80mph / 128kph and do so simultaneously across three lanes. The Bullet Series is the single line of Verkada cameras that supports our License Plate Recognition feature, enabling users to capture and search for specific vehicles by their license plate numbers.

In addition, the Bullet Series has powerful edge processing capabilities that enable advanced computer vision features, including Verkada's People and Vehicle Analytics. These cameras also offer standard capabilities such as data encryption, onboard storage and motion detection, which help organizations rapidly scale their security coverage and enhance situational awareness across multiple locations.

Key features

Enterprise-grade performance

- High-resolution sensors up to 5MP
- License Plate Recognition available only on Bullet cameras
- Advanced edge processing for motion, people and vehicle analytics

Storage and processing

- 256GB-2TB of onboard storage
- Up to 365 days of retention in standard quality
- Low-bandwidth impact, only using 20-50 kbps per camera at rest

Certifications

- IP67 weather rating
- IK10 impact rating
- NDAA compliant

Verkada's hybrid cloud architecture



No NVR or DVRs
Industrial-grade onboard storage saves up to 365 days of continuous video[1]

Easy to scale
Bandwidth friendly and supports thousands of cameras across unlimited locations

Centralized management
Modern platform enables secure access on any device from anywhere in the world

The Reliability of Onboard Storage, With the Accessibility of the Cloud

Simple to install

- No NVRs, DVRs, or servers—just a PoE connection
- Cameras come online and configure in minutes
- No added software or complexities like port forwarding

Easy to use

- Centralized management for secure remote access on any device nearly anywhere
- No training required to access footage and features
- Find, download and share footage from any device

Advantages of cloud-managed solution

- Real-time alerts if cameras fall offline
- SAML-based integration with single-sign on (SSO) solutions
- Continuous updates with new AI features
- Instantly share live footage via SMS and email
- Live, proactive alerting based on unusual activity

Ready for scale

- Bandwidth-friendly, operating at just 20-50 kbps
- Scale to thousands of cameras per location
- No added equipment needed to support additional cameras

No hidden costs

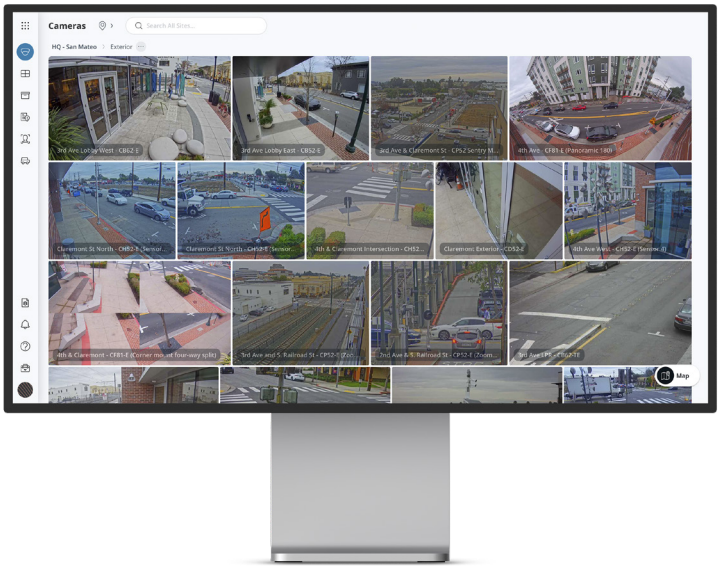
- Hardware includes a 10-year warranty
- Automatic firmware updates keep systems secure
- New features and enhancements are added at no additional costs



1. All our cameras record in "adaptive quality," capturing both standard and high quality streams. Standard quality (SQ) video is stored up to the amount of retention specified by the customer. The amount of high quality video stored on the camera will depend on the amount of motion detected by the camera over time. To learn more, visit our website: https://docs.verkada.com/docs/adaptive-quality-recording-whitepaper.pdf

Verkada Command overview

All-in-one Cloud-based Management Software for Verkada Security Cameras



Command, Verkada's cloud-based management software, is designed to deliver simple access and management for all cameras and users across all sites from virtually anywhere in the world. From Command, users can set up new cameras, create sites, manage settings, access live and archived footage, manage users and access the advanced features powered by Verkada's edge-based analytics.

