

# ULISSE EVO DUAL (UED)

PTZ NETWORK CAMERA WITH DUAL SENSOR, THERMAL AND FULL HD



IP66  
IP67  
IP68

TYPE 4X  
TYPE 6P

IK10



- Unbeatable solution for video surveillance of perimeters and critical areas
- Designed to endure outdoor applications
- Maximum detection accuracy
- PoE compliant with the IEEE.802.3bt standard
- Easy to install



## EFFECTIVE VIDEO SURVEILLANCE NO MATTER THE CONDITIONS

ULISSE EVO DUAL (UED) PTZ is a network positioning system equipped with advanced technology that provides two independent videos simultaneously from a high-sensitivity visual camera and a thermal camera. These are perfectly aligned with the movements of the PTZ.

ULISSE EVO DUAL (UED) is the ideal solution for effective and reliable day/night preventative outdoor video surveillance of perimeters and borders, critical infrastructures, traffic, railways and much more.

The combination of the two cameras in one unit has created an effective and powerful surveillance tool. The visible camera can recognize and identify a target while the thermal camera achieves better detection accuracy, even in total darkness or in extreme weather conditions.

The non-cooled long-wave thermal sensor (LWIR) with vanadium oxide (VOx) guarantees maximum detection accuracy even in total darkness and in extreme weather conditions. Available in 320x256 or 640x512 resolution with a wide choice of optics to create the optimum configuration for the application.

The visible camera is a SONY FCB-EV7520 with 30x optical zoom and a 1/2.8" Exmor R™ CMOS sensor, Full HD 1080/60p resolution. It is capable of producing impeccable image quality, even if objects are moving and in difficult lighting conditions.

It has an image stabilizer and dynamic masking areas for privacy. The advanced SONY technology offers configurable Wide Dynamic Range and High Light Compensation that allow you to optimally manage strong contrasts of light and shadow.

## DESIGNED TO ENDURE OUTDOOR APPLICATIONS

ULISSE EVO DUAL (UED) is designed to ensure complete reliability and continuous operation in the most difficult outdoor environments. It offers exceptional resistance to corrosion and a wide temperature range (from -40°C to +65°C). Its extraordinary robustness is guaranteed by its IP66 / IP67 / IP68, NEMA TYPE 4X and TYPE 6P protection.

ULISSE EVO DUAL (UED)'s modern and simple design combines extreme sturdiness and operational reliability with a light weight, allowing easy and quick assembly, with a consequent reduction in installation costs and zero maintenance interventions.

It can even be mounted upside down, in the typical speed domes position. The supports can be supplied with quick-fit connectors for Ethernet/PoE, power supply and I/O. This means the unit can be replaced quickly and easily in case of on-site intervention.

ULISSE EVO DUAL (UED) can be powered with PoE 90W according to the IEEE.802.3bt standard. This guarantees compatibility with the most common power injectors available on the market, while maintaining backwards compatibility with PoH power injectors (OHEP90INJ or OHEP90INJ0).

In addition to this, to make wiring operations and devices connection as easy as possible, the COMB communication box can be utilised. It can manage the connection of a PTZ and its washing system, or two fixed cameras equipped with washing systems. COMB is available in the Videotec catalogue.

## GEOMOVE FUNCTION

The GeoMove function offered by the ULISSE EVO DUAL (UED) uses two connected cameras that communicate with each other through intelligent language, meaning advanced actions can be carried out in even the most basic surveillance systems.

GeoMove can be used with fixed or PTZ cameras that have VIDEOTECH ANALYTICS and monitor a certain area. When a target is sighted, the camera sends the geo-coordinates of the target to a ULISSE EVO DUAL (UED) PTZ that uses them to frame the target.

The GeoMove function can interface with third-party software that gives an objects geo-coordinates, such as Video Management Software (VMS) for traditional video surveillance where a target needs to be shown on a map, or Vessel Tracking Service (VTS) for navigation control services (also combined with radar control systems).

