

FIPS-Validated Multisensor

4 Independent Cameras  
From a Single Install Point



Overview

Verkada’s FIPS-validated CH52-E-F multisensor camera features four sensors, providing comprehensive coverage from a single install point. As with Verkada’s other FIPS-validated models, the CH52-E-F features a durable, vandal-resistant design, advanced computer vision features, and encryption that meets the FIPS 140-2 and FedRAMP Moderate Ready standards that help provide robust, government-grade security. Each sensor can be repositioned and has 2.5x optical zoom, allowing for expansive coverage while maintaining image detail. Each sensor is powered by a dedicated computer vision processor to provide the image quality, stability and analytics performance of four independent cameras. The CH52-E-F will run FIPS encryption in transit and at rest by default, with no additional settings or configuration required. It is also TAA and FY2019 NDAA compliant.

The CH52-E-F is built to withstand extreme conditions. Sealed interior components have full IP66 rated protection against dust particles and heavy rain. The robust exterior housing provides IK10 rated protection against direct impacts from vandals, hail and flying debris. Like all Verkada cameras, the CH52-E-F works out-of-the-box without any additional configurations. The CH52-E-F only requires a single PoE++ network port, making it the most efficient choice for scaling coverage while minimizing cable runs and port use.

Key features

**Coverage**

- 4 x 5MP image sensors to capture fine detail
- 2.5x optical zoom
- 30m / 98ft IR illuminators for nighttime visibility
- Individually adjustable and repositionable sensors

**Government-grade security**

- Meets the FIPS 140-2 standard, as validated by NIST
- Designated FedRAMP Moderate Ready by the Federal Risk and Authorization Management Program (FedRAMP®)
- TAA and FY2019 NDAA compliant

**Storage and processing**

- 1TB-8TB of onboard storage
- Up to 365 days of retention in standard quality
- Four next generation computer vision processors for edge analytics
- Low-bandwidth impact, only using 80-200 kbps (20-50 kbps per head)
- Edge processing for motion, people and vehicle analytics

**Certifications**

- IK10 impact rating
- IP66 weather rating



## Multisensor camera Tech Specs



CH52-E-F

### Camera features

<b>Image Sensor</b>	4 x 1 / 2.8" Progressive CMOS	<b>Shutter Speed</b>	1 / 5 sec. to 1 / 32,000 sec.
<b>Sensor Resolution<sup>1</sup></b>	4 x 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>	3.7-7.7mm	<b>IR Range</b>	30m / 98ft; non-adjustable
<b>Aperture</b>	F1.9 - F2.9	<b>Minimum Illumination</b>	0.009 lux @ F1.9 (color) 0 lux with IR Illuminators on
<b>Iris</b>	N/A	<b>Onboard Storage</b>	Capacity: From 1TB to 8TB Card: MicroSD, SDXC
<b>Field of View (after LDC<sup>2</sup>)</b>	Horizontal: 37°-89° (35°-82°) Vertical: 29°-65° (26°-60°) Diagonal: 46°-99° (43°-92°)	<b>CPU</b>	4 x Ambarella CV25S88
<b>Sensor Movement</b>	Tilt: +0°-105° for each lens from horizon Pan: +/- 90° for each lens Rotation: +/- 90° for each lens		

### 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 / sensor	<b>WDR Technology</b>	120dB dynamic range, true WDR, dual exposure
<b>Live Streaming Settings (Per Head)</b>	High quality (HQ): Up to 3,000 Kbps (default) 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 802.3bt Type 3 PoE++ Without IR: IEEE 802.3at Type 2 PoE+ Extended temperature range: IEEE 802.3bt Type 3 PoE++	<b>Connectivity</b>	RJ-45 cable connector for network/PoE connection; 10/100 Mbps
<b>Power Consumption<sup>4</sup></b>	With IR: 42.5 - 57V, 0.65-0.49A, 27.69W Without IR: 42.5 - 57V, 0.46-0.34A, 19.54W Extended temperature range: 42.5 - 57V, 0.91 - 0.68A, 38.68W	<b>RTSP</b>	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 -8.5°C / 16.7°F and assumes IR will be enabled.