Manage from anywhere

- Remotely access footage and manage sites from any supported browser or device
- Native apps for iOS, Android and Verkada's VX52 Viewing Station
- Receive alerts for offline cameras, tampering and motion detection

Scale with simplicity

- Add more devices and sites without complicating the user experience
- Leverage granular roles and permissions to manage users at scale
- Bring cameras online without 3rd party plugins, thick clients or downloads

Quickly detect and respond to threats

- Stay informed with customizable, intelligent alerts
- Speed up investigations with intelligent people and face detection
- Search and filter to find vehicles of interest and detected license plates

Effortlessly archive and share

- Command licenses include unlimited cloud archiving and 30-days of cloud backup
- Easily export any footage in MP4 format and allow recipients to verify its authenticity
- Share Live Links and floorplans with first responders

Stay secure from the ground up

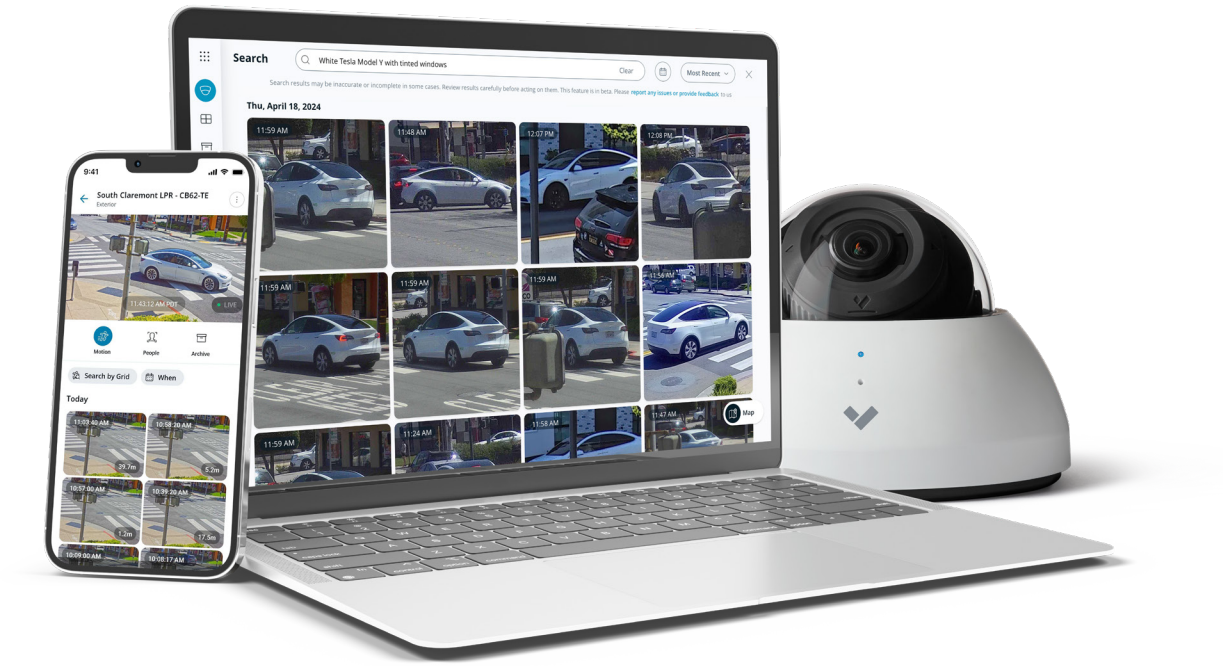
- Stay secure with data encrypted in transit (AES 128) and at rest (AES 256)
- Access cameras securely without port-forwarding, VPNs, or complicated configurations
- Receive automatic firmware updates to stay a step ahead of emerging threats

Streamline incident management

- Consolidate relevant footage to easily review and annotate
- Share incidents while controlling permissions and retaining audit logs
- Export incidents in a zip file and auto-generate incident reports

Verkada's AI-Powered Search[1]

Use Natural Language to Conduct Investigations Directly Relevant to Your Organization



Verkada's latest AI-powered search in Command gives users the ability to search for a near-limitless number of attributes of people and vehicles across their organization. With AI-powered search, users can leverage their own words in a freeform search bar to describe a person or vehicle of interest and conduct highly-granular investigations as a result.

Tap into AI to unlock nearly unlimited search criteria

- A high-performance text-to-image open source AI model and our own in-house enhancements turn the Command search bar into a blank canvas for freeform text queries–allowing users to conduct investigations into specific, granular attributes of people and vehicles.

Structure detailed queries beyond the norm

- Search for specific attributes like articles of clothing, apparel, brands, and more, to drill-down into more granular attributes of people that can make investigations more accurate and streamlined.
- Identify vehicles of interest with detailed criteria like tinted windows, spoilers, bumper stickers, text (like "UPS truck" or "San Mateo School Bus") and more, to quickly detect vehicles pertinent to one's investigation.

Conduct investigations that address different industry-specific use cases by time and location[2]

- Better investigate slip-and-fall cases, shoplifting, break-ins, occupational hazards, workplace safety compliance and more, using freeform queries.
- Organize searches by time and location for added specificity and more relevant insights of people and vehicles.