## 100% MADE IN VIDEOTEC

Videotec guarantees the excellent strength and reliability of the entire "all-in-one product" range with hundreds of verification tests. The mechanics, electronics, positioning, networking, software video analysis algorithms and firmware are designed by Videotec's in-house end-to-end team which, therefore, possesses 100% of the know-how of all the network products offered.

At the heart of Videotec's product development is the concept of cyber-sustainability. To help customers protect their video surveillance systems and keep them secure, Videotec provides constant updates, training and support throughout the lifecycle of its products, regardless of how old the device is or whether it is still for sale.

Thanks to digitally signed firmware, password-restricted access, access control, centralised management of certificates and compliance with ONVIF Security Service specifications, Videotec guarantees that all its IP products will have the highest level of security during data transfer and device access.

ULISSE EVO DUAL (UED) offers the Videotec guarantee of a reliable, cyber-safe, future-proof platform that is easily integrated with third-party products.

## TECHNICAL DATA

### GENERAL

Easy installation thanks to the self-centring connector  
Zero backlash  
Quick configuration and setup  
Dynamic positioning control system  
Functions: Preset, Preset Tour (Patrol), Autoflip, Autopan via Preset Tour  
Maximum number of presets: 250

### MECHANICAL

Constructed from aluminium and tecnopolymer  
Epoxy-polyester powder painted, standard colour grey-white (RAL9002)  
Horizontal rotation: 360°, continuous rotation  
Vertical rotation: from -90° up to +90° (with ceiling installation, from -40° up to +90°)  
Horizontal speed (variable): from 0.1°/s up to 250°/s  
Tilt speed (variable): from 0.1°/s up to 250°/s  
Accuracy of preset positions: 0.05°  
Cable glands: 2xM16 + 1xM20 + special gasket for pre-wired Ethernet cables  
Unit weight: 7.4kg (16.3lb)

### HOUSING'S WINDOW

Window with extra clear tempered glass

- Thick: 5mm (0.2in)

Germanium window

- Thick: 1.5mm (0.06in)
- Scratch-resistant treatment (Hard Carbon Coating - DLC)
- Antireflection treatment
- Spectral range: from 7.5µm up to 14µm
- Medium transmittance (from 7.5µm up to 11.5µm): 91.2%
- Medium transmittance (from 11.5µm up to 14µm): 80.9%

### ELECTRICAL

Supply voltage/Current consumption:

- 24Vac ±20%, 5A, 50/60Hz
- 24Vdc ±10%, 5A
- PoE 90W (in compliance with standard IEEE802.3bt CLASS 8 or in backward compatibility mode usable with accessory OHEP90INJ or OHEP90INJO)

Power consumption:

- 23W, PTZ stopped, heating switched off (with the ECO-MODE function enabled, energy saving function that is activated only when the PTZ is stopped)
- 29W, PTZ stopped, heating switched off (with the ECO-MODE function not enabled)
- 29W, PTZ in motion, heating switched off
- 59W, peak at start-up, heating on and de-icing function

Power supply cables section: from 0.75mm<sup>2</sup> (18AWG) up to 2.5mm<sup>2</sup> (13AWG)  
Cables signal section: from 0.14mm<sup>2</sup> (26AWG) up to 1mm<sup>2</sup> (17AWG)  
Multipolar cable sheath diameter:

- Cable glands M16: from 4.5mm (0.2in) up to 10mm (0.4in)
- Cable glands M20: from 8mm (0.3in) up to 13mm (0.5in)

Alarm inputs: 2 (auto-powered from 12Vdc up to 18Vdc)  
Relay outputs: 2 (1A, 30Vac/30Vdc max)

## NETWORK

Ethernet connection: 100 Base-TX

Connector: RJ45

## CYBERSECURITY

Digitally signed firmware

Password restricted access (HTTP digest)

