

CH52-E-F Government-Grade Four-Camera Multisensor

Expansive 5MP Visibility From a Single Install Point for Government Deployments



Overview

The CH52-E-F government-grade four-camera multisensor features four independent sensors, providing expansive coverage from a single install point. Each sensor includes a 1 / 2.8" progressive CMOS image sensor, varifocal lens with 2.08x optical zoom, and 30 meters / 98 feet of IR range to provide clear and consistent image quality in a variety of lighting conditions. The CH52-E-F also includes FIPS 140-validated encryption, has FedRAMP Ready status at the Moderate impact level, and is both TAA and FY2019 NDAA compliant – essential compliance criteria for government-grade deployments. The CH52-E-F is compatible with the standard Verkada Command platform, as well as Command hosted in AWS GovCloud.

The CH52-E-F includes four onboard CV25S Ambarella processors to support advanced analytics like AI-powered search, line crossing, loitering, and person of interest (POI) alerts. The CH52-E-F excels at covering hallway intersections and exterior corners of buildings, providing comprehensive visibility and eliminating blind spots while only requiring a single PoE++ cable.

With sealed interior components and IP66 weather and IK10 impact ratings, the CH52-E-F withstands extreme temperatures and excessive precipitation, allowing it to be deployed in a variety of interior or exterior environments. Installation and setup are easy to track using the LED status indicator, while the need for a single cable run minimizes port use.

Key features

Excellent image quality

- Four 1 / 2.8" progressive CMOS image sensors
- 20MP (4 x 5MP) of collective resolution
- Four varifocal lenses with 2.08x optical zoom each
- 30 meters / 98 feet of IR range for nighttime viewing

Expansive coverage

- Individually adjustable and repositionable sensor heads
- Combined field of view up to 328°

Government-grade security

- Meets the FIPS 140 standard, as validated by NIST
- FedRAMP Ready status at the Moderate impact level as designated by the Federal Risk and Authorization Management Program
- TAA and FY2019 NDAA compliant

Hybrid cloud architecture

- Onboard storage and processing for reduced bandwidth consumption and coverage at scale
- 30 - 365 days (1TB - 8TB) of onboard storage
- Redundant cloud backup and unlimited cloud-based archiving of footage

Durability and weather protection

- Sealed interior components
- IP66 weather rating and IK10 impact rating
- Operability between -40°C to 50°C / -40°F to 122°F

Advanced analytics

- Four onboard CV25S Ambarella processors enable people and vehicle analytics
- Person of interest (POI) alerts for proactive monitoring



CH52-E-F

Tech Specs

Camera features

| | | | |
|--|--|-----------------------------|---|
| Image Sensor | 4 x 1 / 2.8" Progressive CMOS | Shutter Speed | 1 / 5 sec. to 1 / 32,000 sec. |
| Sensor Resolution¹ | 4 x 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 | 3.7 - 7.7mm | IR Range | 30m / 98ft; non-adjustable |
| Aperture | F1.9 - F2.9 | Minimum Illumination | 0.009 lux @ F1.9 (color) 0 lux with IR Illuminators on |
| Iris | N/A | Onboard Storage | Capacity: From 1TB to 8TB Card: MicroSD, SDXC |
| Field of View (after LDC²) | Horizontal: 89° - 37° (82° - 35°) Vertical: 65° - 29° (60° - 26°) Diagonal: 99° - 46° (92° - 43°) | CPU | 4 x Ambarella CV25S88 |
| Sensor Movement | Tilt: +0°-105° for each lens from horizon Pan: +/- 90° for each lens Rotation: +/- 90° for each lens | | |

Standard video settings

| | | | |
|---|--|----------------------------------|---|
| Compression | H.265, H.264 | Historical Video Settings | Adaptive quality ¹ |
| Frame Rate³ | 24fps / sensor | WDR Technology | 120dB dynamic range, true WDR, dual exposure |
| Live Streaming Settings (Per Head) | High quality (HQ): Up to 3,000 Kbps (default) Standard quality (SQ): Up to 600 Kbps | | |