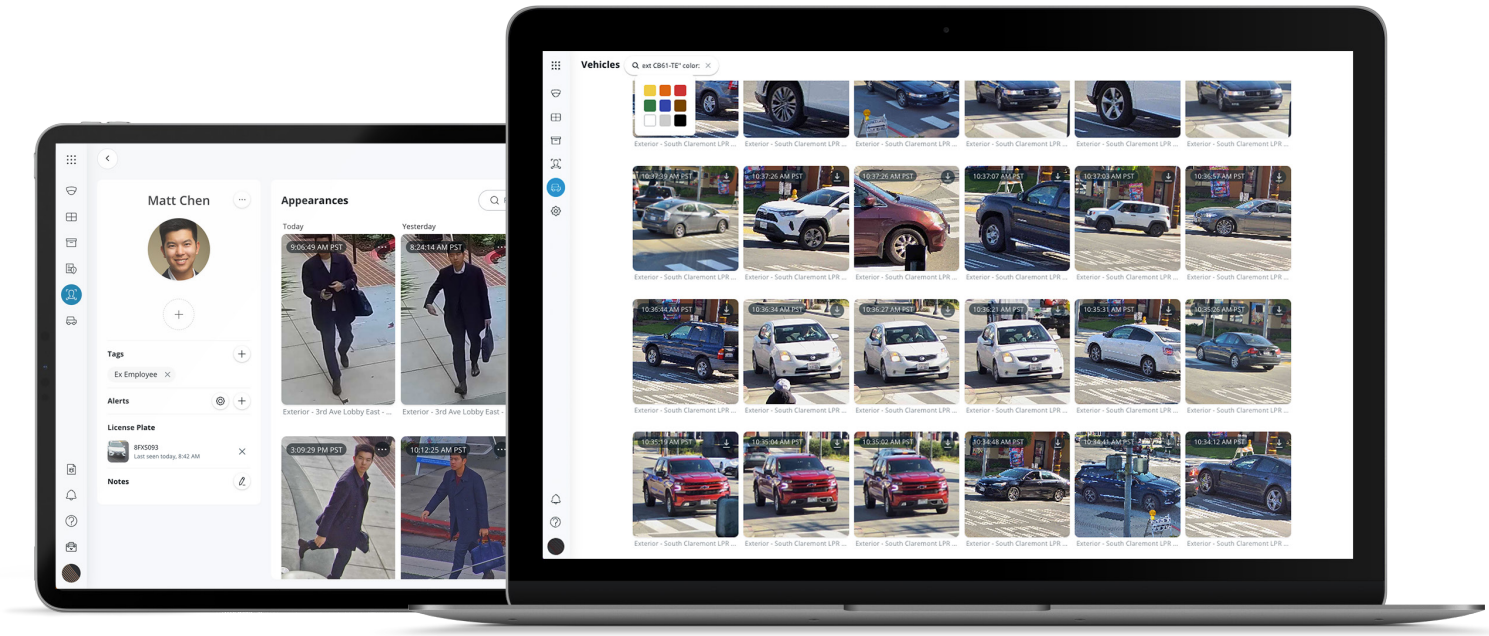
Take actionable steps once the subject or vehicle of concern is identified

- After identifying a specific person or vehicle, archive the relevant footage and create an incident report.
- Sift through results of people, download their image to add them as a POI or search their face across all of your organization's cameras for exhaustive analysis of people under investigation.

1. AI-powered search is currently supported in English only.
2. Check out our User Guide for example queries and methods for constructing your own queries relevant to your organization's requirements.

Verkada's People and Vehicle Analytics

Simplify Investigations with Intelligent People, Face and Vehicle Detection



People and Vehicle Analytics combine intelligent edge-based video processing with computer vision to give users high-quality, cloud-based images of all individuals and vehicles identified in the scene. Using these analytics, customers can filter for specific attributes of people or vehicles (like clothing color or vehicle type) on a camera-by-camera basis.

Bring Intelligence to Investigations

Face search

- Quickly search for matching people by selecting an existing face from your organization or by uploading an image

Person and vehicle history

- Browse through high-resolution snapshots of people and vehicles detected
- Save snapshots or easily access associated full-res video
- Search for matched people and vehicles across your entire organization with cross-camera search