Support of various user access levels

Control of accesses IEEE 802.1X

HTTPS cryptography using TLS1.0, TLS1.1, TLS1.2 and TLS1.3

Centralised certificate management

Complies with ONVIF Security Service specifications

## VIDEO

### Day/Night camera

Video encoder

- Communication protocol: ONVIF, Profile Q, Profile S and Profile T
- Device configuration: TCP/IPv4-IPv6, UDP/IPv4-IPv6, HTTP, HTTPS, NTP, DHCP, WS-DISCOVERY, DSCP, IGMP (Multicast), SOAP, DNS
- Streaming: RTSP, RTCP, RTP/IPv4-IPv6, HTTP, Multicast
- Video compression: H.264/AVC, MJPEG, MPEG4, snapshot JPEG
- 3 independent video streams Full HD
- Image resolution: from 320x180pixel up to 1920x1080pixel in 8 steps
- Selectable frame rate from 1 to 60 images per second (fps)
- Web Server
- Directional OSD (maximum 4 settable areas)
- Motion Detection
- QoS: Differentiated DSCPs for streaming and device management
- SNMP and NTCIP protocols

### Thermal Camera

Video encoder

- Communication protocol: ONVIF, Profile Q, Profile S and Profile T, ONVIF Thermal Service
- Device configuration: TCP/IPv4-IPv6, UDP/IPv4-IPv6, HTTP, HTTPS, NTP, DHCP, WSDISCOVERY, DSCP, IGMP (Multicast), SOAP, DNS
- Streaming: RTSP, RTCP, RTP/IPv4-IPv6, HTTP, Multicast
- Video compression: H.264/AVC, MJPEG, MPEG4, snapshot JPEG
- 3 independent video streams
- Image resolution: from 160x120pixel up to 720x480pixel in 5 steps
- Selectable frame rate from 1 to 30 images per second (fps)
- Web Server
- Directional OSD (maximum 4 settable areas)
- Motion Detection
- QoS: Differentiated DSCPs for streaming and device management
- SNMP and NTCIP protocols

## DAY/NIGHT CAMERA

### SONY FCB-EV7520 Day/Night Full HD 30x

Resolution: Full HD 1080p (1920x1080)

Image Sensor: 1/2.8" Exmor™ R CMOS sensor

Effective Pixels: approx. 2.13 Megapixels

Minimum Illumination:

- Colour: 0.0013lx (50 IRE, High sensitivity on)
- B/W: 0.0008lx (30 IRE, High sensitivity on)

Focal length: from 4.3mm (wide) up to 129mm (tele)

Zoom: 30x (360x with digital zoom)

Iris: from F1.6 up to F14 (Auto, Manual)

Horizontal Viewing Angle: from 63.7° (wide end) up to 2.3° (tele end)

Vertical Viewing Angle: from 38.5° (wide end) up to 1.3° (tele end)

Shutter speed: from 1/1s up to 1/10000s (Auto, Manual)

White balance: Auto, Auto Tracing, Indoor, Outdoor, Manual, Outdoor Auto, Sodium Lamp (Fix/Auto/Outdoor Auto)

Gain: from 0dB up to 50.0dB (Auto, Manual)

Wide Dynamic Range: 120dB

Focus System: Auto (PTZ Trigger, Full Auto), Manual

Picture Effects: E-flip

Noise removal (2D, 3D): Off, On (from level 1 up to level 5)

Exposure Control: Auto, Manual, Priority (Shutter priority, Iris priority, Brightness priority)

De-fog: Off, Low, Mid, High

Dynamic masking of privacy zones: maximum 24 masks settable, maximum 8 simultaneously displayable

Indoor Flicker Reduction

Gain Limit: from 10.7dB up to 50dB

High sensitivity: On/Off

Backlight Compensation: On/Off

Auto Slowshutter: On/Off

Exposure compensation: Off, On (from -10.5dB up to +10.5dB)

Sharpness: from level 0 up to level 15

High Light Compensation (HLC): Off, Low, Mid, High, Masking Level (Off, On, from level 1 up to level 15)