Standard audio settings

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|--------------|---------------|
| Audio | Not supported |
|--------------|---------------|

Power and network

| | | | |
|--------------------------------------|--|---------------------|--|
| Power Input⁴ | With IR: IEEE 802.3bt Type 3 PoE++ Without IR: IEEE 802.3at Type 2 PoE+ Extended temperature range: IEEE 802.3bt Type 3 PoE++ | Connectivity | RJ-45 cable connector for network/PoE connection; 10 / 100 Mbps |
| Power Consumption⁴ | With IR: 43-57V, 0.65-0.49A, 27.7W Without IR: 43-57V, 0.46-0.34A, 19.5W Extended temperature range: 43-57V, 0.91-0.68A, 38.7W | RTSP | RTSP 1.0 RFC 2326 Max concurrent streams: 8 (2 per camera head) 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 -10°C / 14°F and assumes IR will be enabled.



CH52-E-F Tech Specs

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-003, UL/IEC 62368-1, CE, RCM, UKCA, VCCI, BIS, IK10 impact rating, IP66 weather rating | Included Accessories | IR cover, mounting template, 3 mounting screws, 3 wall anchors, 2 desiccants, T10 security screwdriver, offset wrench |

Mechanical

| | | | |
|-------------------|---|-------------|-----------------------------|
| Weight | Camera: 2900g / 102.29oz Mount plate: 536g / 18.91oz | Body | Aluminum, plastic dome trim |
| Dimensions | Ø: 275.0mm / 10.82in, H: 118.0mm / 4.65in with mount plate Ø: 267.0mm / 10.51in, H: 114.0mm / 4.49in without mount plate | | |

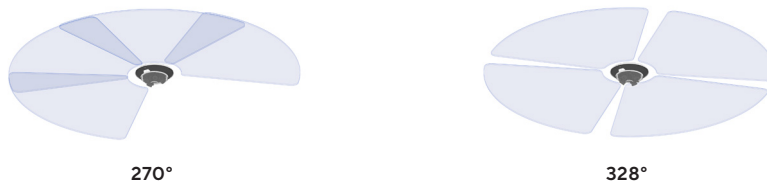
Dimensions



Software capabilities

| | | | |
|--------------------------------------|--|--|---|
| Alerts⁵ | Camera status, motion detection, people detection, vehicle detection, person of interest detection, crowd detection, line-crossing detection, loitering detection, AI-powered alerts | Streaming and Storage⁵ | Cloud backup, configurable retention days, selectable storage location, low bandwidth mode, timelapse, RTSP |
| People Analytics⁵ | People search, attribute search, face search, occupancy trends, motion search, trajectory analysis, selective face blurring, AI-powered search | Sharing and Privacy⁵ | Live links, live face blur, privacy regions, audit log |
| Vehicle Analytics⁵ | Vehicle search, attribute search, motion search, trajectory analysis, occupancy trends, AI-powered search | | |

Coverage examples



5. All the listed features can be enabled independently for each camera head.



Ordering Information

CH52-E-F pricing

| Model Number | MP ¹ | WDR | Lens | IR Range | Onboard Storage | Maximum SQ Onboard Retention ¹ | People/ Vehicle Analytics | Cost (MSRP) ^{USD} |
|----------------|-----------------|-----|------|------------|-----------------|---|------------------------------|----------------------------|
| CH52-1TBE-HW-F | 4 x 5MP | ✓ | Zoom | 30m / 98ft | 1TB | 30 Days | ✓ | \$4,099 |
| CH52-2TBE-HW-F | 4 x 5MP | ✓ | Zoom | 30m / 98ft | 2TB | 60 Days | ✓ | \$5,399 |
| CH52-4TBE-HW-F | 4 x 5MP | ✓ | Zoom | 30m / 98ft | 4TB | 120 Days | ✓ | \$7,999 |
| CH52-8TBE-HW-F | 4 x 5MP | ✓ | Zoom | 30m / 98ft | 8TB | 365 Days | ✓ | \$13,199 |