Attribute filters

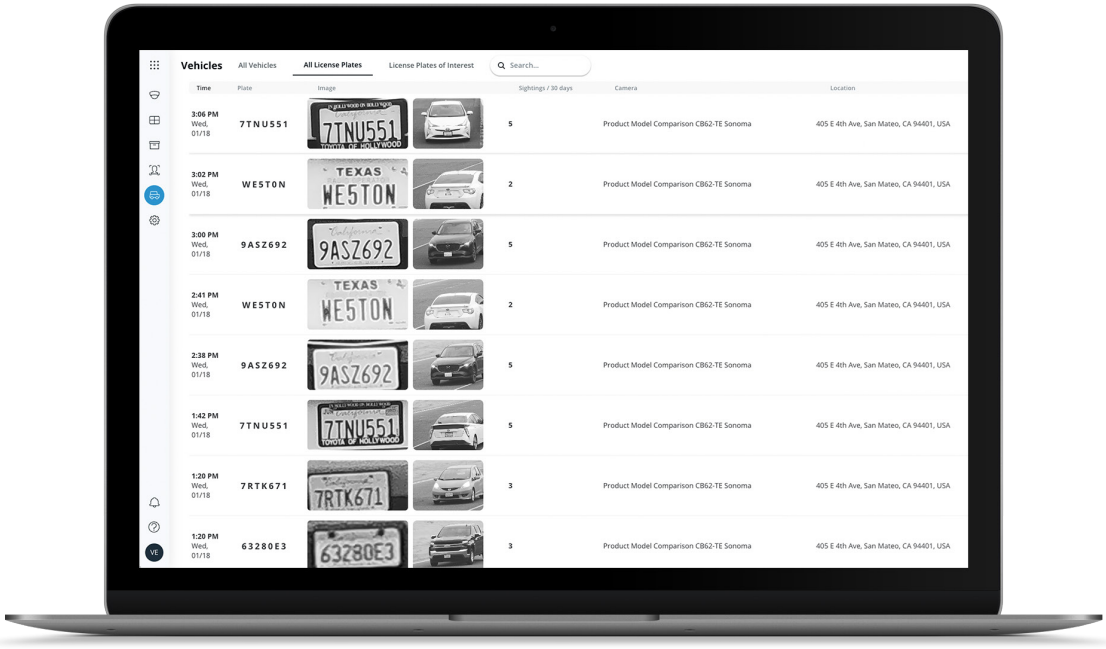
- Drill-down into specific cameras to filter for people and vehicles based on a range of attributes, including clothing or vehicle color, gender appearance, vehicle body type and facial matches

Person and License Plate of Interest notifications

- Create a Person of Interest using an uploaded photo or existing face in Command
- Capture a license plate of interest with our CB52-TE or CB62-TE Bullet cameras
- Set up proactive SMS/email alerts for when a matching face is detected by a camera
- Link License Plates of Interest to a Person of Interest

License Plate Recognition

Enhanced Vehicle Insights with Verkada's Powerful LPR Camera Solution



Verkada's License Plate Recognition (LPR) solution offers intelligent software that allows organizations to monitor license plates in real-time and streamline vehicle investigations. The solution uses Verkada's edge-based processing and computer vision technology to capture license plate images and provide users with a readable and searchable list of license plate numbers. These captures are connected to live or recorded video for added context.

Automatic License Plate Detection

Track fast-moving vehicles and broaden your coverage

Capture license plate characters at speeds of up to 80 mph / 128 kph, cover up to three lanes and recognize international license plates – all with high precision and low latency*

Maximize your video security capabilities with our LPR cameras

Retain key camera functionality in LPR mode. Easily conduct motion searches, review recorded history and archive footage

Streamline investigations with our user-friendly LPR system

Improve security and control access by adding custom descriptions to each license plate

Find License Plates - even with incorrect or incomplete input

Get more comprehensive search results with our system that provides approximate license plate matches even if the inputted characters are incorrect or if the system is unable to capture all characters

