

CF83-E Fisheye Camera

Expansive 180° Coverage with Detailed 12.5MP Resolution



Overview

The CF83-E fisheye camera features a large 1 / 1.6" progressive CMOS image sensor and 12.5MP resolution for great image quality amid varying lighting conditions and inclement weather. With its onboard CV72S Ambarella processor, the CF83-E delivers advanced analytics like AI-powered search, motion trajectory mapping, line crossing, and loitering alerts. The CF83-E offers wide-angle, 180-degree coverage, yet is built to minimize classic fisheye distortion, making its ePTZ mode particularly effective for live monitoring and clear investigations. The CF83-E is ideal for providing overview coverage of large areas—like city blocks, long corridors, and large interior spaces—all from a single install point.

The CF83-E is built with an in-house industrial design for durability and easy installation. It features a robust metal exterior with an IP66/67 weather rating and IK10 impact protection, ensuring reliable performance in harsh environments. The CF83-E's design streamlines installation and large fleet deployments with features such as captive screws that remain attached to the mounting plate, a latch-based cable gland for easy PoE threading, a three-LED light status indicator, and a built-in bubble level for precise alignment.

Key features

Excellent image quality

- Large 1 / 1.6" progressive CMOS image sensor
- 12.5MP resolution
- 20 meters / 66 feet of IR range for nighttime viewing

Streamlined installation

- Latch-based cable gland for easy PoE threading
- Captive screws in mounting plate
- Three-LED light status indicator
- Built-in bubble level
- Physical and digital mute switches to easily enable or disable audio

Advanced analytics

- Onboard CV72S Ambarella processor enables people and vehicle analytics
- AI-powered search and AI-powered alerts

Hybrid cloud architecture

- Onboard storage and processing helps reduce bandwidth consumption, and enables coverage at scale
- 30 - 120 days (512GB - 3TB) of onboard storage
- Redundant cloud backup and unlimited cloud-based archiving of footage

Durability and weather protection

- Robust metal housing
- IP66/67 weather rating
- IK10 impact rating
- Operability between -40°C to 50°C / -40°F to 122°F

Extensive coverage and monitoring

- 180-degree field of view
- ePTZ, panoramic, and split viewing modes for enhanced live monitoring of large areas



CF83-E

Tech specs

Camera features

Image sensor	1/1.6" Progressive CMOS	Shutter speed	1/120 sec. to 1/32000 sec.
Sensor resolution¹	12.5MP (3536 x 3536); resolution (3520 x 3520)	Day/night	IR-cut filter for day and night function
Lens type	Fixed	IR-cut filter	Yes
Focal length	1.7mm	IR range	20m / 66ft
Aperture	F2.0	Minimum illumination	0.009 lux @ F1.9 (Color) 0 lux with IR illuminators on
Iris	Fixed	Onboard storage	Capacity: From 512GB to 3TB Card: MicroSD, SDXC
Field of view	Horizontal: 180° Vertical: 180° Diagonal: 180°	CPU	Ambarella CV72S66

Standard video settings

Compression	H.265, H.264	Historical video settings	Adaptive quality ¹
Frame rate²	24fps	WDR technology	120dB dynamic range, true WDR, dual exposure
Live streaming settings	High quality (HQ): Up to 4,500 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 input³	With IR: IEEE 802.3at Type 2 PoE+ Extended temperature range: IEEE 802.3at Type 2 PoE+	Connectivity	RJ-45 cable connector for network/ PoE connection; 10 / 100 / 1000 Mbps
Power consumption³	With IR: 43-57V, 0.46-0.34A, 19.5W Without IR: 43-57V, 0.22-0.17A, 9.5W Extended temperature range: 43-57V, 0.58-0.44A, 24.8W	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. Frame rate can be adjusted by support.

