

## CB52-E Bullet Camera

Prominent 5MP coverage  
in outdoor environments



### Overview

The CB52-E Bullet Camera features a 1 / 2.8" progressive CMOS image sensor, varifocal lens with 2.86x optical zoom, and IR LEDs with 98 feet / 30 meters of range for detailed 5MP coverage in a variety of lighting and weather conditions. The CB52-E features an onboard CV25S Ambarella processor for advanced, privacy-sensitive analytics like AI-powered search, [occupancy trends](#), line crossing, loitering, and person of interest (POI) alerts. In addition, the CB52-E supports [license plate recognition](#) (LPR), enabling the device to capture license plates from vehicles traveling at speeds up to 80 mph / 128 kph across as many as three lanes of traffic. With its highly-visible form factor, the CB52-E also serves as a deterrent to potential threats. Its LPR capabilities can also be used to grant access at vehicle gates, providing seamless entry to known vehicles while keeping out unauthorized ones.

The CB52-E is constructed with a robust aluminum unibody and withstands extreme conditions with an IP67 weather rating and IK10 impact rating. The camera's design includes a built-in pigtail connector that expedites PoE cabling by removing the need to disassemble the camera itself. Installation and setup are easy to track using the LED status indicator.

### Key features

#### Excellent image quality

- 1 / 2.8" progressive CMOS image sensor
- 5MP resolution
- Varifocal lens with 2.86x optical zoom
- 98 feet / 30 meters of IR range for optimal nighttime viewing

#### Advanced analytics

- Onboard CV25S Ambarella processor enables people and vehicle analytics
- License plate recognition capabilities capture license plates at speeds up to 80 mph / 128 kph
- AI-powered search and AI-powered alerts
- Occupancy trends for operational insights

#### Hybrid cloud architecture

- Onboard storage and processing for reduced bandwidth consumption and coverage at scale
- 30 - 365 days (256GB - 2TB) of onboard storage
- Redundant cloud backup and unlimited cloud-based archiving of footage

#### Easy installation

- Built-in pigtail connector for simplified PoE cabling
- Mounting plate and screw pack included
- LED light status indicator

#### Durability and weather protection

- Factory-sealed robust aluminum unibody
- IP67 weather rating
- IK10 impact rating
- Operability between -40°F to 122°F / -40°C to 50°C



## CB52-E

### Tech specs

#### Camera features

|                                              |                                                                                                           |                             |                                                           |
|----------------------------------------------|-----------------------------------------------------------------------------------------------------------|-----------------------------|-----------------------------------------------------------|
| <b>Image sensor</b>                          | 1 / 2.8" progressive CMOS                                                                                 | <b>Shutter speed</b>        | 1 / 30 sec. to 1 / 10,000 sec.                            |
| <b>Sensor resolution<sup>1</sup></b>         | 5MP (2688 x 1944)                                                                                         | <b>Day/night</b>            | IR-cut filter for day and night function                  |
| <b>Lens type</b>                             | Varifocal; motorized zoom                                                                                 | <b>IR-cut filter</b>        | Yes                                                       |
| <b>Focal length</b>                          | 2.8mm – 8mm                                                                                               | <b>IR range</b>             | 98ft / 30m                                                |
| <b>Aperture</b>                              | F1.3 – F2.4                                                                                               | <b>Minimum illumination</b> | 0.009 lux @ F1.9 (color)<br>0 lux with IR illuminators on |
| <b>Iris</b>                                  | P-Iris                                                                                                    | <b>Onboard storage</b>      | Capacity: from 256GB to 2TB<br>Card: microSD, SDXC        |
| <b>Field of view (after LDC<sup>2</sup>)</b> | Horizontal: 99° - 41° (95° - 39°)<br>Vertical: 74° - 30° (74° - 30°)<br>Diagonal: 125° - 50° (110° - 48°) | <b>CPU</b>                  | Ambarella CV25S88                                         |
| <b>Camera movement</b>                       | Tilt: 0° to 90°<br>Pan: 360°<br>Rotation: 360°                                                            |                             |                                                           |

#### Standard video settings

|                               |              |                                  |                                                                                        |
|-------------------------------|--------------|----------------------------------|----------------------------------------------------------------------------------------|
| <b>Compression</b>            | H.265, H.264 | <b>Historical video settings</b> | Adaptive quality <sup>1</sup>                                                          |
| <b>Frame rate<sup>3</sup></b> | 24fps        | <b>Live streaming settings</b>   | High quality (HQ): up to 3,000 kbps (default)<br>Standard quality (SQ): up to 600 kbps |