Digital image stabilization: On/Off

## THERMAL CAMERAS

*Please refer to the relevant table.*

## ENVIRONMENT

For indoors and outdoors installation

Operating temperature

- Continuous functioning: from -40°C (-40°F) up to +60°C (140°F) (+65°C (149°F) for versions with 320x256 sensor)
- Temperature test complies with NEMA-TS 2-2003 (R2008) par. 2.1.5.1, test profile fig. 2-1 (from -34°C (-29.2°F) to +74°C (165.2°F)) (only for versions with 320x256 sensor)
- De-icing function intervention: from -40°C (-40°F) up to -10°C (14°F)

Wind resistance

- PTZ static: 230km/h (143mph) max.
- PTZ operational at the maximum speed: 230km/h (143mph) max.

Relative humidity: from 5% up to 95%

## CERTIFICATIONS

Electrical safety (CE): EN60950-1, IEC60950-1, EN62368-1, IEC62368-1

Electromagnetic compatibility (CE): EN61000-6-4, EN50130-4, EN55032 (Class A)

Outdoor installation (CE): EN60950-22, IEC60950-22

IP protection degree (EN60529): IP66, IP67, IP68

Vibration test: EN50130-5, EN60068-2-6

Salty fog resistance: EN50130-5, EN60068-2-52

IK protection degree: IK10 (except glass window and germanium window)

UL certification (UL60950-1, CAN/CSA C22.2 No. 60950-1-07, UL62368-1 CAN/CSA C22.2 No. 62368-1-14): cULus Listed

Electromagnetic compatibility (North America): FCC part 15 (Class A), ICES-003 (Class A)

Level of protection Type (UL50E): 4X, 6P

EAC certification (pending)

Restriction of Hazardous Substances (RoHS), Directive 2011/65/EU

Waste Electrical and Electronic Equipment (WEEE), Directive 2012/19/EU

NDAA-compliant

## CERTIFICATIONS - RAILWAY APPLICATIONS

Compliance to railway application standard: EN50121-4 (the product requires the filter accessory SURGEPR)

## ACCESSORIES

COMB100A	Communication box in polycarbonate, IN from 220Vac up to 230Vac, OUT 24Vac
COMB200A	Communication box in polycarbonate, IN 24Vac, OUT 24Vac
COMB300A	Communication box in polycarbonate, IN from 120Vac up to 127Vac, OUT 24Vac
OHEP90INJ	Power Injector PoE (90W), 1 channel, for indoor installations
OHEP90INJO	Power Injector PoE (90W), 1 channel, for outdoor installations
SURGEPR	Lightning surge protection device
UPTIRPS100N	External power supply for ULISSE series, IN 100Vac, in weatherproof box
UPTIRPS120UL	External power supply for ULISSE series, IN 120Vac, in weatherproof box

UPTIRPS230N	External power supply for ULISSE series, IN 230Vac, in weatherproof box
WASPT0V5L5M00	Water tank 5l (1.3gal), pump with delivery up to 5m (16ft), IN 230Vac-24Vac-120Vac
WASPT0V23L5M00	Water tank 23l (6gal), pump with delivery up to 5m (16ft), IN 230Vac-24Vac-120Vac
WASPT0V23L11M00	Water tank 23l (6gal), pump with delivery up to 11m (36ft) with water floating, IN 230Vac-24Vac-120Vac
WASPT1V23L30M00	Water tank 23l (6gal), pump with delivery up to 30m (98ft) with water floating, IN 230Vac
WASPT3V23L30M00	Water tank 23l (6gal), pump with delivery up to 30m (98ft) with water floating, IN 120Vac
WASN1V10L20M00	Tank 10l (2.6gal) with integrated manual pump, controlled by solenoid valve, IN 230Vac, delivery head up to 30m (98ft), with 20m (66ft) antistatic water delivery pipe
WASN2V10L20M00	Tank 10l (2.6gal) with integrated manual pump, controlled by solenoid valve, IN 24Vac, delivery head up to 30m (98ft), with 20m (66ft) antistatic water delivery pipe
WASN3V10L20M00	Tank 10l (2.6gal) with integrated manual pump, controlled by solenoid valve, IN 120Vac, delivery head up to 30m (98ft), with 20m (66ft) antistatic water delivery pipe

