



S Series

FE9391-EV-V2-M12 (M)

12MP Fisheye Panoramic AI
Camera



Technical Specifications

System Information	
CPU	Multimedia SoC (System-on-Chip)
Flash	eMMC 8 GB
RAM	DDR4 2 GB

Camera Specifications	
Image Sensor	1/2.3" Progressive CMOS in 4056x3040
Max. Resolution	2816x2816
Lens Type	Fixed-focal
Focal Length	f = 1.18mm
Aperture	F2.18
Iris Type	Fixed iris
Field of View	180° ± 5° (Horizontal) 180° ± 5° (Vertical)
Shutter Time	1/5 sec. to 1/32,000 sec.
WDR Technology	WDR Pro
Day/Night	Yes
Removable IR-cut filter	Yes
Illuminators	Built-in 940nm IR illuminators, effective up to 5 meters (50IRE) with Smart IR II, IR LED*4
Minimum Illumination	0.1 lux @ F2.18 (Color) <0.005 lux @ F2.18 (B/W) 0 lux with IR illumination on

Pan/Tilt/Zoom Functionalities	ePTZ: 12x digital zoom (12x on IE plug-in)
Storage	Seamless Recording to MicroSD/SDHC/SDXC card (1TB capacity supported) and recording to network-attached storage (NAS)
Built-in Installation Aids	Pixel calculator

Video

Compression	H.265, H.264, MJPEG
Maximum Frame Rate	30fps @ 2816x2816 (WDR off) 20fps @ 2816x2816 (WDR on)
Maximum Streams	3 video streams (up to 8 configurable profiles)
S/N Ratio	56.9 dB
Dynamic Range	120 dB
Video Streaming	Adjustable resolution, quality and constant bit rate control, Smart Stream III
Image Settings	<p>General settings video title and time stamp overlay, video orientation (flip, mirror), day/night settings</p> <p>anti-overexposure Image settings white balance, image adjustment (brightness, contrast, saturation, sharpness, gamma curve), defog, 3DNR</p> <p>Exposure BLC, exposure control, AE speed adjustment, WDR</p> <p>Privacy mask Scheduled profile settings Pixel calculator</p>
Display Mode	<p>Client Dewarping Ceiling mounted: 1O Fisheye*, 1P Panoramic*, 2P Two Panoramics, 1R One Region*, 4R Four Regions, 1O3R One Fisheye Three Regions, 1O8R One Fisheye Eight Regions Wall mounted: 1O Fisheye*, 1P Panoramic*, 1R One Region*, 4R Four Regions, 1P2R One Panoramic Two Regions, 1P3R One Panoramic Three Regions, 1O3R, One Fisheye Three Regions * Available only by Plug-in free browser</p> <p>Local Dewarping Ceiling mounted: 1O Fisheye, 1P Panoramic, 2P Two Panoramics, 1R One Region, 4R Four Regions Wall mounted: 1O Fisheye, 1P Panoramic, 1R One Region, 4R Four Regions</p>
Display Resolution	<p>1O : 2816x2816, 2560x2560, 2048x2048, 1920x1920, 1536x1536, 1280x1280, 1024x1024, 768x768</p> <p>Local Dewarp Mode 1P: 2816x704, 2560x640, 2048x512, 1920x480, 1536x384 2P: 2816x2816, 2560x2560, 2048x2048, 1920x1920, 1536x1536 1R: 1408x1408, 1280x1280, 1024x1024, 960x960, 768x768 4R: 2816x2816, 2560x2560, 2048x2048, 1920x1920, 1536x1536</p>

Audio

Audio Capability	One-way Audio
Compression	G.711, G.726, MPEG-2 AAC-LC
Interface	Built-in microphone
Effective Range	5 meters