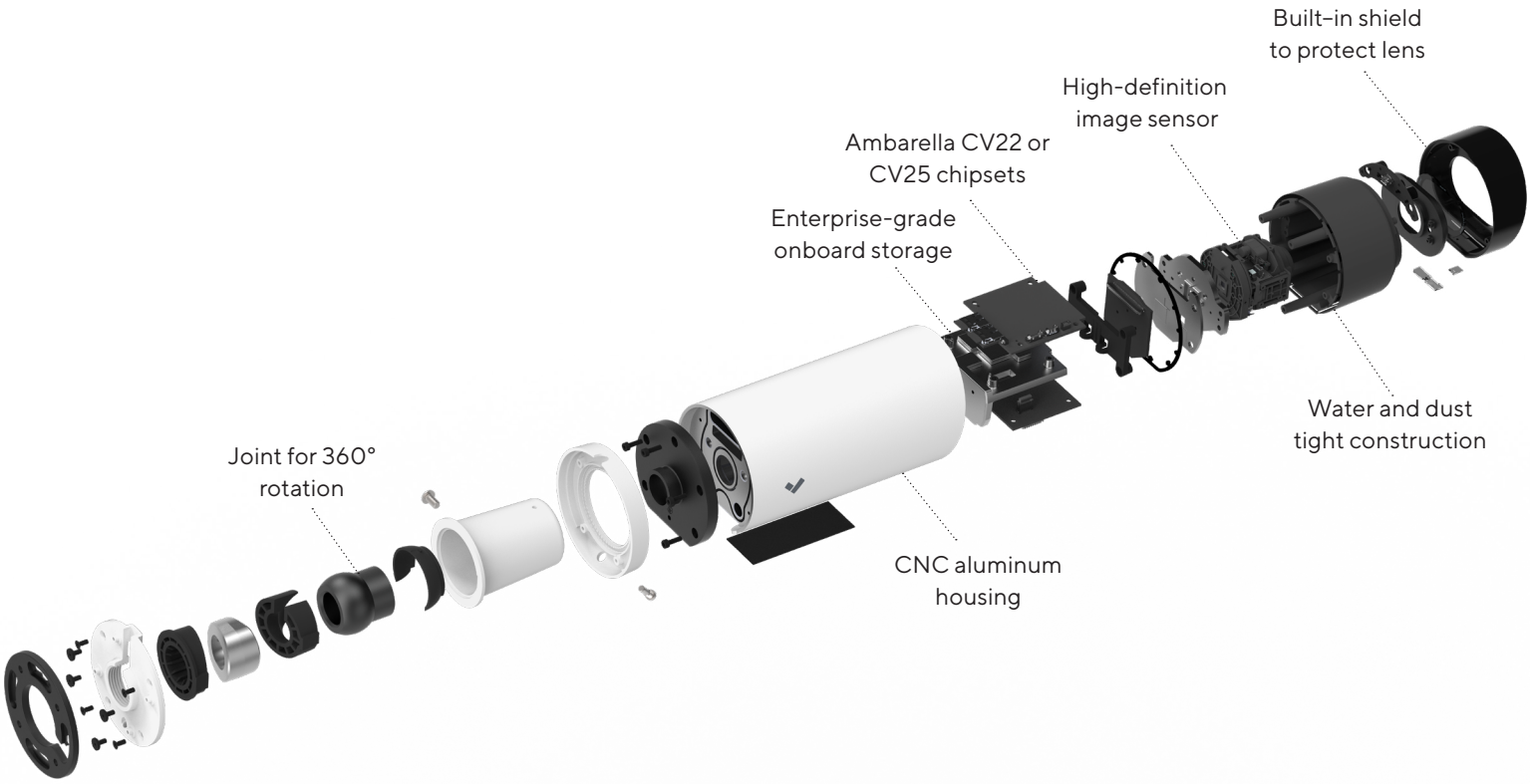
Receive custom License Plate of Interest Alerts

Send alerts to specific individuals or entire teams when designated license plates are detected across your LPR-enabled cameras

*For best results, install cameras as outlined in the User Guide for License Plate Recognition.

Verkada's Bullet Series hardware

Designed and Constructed With the Highest Level of Precision and Quality



Protective housing

- Durable CNC aluminum housing able to withstand impacts up to IK10 rating
- Water and dust tight construction with IP67 rating to protect the lens assembly
- Built-in shield to protect lens from obstruction

High-performance hardware

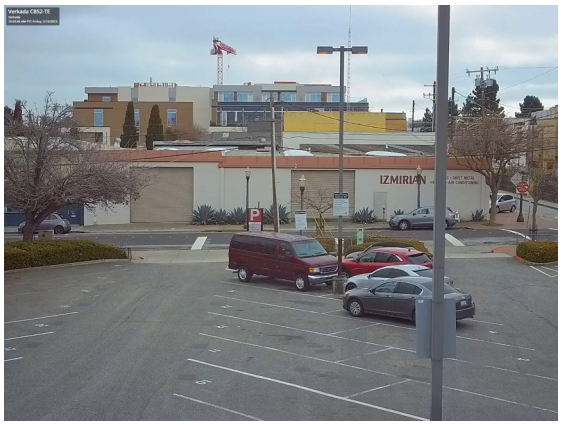
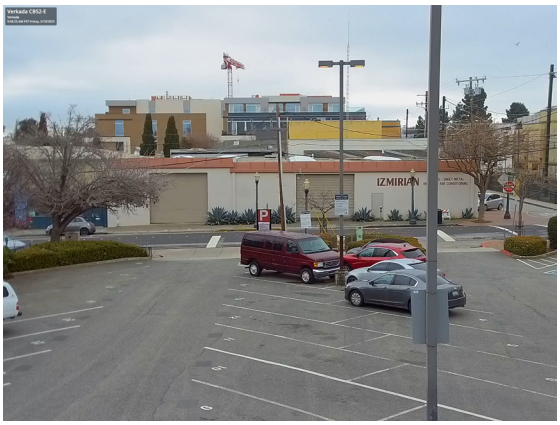
- High-definition image sensor with 5MP ultra-HD resolution and 3x optical zoom
- Advanced processing capabilities with Ambarella CV22 or CV25 chipsets