# Multisensor camera Tech Specs



CH52-E-F

## General

<b>Operating Temperature</b>	-40°C to 50°C / -40°F to 122°F	<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-003, UL/IEC 62368-1, CE, RCM, UKCA, VCCI, BIS, IK10 impact rating, IP66 weather rating, FIPS 140-2 validated, TAA and FY2019 NDAA compliant	<b>Included Accessories</b>	IR cover, mounting template, 3 mounting screws, 3 wall anchors, 2 desiccants, T10 security screwdriver, offset wrench

## Mechanical

<b>Weight</b>	Camera: 2,900g / 102.3oz Mount plate: 536g / 18.9oz	<b>Body</b>	Aluminum, plastic dome trim
<b>Dimensions</b>	Ø: 275mm / 10.82in, H: 118mm / 4.65in with mount plate Ø: 267mm / 10.51in, H: 114mm / 4.49in without mount plate		

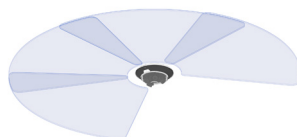
## Dimensions



## Software capabilities

<b>Alerts<sup>5</sup></b>	Camera status, motion detection, people detection, vehicle detection, Person of Interest detection, crowd detection, line-crossing detection, loitering detection	<b>Streaming and Storage<sup>5</sup></b>	Cloud backup, configurable retention days, selectable storage location, low bandwidth mode, timelapse, RTSP
<b>People Analytics<sup>5</sup></b>	People search, attribute search, face search, Occupancy Trends, motion search, trajectory analysis, selective face blurring, AI-powered search <sup>6</sup>	<b>Sharing and Privacy<sup>5</sup></b>	Live Links, live face blur, privacy regions, audit log
<b>Vehicle Analytics<sup>5</sup></b>	Vehicle search, attribute search, motion search, trajectory analysis, Occupancy Trends, AI-powered search		

## Coverage examples



270°



328°

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



## Ordering Information

### FIPS-validated Multisensor pricing

Model Number	MP <sup>1</sup>	WDR	Lens	IR Range	Onboard Storage	Maximum SQ Onboard Retention <sup>1</sup>	People/Vehicle Analytics	Cost (MSRP) <sup>USD</sup>
CH52-1TBE-F	20MP	✓	Zoom	30m / 98ft	1TB	30 Days	✓	\$4,099
CH52-2TBE-F	20MP	✓	Zoom	30m / 98ft	2TB	60 Days	✓	\$5,399
CH52-4TBE-F	20MP	✓	Zoom	30m / 98ft	4TB	120 Days	✓	\$7,999
CH52-8TBE-F	20MP	✓	Zoom	30m / 98ft	8TB	365 Days	✓	\$13,199

### FIPS-validated Multisensor License pricing<sup>2</sup>

Model Number	Description	Cost (MSRP) <sup>USD</sup>
LIC-CH52-1Y-G	1-Year CH52-E Multisensor Camera License for Government	\$899
LIC-CH52-3Y-G	3-Year CH52-E Multisensor Camera License for Government	\$2,479
LIC-CH52-5Y-G	5-Year CH52-E Multisensor Camera License for Government	\$4,049
LIC-CH52-10Y-G	10-Year CH52-E Multisensor Camera License for Government	\$8,099

### Accessories pricing

ACC-MNT-ARM-1	Arm Mount	\$99
ACC-MNT-8	Pendant Cap Mount Kit	\$69
ACC-MNT-9	Pole Mount, 2nd Generation	\$209
ACC-MNT-CORNER-1	Corner Mount	\$199
ACC-POE-60W	PoE++ (802.3bt) Injector, GigE	\$149

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 CH52-E requires a separate license from other Verkada Cameras.



## Ordering Information

### Viewing Station pricing

Model Number	Description	Cost (MSRP) USD
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