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>



Ordering Information

Video Security Cloud License pricing (New/Capacity Increase)²

| Model Number | Description | Cost (MSRP) USD |
|------------------------|---|-----------------|
| LIC-CAM-MLT4-1Y-CAP | 1-Year Four-Camera Multisensor License, Capacity Increase | \$649 |
| LIC-CAM-MLT4-3Y-CAP | 3-Year Four-Camera Multisensor License, Capacity Increase | \$1,799 |
| LIC-CAM-MLT4-5Y-CAP | 5-Year Four-Camera Multisensor License, Capacity Increase | \$2,999 |
| LIC-CAM-MLT4-10Y-CAP | 10-Year Four-Camera Multisensor License, Capacity Increase | \$5,999 |
| LIC-CAM-MLT4-1Y-CAP-G | 1-Year Four-Camera Multisensor License for Government, Capacity Increase | \$999 |
| LIC-CAM-MLT4-3Y-CAP-G | 3-Year Four-Camera Multisensor License for Government, Capacity Increase | \$2,699 |
| LIC-CAM-MLT4-5Y-CAP-G | 5-Year Four-Camera Multisensor License for Government, Capacity Increase | \$4,499 |
| LIC-CAM-MLT4-10Y-CAP-G | 10-Year Four-Camera Multisensor License for Government, Capacity Increase | \$8,999 |

Video Security Cloud License pricing (Renewal)²

| Model Number | Description | Cost (MSRP) USD |
|------------------------|---|-----------------|
| LIC-CAM-MLT4-1Y-RNW | 1-Year Four-Camera Multisensor License, Renewal | \$649 |
| LIC-CAM-MLT4-3Y-RNW | 3-Year Four-Camera Multisensor License, Renewal | \$1,799 |
| LIC-CAM-MLT4-5Y-RNW | 5-Year Four-Camera Multisensor License, Renewal | \$2,999 |
| LIC-CAM-MLT4-10Y-RNW | 10-Year Four-Camera Multisensor License, Renewal | \$5,999 |
| LIC-CAM-MLT4-1Y-RNW-G | 1-Year Four-Camera Multisensor License for Government, Renewal | \$999 |
| LIC-CAM-MLT4-3Y-RNW-G | 3-Year Four-Camera Multisensor License for Government, Renewal | \$2,699 |
| LIC-CAM-MLT4-5Y-RNW-G | 5-Year Four-Camera Multisensor License for Government, Renewal | \$4,499 |
| LIC-CAM-MLT4-10Y-RNW-G | 10-Year Four-Camera Multisensor License for Government, Renewal | \$8,999 |

2. Four-camera multisensors require a separate license from other Verkada Cameras.



Ordering Information

Accessories pricing

| Model Number | Description | Cost (MSRP) USD |
|------------------|--|-----------------|
| ACC-MNT-ARM-1 | Arm Mount | \$99 |
| ACC-MNT-CORNER-1 | Corner Mount | \$199 |
| ACC-MNT-PEND-1 | Pendant Cap Mount | \$69 |
| ACC-MNT-POLE-1 | Pole Mount | \$209 |
| ACC-MNT-XLARM-1 | Large Arm Mount | \$159 |
| ACC-POE-90W-AU | 90W PoE++ (802.3bt Type 4) Injector, GigE, Indoor, Australia Type I Plug | \$169 |
| ACC-POE-90W-EU | 90W PoE++ (802.3bt Type 4) Injector, GigE, Indoor, Europe Type F Plug | \$169 |
| ACC-POE-90W-NA | 90W PoE++ (802.3bt Type 4) Injector, GigE, Indoor, North America Type B Plug | \$169 |
| ACC-POE-90W-UK | 90W PoE++ (802.3bt Type 4) Injector, GigE, Indoor, United Kingdom Type G Plug | \$169 |