System functionality

- Enterprise-grade onboard storage capacity for up to 365 days of standard quality footage
- Flexible installation with a rotating joint for 360° rotation

Comparison: wide angle and telephoto

Lens Options for the Bullet Series

	Wide Angle	Telephoto
Focal Length	2.8mm–8mm	8mm–20mm
Image at No Zoom	 CB52-E at 2.8mm	 CB52-TE at 8mm
Image at Full Zoom	 CB52-E at 8mm	 CB52-TE at 20mm

Bullet Series
Tech Specs



CB52-E

Camera features

Image Sensor	1 / 2.8" Progressive CMOS	**Shutter Speed**	1 / 30 sec. to 1 / 10,000 sec.
Sensor Resolution[1]	5MP (2688 x 1944)	**Day/Night**	IR-cut filter for day and night function
Lens Type	Varifocal; motorized zoom	**IR Cut Filter**	Yes
Focal Length	2.8mm–8mm	**IR Range**	30m / 98ft
Aperture	F1.3–F2.4	**Minimum Illumination**	0.009 lux @ F1.9 (Color) 0 lux with IR Illuminators on
Iris	P-Iris	**Onboard Storage**	Capacity: From 256GB to 2TB Card: MicroSD, SDXC
Field of View (after LDC[2]**)**	Horizontal: 41° – 99° (39° – 95°) Vertical: 30° – 74° (30° – 74°) Diagonal: 50° – 125° (48° – 110°)	**CPU**	Ambarella CV25S88
Camera Movement	Tilt: 0° to 90° Pan: 360° Rotation: 360°		

Standard video settings

Compression	H.265, H.264	**Historical Video Settings**	Adaptive quality[1]
Frame Rate[3]	24fps	**Live Streaming Settings**	High quality (HQ): Up to 3,000 Kbps (default) Standard quality (SQ): Up to 600 Kbps

Standard audio settings

Audio	Not supported

Power and network

Power Input[4]	With IR: IEEE 802.3at Type 2 PoE+ Without IR: IEEE 802.3af Type 1 PoE Extended temperature range: IEEE 802.3at Type 2 PoE+	**Connectivity**	RJ-45 cable connector for network/PoE connection; 10/100 Mbps
Power Consumption[4]	With IR: 37-57V, 0.38-0.25A, 14W Without IR: 37-57V, 0.09-0.06A, 3.46W Extended temperature range: 37-57V, 0.61-0.37A, 22.57W	**RTSP**	RTSP 1.0 RFC 2326 Max concurrent streams: 2 Audio support: No

1. All our cameras record in "adaptive quality," capturing both standard (SQ) and high quality (HQ) streams. SQ video is stored up to the amount of retention specified by the customer. The amount of HQ video stored on the camera will depend on the amount of motion detected by the camera over time. To learn more, visit our website: https://docs.verkada.com/docs/adaptive-quality-recording-whitepaper.pdf
2. Lens Distortion Correction (LDC) crops the sensor field of view to deliver a rectified, undistorted output image.
3. Frame rate can be adjusted by support.
4. Extended temperature range includes operating temperatures below -8.5°C / 16.7°F and assumes IR will be enabled.

Bullet Series
Tech Specs



CB52-E

General

Operating Temperature	-40°C to 50°C / -40°F to 122°F	**LED Indicator**	System power and status indicator
Humidity	0 to 90%	**Warranty**	10 Years
Certifications	FCC, ICES, CE, UKCA, RCM, VCCI, BIS, UL/IEC62368-1, IP67 weather rating, IK10 impact rating	**Included Accessories**	4x M4x8 screws, 4x TP4x30 mount screws, mount plate, junction box adapter, junction box cover, T25 hand tool

Mechanical

Weight	Camera: 1464g / 51.6oz Mount plate: 33g / 1.16oz	**Body**	Aluminum
Dimensions	Ø: 85mm / 3.35in L: 254mm / 10in		

Software capabilities

Alerts	Camera status, motion detection, people detection, vehicle detection, Person of Interest detection, crowd detection, line-crossing detection, loitering detection	**Streaming and Storage**	Cloud backup, configurable retention days, selectable storage location, low bandwidth mode, timelapse, RTSP
People Analytics	People search, attribute search, face search, Occupancy Trends, motion search, trajectory analysis, selective face blurring, AI-powered search[5]	**Sharing and Privacy**	Live Links, live face blur, privacy regions, audit log
Vehicle Analytics	Vehicle search, attribute search, motion search, trajectory analysis, Occupancy Trends, AI-powered search[5]	**License Plate Recognition**	License Plate of Interest alerts, license plate indexing