Network

Users	Live viewing for up to 10 clients
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Security	Access list, Account block , Audit log, Configurable password strength protection, CSRF protection, Digest authentication, HTTPS , IEEE 802.1x, Secure boot, Session timeout, Signed firmware, Trend Micro IoT Security (Brute force attack event, Cyberattack event, Quarantine event), User access log, User account management
Protocols	802.1X, ARP, Bonjour, CIFS/SMB, DDNS, DHCP, DNS, FTP, HTTP, HTTPS, ICMP, IGMPv3, IPv4, IPv6, NTP, PPPoE, QoS (CoS/DSCP), RTSP/RTP/RTCP, SMTP, SNMP, SSL, TCP/IP, TLS 1.2, UDP, UPnP
Interface	10 Base-T/100 Base-TX Ethernet (M12, Female, 4pin D-coded)
ONVIF	Profile G, S, T, M supported, specification available at www.onvif.org

AI Analytics

Compute Capability	SoC with built-in hardware deep learning accelerator
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Solution Integration

VADP Package	Deep Learning VCA (Smart Motion Detection, Trend Micro IoT Security (3-year free trial), Stratocast
Video Motion Detection	Five-window video motion detection, people detection

Alarm and Event

Event Trigger	Audio detection, camera tampering detection, cybersecurity events (brute force attack event, cyberattack event, quarantine event), digital input, manual trigger, motion detection, periodical trigger, recording notification, SD card life expectancy, shock detection, system boot
Event Action	Event notification via audio clip*, digital output, email, HTTP, FTP, NAS server, SD card File upload via email, HTTP, FTP, NAS server, SD card, Camera link

General

Connectors	Single HL3 cable with M12 4pin D-coded, Female connector for 10/100 Mbps PoE network connection Eearth/grounding point hole x1 Venting holes with water-proof breathable membrane x1
LED Indicator	System power and status indicator
Power Input	IEEE 802.3at PoE Class 4
Power Consumption	Max. 18 W/9.55 W (IR on/off)
Dimensions	ø 160 x 61.7 mm
Weight	Approx. 930g
Certifications	<p>EMC CE(EN 55032, EN 55035 Class A), FCC (FCC Part 15 Subpart B Class A), ICES-003 Issue 07, RCM (AS/NZS CISPR 32 Class A), VCCI (VCCI-CISPR 32 Class A), EMV06</p> <p>Safety UL (UL 62368-1), CB (IEC/EN 62368-1, IEC/EN 60950-22, IEC/EN 62471)</p> <p>Environment IK10 (IEC 62262), IP66/67 (IEC 60529), NEMA (NEMA 250 Type 4X)</p> <p>Railway EN 50155:2021(OT4/ST1), EN 50121-3-2, EN 60068-2-1, EN 60068-2-2, EN 61373, EN 45545-2, IEC 60571 Ed 3.0, IEC 62236-3-2 Ed 3.0, EN50121-4</p> <p>Vehicles ECE R118, E-Mark(ECE R10)</p> <p>BI BSMI (EMC: CNS 13438, Safety: CNS 14336-1)</p>

Operating Temperature	Starting Temperature: -40°C ~ 70°C (-40°F ~ 158°F) Working Temperature: -40°C ~ 70°C (-40°F ~ 158°F) (IR off) -40°C ~ 60°C (-40°F ~ 140°F) (IR on)
Humidity	98% RH (non-condensing)
Storage Temperature	-40°C ~ 70°C (14°F ~ 158°F)

System Requirements

Operating System	Microsoft Windows 11/10/8/7 Mac 10.12 (Chrome only)
Web Browser	Chrome 58.0 or above Internet Explorer 11
Other Players	VLC: 1.1.11 or above

Included Accessories

Packing Contents	Quick installation guide, alignment sticker, screw pack, desiccant bag
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DORI (EN 62676-4 Standard)

Detection (25PPM/ 8PPF)	30.3 m (99.4 ft)
Observation (63PPM/ 19PPF)	12.0 m (39.4 ft)
Recognition (125PPM/ 38PPF)	6.1 m (20.0 ft)
Identification (250PPM/ 76PPF)	3.0 m (9.8 ft)