

FEATURES

- Fast AE for Quick Adaptation to Light Changes
- WDR Pro for unparalleled Visibility in High Contrast Environments
- Weather-proof IP66 and IP67, Vandal-proof IK10 Housing



NETWORK CAMERAS FOR EVERY LOCATION IN THE VEHICLE

Compatible with Luminators X-Recorder platform, this camera has been specially developed for on-board use. Approvals for buses and trains include ECE R10 and EN 50155 certification. The cameras are equipped with M12 D-coded connectors and video rotation is available for corridor installations.

The strong backlighting compensates for changing light - for example when crossing bridges and tunnels. The built-in IR illuminators are effective up to 20 meters.

The image data is transmitted in several bandwith-optimized streams. This allows simultaneous recording while the live image is displayed in the driver's monitor and transmitted to the control center.



TECHNICAL DATA

Image	
Image Sensor	1/2.9" Progressive CMOS
Lens	Fixed-focal
Focal Length	(2.8mm): f = 2.8 mm
Aperture	(2.8mm): F1.8
Iris type	Fixed-iris
Field of View	(2.8mm): 108° (Horizontal) 60° (Vertical) 124° (Diagonal)
Resolution	1920x1080 (2MP)
Frame Rate	30 fps @ 1920x1080
Shutter Speed	1/5 sec. to 1/32,000 sec.
Pan Range	±30°
Tilt Range	90°
Zoom Range	±180°
Pan / Tilt / Zoom	ePTZ: 48x digital zoom (4x on IE plug-in, 12x built-in)
IR Illuminators	Built-in IR illuminators, effective up to 20 meters with Smart IR, IR LED*2
Minimum Illumination	(2.8mm): 0.13 Lux @ F1.8 (Color) 0.01 Lux @ F1.8 (B/W) 0 Lux with IR illumination on
Signal-To-Noise-Ratio	(2.8mm): 60 dB
Dynamic Range	120 dB, WDR Pro Technology
Day and Night	Removable IR-cut filter for day & night function
Image Settings	Adjustable image size, quality and bit rate; Time stamp, text overlay, flip & mirror; Configurable brightness, contrast, saturation, sharpness, white balance, exposure control, gain, backlight compensation, privacy masks; Scheduled profile settings, 3DNR, video rotation, defog
Video	
Video Streaming	Adjustable resolution, quality and bitrate, Smart Stream III
Video Compression	H.265, H264, MJPEG
Video Motion Detection	Five-window video motion detection
Audio	
Audio Input	One-way Audio, built-in microphone, external line input, effective range of 5 meters
Audio Compression	G.711, G.726
Network	
Supported Protocols	802.1X, ARP, CIFS/SMB, CoS, DDNS, DHCP, DNS, FTP, HTTP, HTTPS, ICMP, IGMF IPv4, IPv6, NTP, PPPoE, QoS, RTSP/RTP/RTCP, SMTP, SNMP, SSL, TCP/IP, TLS, UDP, UPnP
Security	Trend Micro IoT Security
Users	Live viewing for up to 10 clients
ONVIF	Supported, specification available at www.onvif.org
Mechanics	
Micro-SD Card Slot	Slot type: MicroSD/SDHC/SDXC card slot. Seamless Recording

Micro-SD Card Slot

Slot type: MicroSD/SDHC/SDXC card slot, Seamless Recording



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TECHNICAL DATA

Alarm and Event	
Alarm Triggers	Motion detection, manual trigger, digital input, periodical trigger, system boot, recording notification, camera tampering detection, audio detection, SD card life expectancy, cybersecurity events (brute force attack event, cyberattack event, quarantine event)
Alarm Events	Event notification via digital output, email, HTTP, FTP, NAS server, SD card File upload via email, HTTP, FTP, NAS server, SD card
Solution Integration	
VADP Package	Trend Micro IoT Security, Stratocast
Computer	
Processor	Multimedia SoC (System-on-Chip)
Memory	128 MB
RAM	256 MB
Software	
Applications	X-Fleet Manager
Electrical Properties	
Operating Voltage	IEEE 802.3af PoE Class 2
Power Consumption	Max. 5.5 W (IR on); Max. 3.3 W (IR off)
Interfaces	
User Interface	System power and status indicator
Digital In	1x (30 V, 1 A)
Digital Out	1x (12 V, 50 mA)
Ethernet	1x M12 (Female, 4pin D-coded, 10Base-T/100 BaseTX Ethernet)
Audio Input	1 x Line
Microphone	Built in
Mechanical Properties	
Weight	400 g
Dimensions	98 mm x 54 mm x 110.8 mm
Environment	
Operating Temperature	Starting Temperature: -25°C ~ 55°C (-13°F~ 131°F) Working Temperature: -25°C ~ 60°C (-13°F~ 140°F) (IR off) -25°C ~ 55°C (-13°F~ 131°F) (IR on) Maximum (intermittent): 70 °C (158 °F)
Relative Humidity	98%
Ingress Protection	IP66, IP67, NEMA 4X
Impact Protection	IK10



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TECHNICAL DATA

Standards	
DIN EN 45545	HL1
DIN EN 50121-3-2	Compliant
DIN EN 50121-4	Compliant
DIN EN 50132-7	Compliant
DIN EN 50155	2017 OT1/ST1
DIN EN 60068-2-1	Compliant
DIN EN 60068-2-2	Compliant
DIN EN 61373	Compliant
IEC 60571	Compliant
IEC 62236-3-2	Compliant
ECE-R118	Compliant
UL	Compliant
FCC	Class B
CE	Compliant
LVD	Compliant
VCCI	Compliant
C-Tick	Compliant

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