5. AI-powered search is currently supported in English only.

Bullet Series
Tech Specs



CB52-TE

Camera features

Image Sensor	1 / 2.8" Progressive CMOS	**Shutter Speed**	1 / 30 sec. to 1 / 10,000 sec.
Sensor Resolution[1]	5MP (2688 x 1944)	**Day/Night**	IR-cut filter for day and night function
Lens Type	Varifocal; motorized zoom	**IR Cut Filter**	Yes
Focal Length	8mm–20mm	**IR Range**	50m / 164ft
Aperture	F1.5–F2.8	**Minimum Illumination**	0.009 lux @ F1.9 (Color) 0 lux with IR Illuminators on
Iris	P-Iris	**Onboard Storage**	Capacity: From 256GB to 2TB Card: MicroSD, SDXC
Field of View (after LDC[2]**)**	Horizontal: 16° – 38° (16° – 37°) Vertical: 12° – 28° (12° – 27°) Diagonal: 19° – 48° (19° – 44°)	**CPU**	Ambarella CV25S88
Camera Movement	Tilt: 0° to 90° Pan: 360° Rotation: 360°		

Standard video settings

Compression	H.265, H.264	**Historical Video Settings**	Adaptive quality[1]
Frame Rate[3]	24fps	**Live Streaming Settings**	High quality (HQ): Up to 3,000 Kbps (default) Standard quality (SQ): Up to 600 Kbps

Standard audio settings

Audio	Not supported

Power and network

Power Input[4]	With IR: IEEE 802.3at Type 2 PoE+ Without IR: IEEE 802.3af Type 1 PoE Extended temperature range: IEEE 802.3at Type 2 PoE+	**Connectivity**	RJ-45 cable connector for network/PoE connection; 10/100 Mbps
Power Consumption[4]	With IR: 37-57V, 0.38-0.25A, 14W Without IR: 37-57V, 0.09-0.06A, 3.46W Extended temperature range: 37-57V, 0.61-0.37A, 22.57W	**RTSP**	RTSP 1.0 RFC 2326 Max concurrent streams: 2 Audio support: No

1. All our cameras record in "adaptive quality," capturing both standard (SQ) and high quality (HQ) streams. SQ video is stored up to the amount of retention specified by the customer. The amount of HQ video stored on the camera will depend on the amount of motion detected by the camera over time. To learn more, visit our website: https://docs.verkada.com/docs/adaptive-quality-recording-whitepaper.pdf
2. Lens Distortion Correction (LDC) crops the sensor field of view to deliver a rectified, undistorted output image.
3. Frame rate can be adjusted by support.
4. Extended temperature range includes operating temperatures below -8.5°C / 16.7°F and assumes IR will be enabled.

Bullet Series
Tech Specs



CB52-TE

General

Operating Temperature	-40°C to 50°C / -40°F to 122°F	**LED Indicator**	System power and status indicator
Humidity	0 to 90%	**Warranty**	10 Years
Certifications	FCC, ICES, CE, UKCA, RCM, VCCI, BIS, UL/IEC62368-1, IP67 weather rating, IK10 impact rating	**Included Accessories**	4x M4x8 screws, 4x TP4x30 mount screws, mount plate, junction box adapter, junction box cover, T25 hand tool

Mechanical

Weight	Camera: 1478g / 52.1oz Mount plate: 33g / 1.16oz	**Body**	Aluminum
Dimensions	Ø: 85mm / 3.35in L: 254mm / 10in		

Software capabilities

Alerts	Camera status, motion detection, people detection, vehicle detection, Person of Interest detection, crowd detection, line-crossing detection, loitering detection	**Streaming and Storage**	Cloud backup, configurable retention days, selectable storage location, low bandwidth mode, timelapse, RTSP
People Analytics	People search, attribute search, face search, Occupancy Trends, motion search, trajectory analysis, selective face blurring, AI-powered search[5]	**Sharing and Privacy**	Live Links, live face blur, privacy regions, audit log
Vehicle Analytics	Vehicle search, attribute search, motion search, trajectory analysis, Occupancy Trends, AI-powered search[5]	**License Plate Recognition**	License Plate of Interest alerts, license plate indexing

5. AI-powered search is currently supported in English only.



Professional video monitoring

Stop Crimes in Progress

Verkada's professional video monitoring solution enables organizations to detect and respond to threats as they happen, using only their cameras.