#### Standard audio settings

|              |               |
|--------------|---------------|
| <b>Audio</b> | Not supported |
|--------------|---------------|

#### Power and network

|                                      |                                                                                                                                        |                     |                                                                           |
|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|---------------------|---------------------------------------------------------------------------|
| <b>Power input<sup>4</sup></b>       | With IR: IEEE 802.3at Type 2 PoE+<br>Without IR: IEEE 802.3af Type 1 PoE<br>Extended temperature range:<br>IEEE 802.3at Type 2 PoE+    | <b>Connectivity</b> | RJ-45 cable connector for network/PoE connection; 10 / 100 Mbps           |
| <b>Power consumption<sup>4</sup></b> | With IR: 37-57V, 0.38-0.25A, 14.0W<br>Without IR: 37-57V, 0.09-0.06A, 3.5W<br>Extended temperature range:<br>37-57V, 0.61-0.37A, 22.6W | <b>RTSP</b>         | RTSP 1.0<br>RFC 2326<br>Max concurrent streams: 2<br>Audio: not supported |

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 14°F / -10°C and assumes IR will be enabled.



## CB52-E

## Tech specs

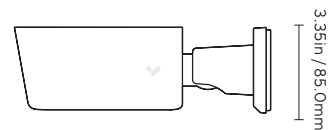
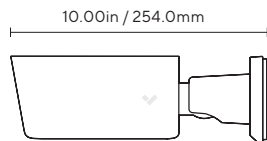
## General

|                              |                                                                                                                                   |                             |                                                                                                              |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------|--------------------------------------------------------------------------------------------------------------|
| <b>Operating temperature</b> | -40°F to 122°F / -40°C to 50°C                                                                                                    | <b>LED indicator</b>        | System power and status indicator                                                                            |
| <b>Humidity</b>              | 0 to 90%                                                                                                                          | <b>Warranty</b>             | 10 years                                                                                                     |
| <b>Certifications</b>        | FCC, ICES, CE, UKCA, RCM, VCCI, KCC, BIS, NOM, UL/cUL/IEC 62368-1, IP67 weather rating, IK10 impact rating, FY2019 NDAA compliant | <b>Included accessories</b> | 4x M4x8 screws, 4x TP4x30 mount screws, mount plate, junction box adapter, junction box cover, T25 hand tool |

## Mechanical

|                   |                                                      |             |          |
|-------------------|------------------------------------------------------|-------------|----------|
| <b>Weight</b>     | Camera: 51.64oz / 1464g<br>Mount plate: 1.16oz / 33g | <b>Body</b> | Aluminum |
| <b>Dimensions</b> | L: 10.00in / 254.0mm, Ø: 3.35in / 85.0mm             |             |          |

## Dimensions



## Software capabilities

|                          |                                                                                                                                                                                      |                                  |                                                                                                             |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-------------------------------------------------------------------------------------------------------------|
| <b>Alerts</b>            | Camera status, motion detection, people detection, vehicle detection, person of interest detection, crowd detection, line-crossing detection, loitering detection, AI-powered alerts | <b>Streaming and storage</b>     | Cloud backup, configurable retention days, selectable storage location, low bandwidth mode, timelapse, RTSP |
| <b>People analytics</b>  | People search, attribute search, face search, occupancy trends, motion search, trajectory analysis, selective face blurring, AI-powered search                                       | <b>Sharing and privacy</b>       | Live links, live face blur, privacy regions, audit log                                                      |
| <b>Vehicle analytics</b> | Vehicle search, attribute search, motion search, trajectory analysis, occupancy trends, AI-powered search                                                                            | <b>License plate recognition</b> | License plate of interest alerts, license plate indexing                                                    |



## Ordering information

### CB52-E pricing

| Model number | MP <sup>1</sup> | WDR | Lens | IR range   | Onboard storage | Maximum SQ onboard retention <sup>1</sup> | People/vehicle analytics |
|--------------|-----------------|-----|------|------------|-----------------|-------------------------------------------|--------------------------|
| CB52-256E-HW | 5MP             | ✓   | Zoom | 98ft / 30m | 256GB           | 30 Days                                   | ✓                        |
| CB52-512E-HW | 5MP             | ✓   | Zoom | 98ft / 30m | 512GB           | 60 Days                                   | ✓                        |
| CB52-768E-HW | 5MP             | ✓   | Zoom | 98ft / 30m | 768GB           | 90 Days                                   | ✓                        |
| CB52-2TBE-HW | 5MP             | ✓   | Zoom | 98ft / 30m | 2TB             | 365 Days                                  | ✓                        |

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>.