## BRACKETS AND ADAPTORS

UEBP0AA	Parapet bracket with internal cable channel for ULISSE EVO, grey-white (RAL9002)
UEBP4AA	Parapet bracket with quick connectors RJ45 (Ethernet and PoE) + 4 poles with screw terminal (power supply and I/O) for ULISSE EVO grey-white (RAL9002)
UEBP7AA	Parapet bracket with quick connectors RJ45 (Ethernet and PoE) + 7 poles to weld (power supply and I/O) for ULISSE EVO, grey-white (RAL9002)
UEBWAA	Wall bracket for ULISSE EVO, grey-white (RAL9002)
UEAP	Pole adaptor in stainless steel AISI 316L
UEAC	Corner adaptor in stainless steel AISI 316L
UEAW	Counter-plate in stainless steel AISI 316L

## PACKAGE

Model Number	Weight	Dimensions (WxHxL)	Master carton
UED22CA000A	9.5kg (21lb)	27x30x50cm (10.6x11.8x19.6in)	-

THERMAL CAMERAS (RESOLUTION 320X256)			
	Lens 6.3mm	Lens 9.1mm	Lens 18mm
Image Sensor	Uncooled VOx microbolometer	Uncooled VOx microbolometer	Uncooled VOx microbolometer
Interpolated resolution	720x480	720x480	720x480
Pixel dimensions	12µm	12µm	12µm
Spectral response - long wave infrared (LWIR)	from 7.5µm up to 14µm	from 7.5µm up to 14µm	from 7.5µm up to 14µm
Internal shutter (only for sensor compensation)	Video stop < 1s	Video stop < 1s	Video stop < 1s
Digital Detail Enhancement (DDE)	✓	✓	✓
Adaptive Contrast Enhancement (ACE)	✓	✓	✓
Digital Zoom	8x	8x	8x
Image updating frequency	7.5fps	7.5fps	7.5fps
Image updating high frequency	30fps	30fps	30fps
Typical dynamic range scene 320	from -40°C (-40°F) up to +160°C (320°F) or from -40°C (-40°F) up to +370°C (698°F) (selectable)	from -40°C (-40°F) up to +160°C (320°F) or from -40°C (-40°F) up to +370°C (698°F) (selectable)	from -40°C (-40°F) up to +160°C (320°F) or from -40°C (-40°F) up to +370°C (698°F) (selectable)
Horizontal field of view	34°	24.1°	12°
Vertical field of view	27.2°	19.2°	9.6°
F-number	F/1.01	F/1.02	F/1.04
Thermal sensitivity (NETD)	< 50mK at f/1.0	< 50mK at f/1.0	< 50mK at f/1.0
Person (detection / recognition / identification)	131/33/20	188/47/29	381/95/59
Car (detection / recognition / identification)	608/152/94	870/218/134	1753/438/270