Turn your cameras into a monitored alarm system

Professional video monitoring allows organizations to turn their Verkada cameras into a complete, monitored alarm solution - no extra hardware required. Simply select which cameras should be monitored, set an arm/disarm schedule and choose how monitoring agents should respond to a threat, such as remote talk down or notifying police.

How it works

Detect unusual activity

- Choose which cameras should be monitored and when. An alarm is triggered if a person is detected while the system is armed.
- Other Verkada devices, including intrusion sensors, access control and environmental sensors, can also be configured as alarm triggers.

Assess the threat

- Monitoring agents immediately review camera footage to determine if a person is actually present.*
- Video-verification helps to ensure priority police response and screens out false alarms.

Take action

- If there is a person present, the monitoring agent will immediately notify your call list.
- Agents can also request emergency dispatch or talk down to intruders through an on-site speaker.
- If there is not a person present, the agent will dismiss the incident.

Key benefits

Detect intruders before they enter your building

Protect your perimeter with cameras that can detect intruders the minute they set foot on your property.

No alarm panel or sensors needed

Use cameras as intrusion sensors and get all the benefits of a monitored alarm system without any extra hardware.

Cut back on expensive in-person guards

Cameras detect intruders and agents can take action, reducing the need for live guards patrolling or watching cameras.

Help get priority police response

Video-verified alarms help the police know that they should respond quickly and helps you avoid false alarm fines.

Take action against intruders immediately

In addition to notifying law enforcement, our agents can talk down to intruders through a powerful speaker to scare them off.

*Professional monitoring with video verification is included in the LIC-BA Standard Alarm License or the LIC-BV Premium Alarm License. One License is required per location, and includes up to 50 monitored cameras. Monitoring is provided by fully redundant, US-based, UL-listed central monitoring stations with Five Diamond Certification from The Monitoring Association. Certified monitoring centers are also available in Canada, the UK and Australia.

Ordering Information

Bullet Series pricing[2]

Model Number	MP[1]	WDR	Lens	IR Range	Onboard Storage	Maximum SQ Onboard Retention[1]	People/ Vehicle Analytics	Cost (MSRP) USD
CB52-256E-HW	5.0MP	✓	Zoom	30m / 98ft	256GB	30 Days	✓	$1,399
CB52-512E-HW	5.0MP	✓	Zoom	30m / 98ft	512GB	60 Days	✓	$1,799
CB52-768E-HW	5.0MP	✓	Zoom	30m / 98ft	768GB	90 Days	✓	$2,199
CB52-2TBE-HW	5.0MP	✓	Zoom	30m / 98ft	2TB	365 Days	✓	$3,899
CB52-256TE-HW	5.0MP	✓	Zoom	50m / 164ft	256GB	30 Days	✓	$1,499
CB52-512TE-HW	5.0MP	✓	Zoom	50m / 164ft	512GB	60 Days	✓	$1,899
CB52-768TE-HW	5.0MP	✓	Zoom	50m / 164ft	768GB	90 Days	✓	$2,299
CB52-2TBTE-HW	5.0MP	✓	Zoom	50m / 164ft	2TB	365 Days	✓	$3,999

1. All our cameras record in "adaptive quality," capturing both standard and high quality streams. Standard quality (SQ) video is stored up to the amount of retention specified by the customer. The amount of high quality video stored on the camera will depend on the amount of motion detected by the camera over time. To learn more, visit our website: https://docs.verkada.com/docs/adaptive-quality-recording-whitepaper.pdf

2.The CB52-E, CB52-TE, CB62-E and CB62-TE are also available in FIPS-validated models. See https://docs.verkada.com/docs/video-security-fips-series-overview.pdf for details.

Ordering Information

Video Security Cloud License pricing

Model Number	Description	Cost (MSRP) USD
LIC-CAM-1Y	1-Year Camera License	$199
LIC-CAM-3Y	3-Year Camera License	$549
LIC-CAM-5Y	5-Year Camera License	$899
LIC-CAM-10Y	10-Year Camera License	$1,799

Accessories pricing

ACC-MNT-9	Pole Mount, 2nd Generation	$209
ACC-MNT-10	Corner Mount	$199
ACC-MNT-SJBOX-1	Square Junction Box Mount	$89
INJ-POE-PLUS	PoE Plus (802.3at) Injector, GigE	$129

Viewing Station pricing

VX52-HW	VX52 Viewing Station	$499
LIC-VX-1Y	1-Year Viewing Station License	$499
LIC-VX-3Y	3-Year Viewing Station License	$1,299
LIC-VX-5Y	5-Year Viewing Station License	$1,999
LIC-VX-10Y	10-Year Viewing Station License	$3,999