VIVOTEK
A Delta Group Company

V Series

FD9399-EHTV

8MP Outdoor Fixed Dome Camera

Technical Specifications

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

Camera Specifications

Image Sensor	1/1.8" Progressive CMOS
Max. Resolution	3840x2160 (8MP)
Lens Type	Motorized, Vari-focal, Remote Focus
Focal Length	f = 4.3~9.8mm
Aperture	F1.6 ~ F2.6
Iris Type	P-iris
Field of View	110.4° ~ 45.1° (Horizontal) 57.9° ~ 25.4° (Vertical) 133.9° ~ 51.8°(Diagonal)
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 IR illuminators, effective up to 40 meters with Smart IR, IR LED*4
Minimum Illumination	0.02 lux @ F1.6 (Color) <0.005 lux @ F1.6 (B/W) 0 lux with IR illumination on
Pan Range	350°
Tilt Range	80°
Rotation Range	350°
Pan/Tilt/Zoom Functionalities	ePTZ: 48x digital zoom (4x on IE plug-in, 12x built-in)
Storage	Seamless Recording to MicroSD/SDHC/SDXC card (1TB capacity supported) and recording to network-attached storage (NAS)
Built-in Installation Aids	Remote focus, remote zoom, pixel calculator

Video

Compression	H.265, H.264, MJPEG
Maximum Frame Rate	30 fps @ 3840x2160 (8MP)
Maximum Streams	3 video streams (Up to 8 configurable profiles)
Main Stream	30fps @3840x2160, 3328x1872, 3072x1728, 2688x1520, 2560x1440, 1920x1080, 1280x720, 640x360 (16:9)
3rd Stream	30fps @1920x1080, 1280x720, 640x360 (16:9)
2nd Stream	30 fps @ 1280x720, 640x360 (16:9)
S/N Ratio	54 dB
Dynamic Range	120 dB
Video Streaming	Adjustable resolution, quality and constant bit rate control, Smart Stream III
Image Settings	**General settings** video title and time stamp overlay, video orientation (flip, mirror, rotation), day/night settings **Illuminators** illuminators, anti-overexposure, VCA-based Smart IR III **Image settings** white balance, image adjustment (brightness, contrast, saturation, sharpness, gamma curve), defog, 3DNR, EIS (built-in gyro sensor), scene mode (auto, deblur) **Exposure** BLC, HLC, exposure control (exposure level, iris adjustment, exposure time, gain control, iris mode), AE speed adjustment, WDR **Focus** zoom, focus Privacy mask pixel calculator Scheduled profile settings

Audio

Audio Capability	Two-way audio (Full duplex)* * Requires AO-015 cable
Compression	G.711, G.726, MPEG-2 AAC-LC
Interface	Built-in microphone External microphone Input* External line output* * Requires AO-015 cable
Effective Range	5 meters

Network

Users	Live viewing for up to 10 clients
Security	Access list, CSRF protection, digest authentication, HTTPS , IEEE 802.1x, Password protection, secure boot, signed firmware, Trend Micro IoT Security (brute force attack event, cyberattack event, quarantine event), user access log, user account management, Built-in FIPS 140-2 Level 2 certified Trusted Platform Module (TPM)
Protocols	802.1X, ARP, Bonjour, CIFS/SMB, DDNS, DHCP, DNS, FTP/SFTP, HTTP, HTTPS, ICMP, IGMPv3, IPv4, IPv6, , NTP, PPPoE, QoS (CoS/DSCP), RTSP/RTP/RTCP, SMTP, SNMP, SSL, TCP/IP, TLS 1.2/1.3, UDP, UPnP
Interface	10 Base-T/100 Base-TX Ethernet (RJ-45) *It is highly recommended to use standard CAT5e & CAT6 cables which are compliant with the 3P/ETL standard.
ONVIF	Profile G, S, T supported, specification available at www.onvif.org

AI Analytics

Compute Capability	SoC with built-in hardware deep learning accelerator
Vision Object Analytics	Object Detection People, Vehicle (4-wheeled, 2-wheeled) Attribute Extraction People (gender, clothing color, bag, hat), Vehicle (bike, bus, car, motorcycle, truck, color) Re-Search Extraction Path Extraction
Application	Deep Learning VCA (Smart Motion Detection, Smart VCA) Smart Motion Detection (Five-window video motion detection, People detection, Vehicle detection, Time filter), Smart VCA (Intrusion detection, Loitering detection, Line crossing detection, Unattended object detection, Missing object detection, Face detection, Crowd detection
Application available with license	Running detection, Parking Violation Detection, Restricted Zone Detection Support for more analytic applications and free trial, please visit vivotek.com/video-analytics
RealSight Engine	Smart IR III, Deblur, WDR, White Balance, Exposure Control

Solution Integration

VADP Package	Trend Micro (Default, 3-year free trial)
Video modtion detection	Motion Detection (Five-window video motion 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 * Requires AO-015 cable
Event Action	Event notification via audio clip*, camera link, digital output*, email, HTTP, FTP/SFTP, NAS server, SD card File upload via email, HTTP, FTP/SFTP, NAS server, SD card *Requires AO-015 cable

General

Connectors	RJ-45 cable connector for 10/100 Mbps Network/PoE connection Audio line input* Audio line output* Digital input: 1* Digital output: 1* * Requires AO-015 cable
LED Indicator	System power and status indicator
Power Input	IEEE 802.3af PoE Class 3
Power Consumption	Max. 12.4W/ 9.6W (IR on/off)
Dimensions	ø 134 x 116 mm
Weight	990 g
Certifications	EMC CE (EN55032, EN55035 Class A), UKCA (BS EN 55032/BS EN 55035 Class A), FCC (FCC Part 15 Subpart B Class A), RCM (AS/NZS CISPR32 Class A), VCCI (VCCI-CISPR 32 Class A) IC (ICES-003 Issue 7, Class A) Safety UL (UL62368-1), CB (IEC/EN 62368-1, IEC/EN 62368-1, IEC/EN 62471) UKCA (BS EN IEC 62368-1) Environment NEMA (NEMA 250 Type 4X), IK10 (IEC 62262), IP66 (IEC 60529) IA BIS (IS 13252), BSMI (EMC: CNS 13438, Safety: CNS 14336-1)
Operating Temperature	Starting Temperature: -20°C ~ 50°C (-4°F ~ 122°F) Working Temperature: -35°C ~ 60°C (-31°F ~ 140°F) (IR off) -35°C ~ 50°C (-31°F ~ 122°F) (IR on)
Humidity	98% RH (non-condensing)

System Requirements

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

Included Accessories

Packing Contents	Quick installation guide, alignment sticker, screw pack, L-shaped wrench

DORI (EN 62676-4 Standard)

Detection (25PPM/ 8PPF)	Wide: 88.1 m (289.2 ft) Tele: 197.6 m (648.2 ft)
Observation (63PPM/ 19PPF)	Wide: 35.0 m (114.9 ft) Tele: 77.9 m (255.7 ft)
Recognition (125PPM/ 38PPF)	Wide: 17.5 m (57.4 ft) Tele: 39.0 m (127.8 ft)
Identification (250PPM/ 76PPF)	Wide: 8.7 m (28.6 ft) Tele: 19.5 m (63.9 ft)

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