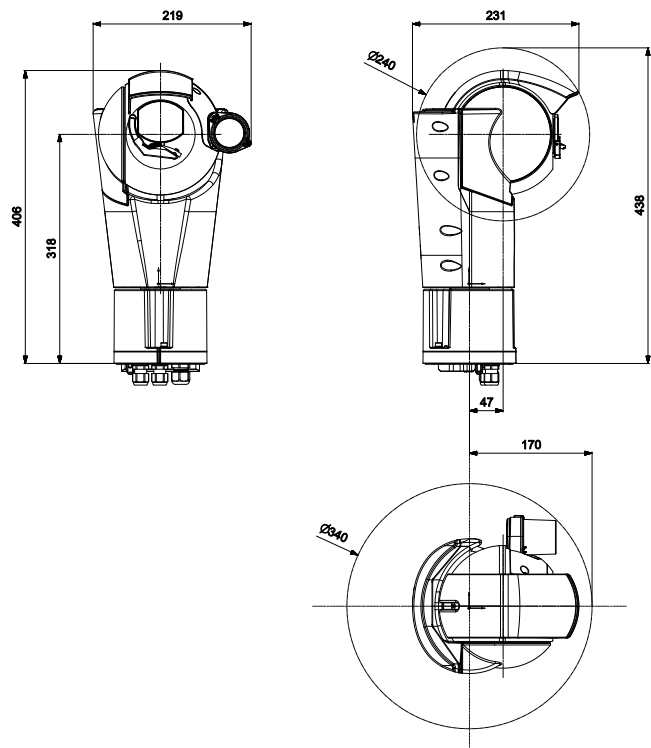
THERMAL CAMERAS (RESOLUTION 640X512)			
	Lens 8.7mm	Lens 14mm	Lens 24.4mm
Image Sensor	Uncooled VOx microbolometer	Uncooled VOx microbolometer	Uncooled VOx microbolometer
Interpolated resolution	720x480	720x480	720x480
Pixel dimensions	12µm	12µm	12µm
Spectral response - long wave infrared (LWIR)	from 7.5µm up to 14µm	from 7.5µm up to 14µm	from 7.5µm up to 14µm
Digital Detail Enhancement (DDE)	✓	✓	✓
Adaptive Contrast Enhancement (ACE)	✓	✓	✓
Digital Zoom	8x	8x	8x
Image updating frequency	7.5fps	7.5fps	7.5fps
Image updating high frequency	30fps	30fps	30fps
Typical dynamic range scene 640	from -40°C (-40°F) up to +150°C (302°F) or from -40°C (-40°F) up to +500°C (932°F) (selectable)	from -40°C (-40°F) up to +150°C (302°F) or from -40°C (-40°F) up to +500°C (932°F) (selectable)	from -40°C (-40°F) up to +150°C (302°F) or from -40°C (-40°F) up to +500°C (932°F) (selectable)
Horizontal field of view	50°	32°	18°
Vertical field of view	37.5°	25.6°	13.5°
F-number	F/1.01	F/1.00	F/1.00
Thermal sensitivity (NETD)	< 50mK at f/1.0	< 50mK at f/1.0	< 50mK at f/1.0
Person (detection / recognition / identification)	172/43/26	279/70/43	505/126/78
Car (detection / recognition / identification)	867/217/133	1296/324/199	2506/627/386

**ULISSE EVO DUAL (UED) - CONFIGURATION OPTIONS**

	Voltage	Day/Night camera	Thermal camera	Colour	Revision	Frequency
<b>UED</b>	<b>2</b> 24Vac, 24Vdc, PoE 90W	<b>2</b> SONY FCB-EV7520 camera, FULL HD 1080p, 30x	<b>C</b> 34° HFOV, Thermal camera 6.3mm, 320x256	<b>A</b> Grey-white (RAL9002)	<b>000</b> <b>A</b> Complies with ONVIF, Profile Q, Profile S and Profile T	- 7.5Hz
			<b>D</b> 24° HFOV, Thermal camera 9.1mm, 320x256		<b>J</b> Complies with ONVIF, Profile S and Profile T	<b>H</b> 30Hz
			<b>F</b> 12° HFOV, Thermal camera 18mm, 320x256			
			<b>I</b> 50° HFOV, Thermal camera 8.7mm, 640x512			
			<b>L</b> 32° HFOV, Thermal camera 14mm, 640x512			
			<b>N</b> 18° HFOV, Thermal camera 24.4mm, 640x512			

**TECHNICAL DRAWINGS**

The indicated measurements are expressed in millimetres.



ULISSE EVO DUAL