3. Extended temperature range includes operating temperatures below -10°C / 14°F and assumes IR will be enabled.



CF83-E

Tech specs

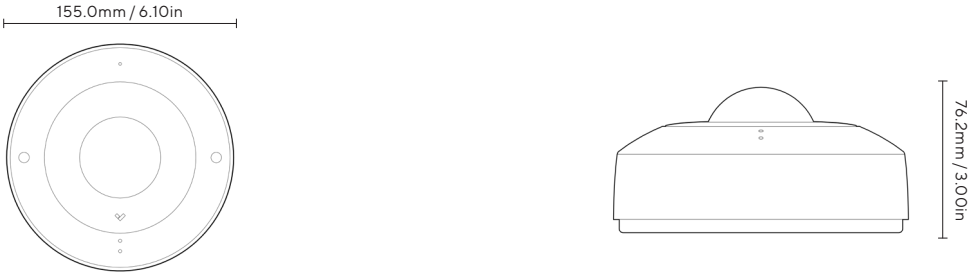
General

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, CE, UKCA, VCCI, NOM, NTRA, KCC, UL/cUL/IEC 62368-1, IK10 impact rating, ICASA, IP66/67 weather rating	Included accessories	Screw packs, mount plate with leveler, cable sealing rubber for 6.5-7.5mm, conduit adapter, T10 security driver

Mechanical

Weight	Camera: 1368g / 48.25oz Mount plate: 196g / 6.91oz	Body	Aluminum, plastic dome trim
Dimensions	Ø: 155.0mm / 6.10in, H: 76.2mm / 3.00in with mount plate Ø: 155.0mm / 6.10in, H: 69.2mm / 2.72in without mount plate		

Dimensions



Software capabilities

Alerts	Camera status, motion detection, people detection, vehicle detection, person of interest detection, crowd detection, AI-powered alerts	Streaming and storage	Cloud backup, configurable retention days, selectable storage location, low bandwidth mode, timelapse, RTSP
People analytics	People search, attribute search, face search, motion search, trajectory analysis ⁴ , selective face blurring, AI-powered search	Sharing and privacy	Live links, privacy regions, audit log
Vehicle analytics	Vehicle search, attribute search, motion search, trajectory analysis ⁴ , AI-powered search		

4. Trajectory analysis is supported in four-way split, panoramic, and ePTZ circle mode.



Ordering information

CF83-E pricing

Model number	MP ¹	WDR	Lens	IR range	Onboard storage	Maximum SQ onboard retention ¹	People/ vehicle analytics	US cost (MSRP) ^{USD}	WW cost (MSRP) ^{USD}
CF83-512E-HW	12.5MP	✓	Fixed	20m / 66ft	512 GB	30 days	✓	\$2,099	\$1,999
CF83-1TB-E-HW	12.5MP	✓	Fixed	20m / 66ft	1TB	60 days	✓	\$3,499	\$3,399
CF83-2TB-E-HW	12.5MP	✓	Fixed	20m / 66ft	2TB	90 days	✓	\$5,699	\$5,599
CF83-3TB-E-HW	12.5MP	✓	Fixed	20m / 66ft	3TB	120 days	✓	\$7,899	\$7,799

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 software license pricing (new/capacity increase)

Model number	Description	US cost (MSRP) ^{USD}	WW cost (MSRP) ^{USD}
LIC-CAM-1Y-CAP	Verkada 1-Year Camera License, Capacity Increase	\$249	\$249
LIC-CAM-3Y-CAP	Verkada 3-Year Camera License, Capacity Increase	\$659	\$659
LIC-CAM-5Y-CAP	Verkada 5-Year Camera License, Capacity Increase	\$1,099	\$1,099
LIC-CAM-10Y-CAP	Verkada 10-Year Camera License, Capacity Increase	\$2,199	\$2,199

Video Security software license pricing (renewal)

Model number	Description	US cost (MSRP) ^{USD}	WW cost (MSRP) ^{USD}
LIC-CAM-1Y-RNW	Verkada 1-Year Camera License, Renewal	\$249	\$249
LIC-CAM-3Y-RNW	Verkada 3-Year Camera License, Renewal	\$659	\$659
LIC-CAM-5Y-RNW	Verkada 5-Year Camera License, Renewal	\$1,099	\$1,099
LIC-CAM-10Y-RNW	Verkada 10-Year Camera License, Renewal	\$2,199	\$2,199



Accessories

Recommended accessories

Model Number	Description
ACC-CAM-SHIELD-1	Camera Weather Shield
ACC-MNT-ANGLE-1	Angle Mount
ACC-MNT-ARM-1	Arm Mount
ACC-MNT-CJBOX-1	Circle Junction Box
ACC-MNT-CLIP-1	Tile Clip Mount
ACC-MNT-CORNER-1	Corner Mount
ACC-MNT-PEND-1	Standard Pendant Cap
ACC-MNT-POLE-1	Pole Mount
ACC-MNT-UPEND-1	Umbrella Pendant Cap
INJ-POE-PLUS	PoE Plus (802.3at Type 2) Injector, GigE