CH53-E Four-Camera Multisensor

5MP Coverage in All Directions From a Single Install Point

Overview

The CH53-E four-camera multisensor features four independent and adjustable image sensors which together support 5MP coverage in all directions from a single install point. 1 / 2.8" progressive CMOS image sensors, each with 2.55x optical zoom and 30 meters / 98 feet of IR range, enable clear and consistent image quality in varied lighting conditions. The CH53-E includes a pair of CV72S Ambarella processors to support advanced analytics like AI-powered search, AI-powered unified timeline, occupancy trends, line crossing, loitering, and person of interest (POI) alerts. The camera is optimal for covering hallway intersections, open floor spaces, and exterior building corners, offering a complete 360° field of view free of distortion while only requiring a single PoE+ cable.

The CH53-E's redesigned housing, IP66/IP67 weather rating, and IK10 impact rating enable the device to withstand extreme temperatures and excessive precipitation. Constructed with easy and efficient installation top-of-mind, the CH53-E features a single tool install, a latch-based cable gland for easy PoE threading, a three-LED status light indicator, and alignment presets that guide each lens into optimal positions for common viewing angles.

Key features

Excellent image quality

- Four 1 / 2.8" progressive CMOS image sensors
- 5MP resolution
- Four varifocal lenses with 2.55x optical zoom per lens
- 30 meters / 98 feet of IR range for nighttime viewing

Expansive coverage

- Individually adjustable and repositionable sensor heads
- Total field of view up to 360°

Advanced analytics

- Onboard CV72S Ambarella processor enables people and vehicle analytics
- AI-powered search and AI-powered alerts
- Occupancy trends for operational insights

Durability and weather protection

- Robust metal housing
- IP66/IP67 weather rating
- IK10 impact rating
- Operability between -40°C to 50°C / -40°F to 122°F

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

Streamlined installation

- Single PoE+ cable required
- Latch-based cable gland for easy PoE threading
- Alignment presets for optimal lens positioning
- Physical and digital mute switches to easily enable or disable audio

CH53-E
Tech Specs

Camera features

Image Sensor	4 x 1 / 2.8" Progressive CMOS	**Shutter Speed**	1 / 30 sec. to 1 / 10,000 sec.
Sensor Resolution[1]	4 x 5MP (2592 x 1944)	**Day/Night**	IR-cut filter for day and night function
Lens Type	Varifocal; motorized zoom	**IR Cut Filter**	Yes
Focal Length	3.18 - 8.12mm	**IR Range**	30m / 98ft; non-adjustable
Aperture	F1.9 - F3.24	**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 LDC[2]**)**	Horizontal: 105° - 39° (92° - 38°) Vertical: 76° - 29° (70° - 28°) Diagonal: 145° - 47° (116° - 44°)	**CPU**	2 x Ambarella CV72S66
Sensor Movement	Tilt: +25° to +90° from horizon Pan: +/- 180° Rotation: +/- 90° for each lens		

Standard video settings

Compression	H.265, H.264	**Historical Video Settings**	Adaptive quality[1]
Frame Rate[3]	24fps / sensor	**WDR Technology**	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

Audio	Supported	**Interface**	Built-in microphone
Audio Capacity	One-way audio	**Effective Range**	5m / 16ft

Power and network

Power Input[4]	IEEE 802.3bt Type 3 PoE++	**Connectivity**	RJ-45 cable connector for network/PoE connection; 10 / 100 / 1000 Mbps
Power Consumption[4]	With IR: 43–57V, 0.82-0.69A, 35.0W Without IR: 37-57V, 0.51-0.33A, 19.0W Extended temperature range: 43-57V, 1.20-0.90A, 51.0W	**RTSP**	RTSP 1.0 RFC 2326 Max concurrent streams: 8 (2 per camera head) Audio support: Yes

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.

CH53-E
Tech Specs

General

Operating Temperature	-40°C to 50°C / -40°F to 122°F	**LED Indicator**	System power, status indicator and debug indicator
Humidity	0 to 90%	**Warranty**	10 Years
Certifications	FCC, ICES, VCCI, IP66/67 weather rating, IK10 impact rating, FY2019 NDAA compliant	**Included Accessories**	T10 security screwdriver, mount plate, 4x wall mount screws, 4x wall anchors, 2x desiccants, conduit adapter, large cable gland

Mechanical

Weight	Camera: 3425g / 120.81oz Mount plate: 528g / 18.62oz	**Body**	Aluminum
Dimensions	D: 262.0mm / 10.32in H: 117.0mm / 4.61in with mount plate H: 115.0mm / 4.53in without mount plate		

Dimensions

262.0mm / 10.32in

117.0mm / 4.61in

Software capabilities

Alerts[5]	Camera status, motion detection, people detection, vehicle detection, person of interest detection, crowd detection, line-crossing detection, loitering detection, AI-powered alerts	**Streaming and Storage[5]**	Cloud backup, configurable retention days, selectable storage location, low bandwidth mode, timelapse, RTSP
People Analytics[5]	People search, attribute search, face search, occupancy trends, motion search, trajectory analysis, selective face blurring, AI-powered search	**Sharing and Privacy[5]**	Live links, live face blur, privacy regions, audit log
Vehicle Analytics[5]	Vehicle search, attribute search, motion search, trajectory analysis, occupancy trends, AI-powered search		

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

Ordering Information

CH53-E pricing

Model Number	MP[1]	WDR	Lens	IR Range	Onboard Storage	Maximum SQ Onboard Retention[1]	People/ Vehicle Analytics	Cost (MSRP) USD
CH53-1TBE-HW	4 x 5MP	✓	Zoom	30m / 98ft	1TB	30 Days	✓	$3,399
CH53-2TBE-HW	4 x 5MP	✓	Zoom	30m / 98ft	2TB	60 Days	✓	$4,699
CH53-3TBE-HW	4 x 5MP	✓	Zoom	30m / 98ft	3TB	90 Days	✓	$5,999
CH53-4TBE-HW	4 x 5MP	✓	Zoom	30m / 98ft	4TB	120 Days	✓	$7,299
CH53-8TBE-HW	4 x 5MP	✓	Zoom	30m / 98ft	8TB	365 Days	✓	$12,499

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 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

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

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-HPEND-1	Four-Camera Multisensor Pendant Cap Mount	$139
ACC-MNT-HREC-1	Four-Camera Multisensor Recessed Ceiling Mount	$269
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

Ordering Information

Viewing Station pricing

Model Number	Description	Cost (MSRP) USD
VX52-HW	VX52 Viewing Station	$499

Viewing Station License pricing (New/Capacity Increase)

Model Number	Description	Cost (MSRP) USD
LIC-VX-1Y-CAP	1-Year Viewing Station License, Capacity Increase	$499
LIC-VX-3Y-CAP	3-Year Viewing Station License, Capacity Increase	$1,299
LIC-VX-5Y-CAP	5-Year Viewing Station License, Capacity Increase	$1,999
LIC-VX-10Y-CAP	10-Year Viewing Station License, Capacity Increase	$3,999

Viewing Station License pricing (Renewal)

Model Number	Description	Cost (MSRP) USD
LIC-VX-1Y-RNW	1-Year Viewing Station License, Renewal	$499
LIC-VX-3Y-RNW	3-Year Viewing Station License, Renewal	$1,299
LIC-VX-5Y-RNW	5-Year Viewing Station License, Renewal	$1,999
LIC-VX-10Y-RNW	10-Year Viewing Station License, Renewal	$3,999