

# NDE-8703-RL Fixed dome 6MP HDR 3.9-10mm PTRZ IP67 FLEXIDOME 8100i IR



The FLEXIDOME 8100i IR 6MP camera has a 1/1.8" sensor, starlight and HDR technology at 6MP resolution.

Starlight technology provides low-light sensitivity ensuring highly detailed images even in the most challenging situations. HDR enables the camera to capture video across different light levels and without motion blur and artefacts on moving objects. The camera's remote commissioning functionality ensures installation and commissioning in the minimum amount of time. Using a PC or a mobile device with the Project Assistant app, you can pan, tilt, roll and zoom (PTRZ) and point the camera to the required field of view with a single click, without ever having to touch the camera or lens.

The latest CPP14 platform provides powerful processing capabilities and built-in neural processing engine to enable deep learning based IVA Pro video analytics, bringing highly reliable detection of persons and vehicles, even in crowded scenes.













- ► Remote configuration and commissioning. Pan, Tilt, Roll and Zoom (PTRZ) remotely to set the camera to the required field of view, without having to touch the camera or lens
- ➤ Starlight technology with 1/1.8" HD 6MP sensor for next level low-light performance with maximum detail
- ► Split IR design with intelligent IR for illumination up to 30m (98ft)
- ▶ IVA Pro brings highly reliable deep-learning based detection of persons and vehicles to scenes ranging from sterile to crowded and congested zones
- ► Electronic image stabilization (EIS) measures the frequency and amplitude of the device's vibrations to offset their impact on the image

The extreme rugged design is suited for diverse applications in sectors like government, transportation, city and traffic surveillance and education.

#### **Functions**

#### Starlight performance

The latest sensor technology combined with the sophisticated image processing and noise suppression results in exceptional sensitivity in color. The excellent low-light performance allows great color performance even with minimum ambient light.

#### **High Dynamic Range**

The high dynamic range (HDR) mode is based on a multiple-exposure process that captures more details in the highlights and in the shadows even in the same scene. The result is that you can easily distinguish objects and features, for example, faces with bright backlight.

The actual dynamic range of the camera is measured using Opto-Electronic Conversion Function (OECF) analysis according to IEC 62676 Part 5.

#### **Intelligent Video Analytics Pro (IVA Pro)**

The camera comes with IVA Pro Buildings, IVA Pro Perimeter and IVA Pro Privacy pre-installed. Other options can be licensed to optimize the camera analytics for enhanced surveillance capabilities tailored to the application.

The advanced analytics brings highly reliable deep-learning-based detection and tracking of persons and vehicles to scenes ranging from sterile zones to crowded and congested areas. Resilient against false triggers caused by challenging environmental conditions such as rain, wind-induced movements (such as trees), snow, hail, water reflections, shadows, and insects, the camera ensures accurate and reliable object detection, tracking, and classification. A smart set of alarm and counter rules ensures that you are promptly alerted when predefined alarms are triggered.

Configuration effort is made easy with the camera already classifying objects out of the box. With these advanced features, the camera provides comprehensive security coverage across a wide range of environments and scenarios.

### Intelligent Video Analytics Pro (IVA Pro) - optional licenses

With the introduction of IVA Pro Appearance, users can conduct forensic searches based on distinct characteristics, such as color of clothing, bags, hats, or other features, enabling a more precise search of individuals. Furthermore, the integration of IVA Pro Gun Detection enhances security measures by automatically detecting and classifying people brandishing firearms, ensuring comprehensive threat detection.

Additionally, the camera now features IVA Pro Personal Protective Equipment (PPE), designed to detect the proper use of personal protective equipment, which can reduce accident risk and promote health and safety in various environments. IVA Pro Traffic can be licensed to optimize the camera analytics for ITS applications such as counting and classification, as well as Automatic Incident Detection, which are necessary for highway and urban infrastructure planning. IVA Pro License Plate excels in real-time identification of license plates in parking applications or city environments.for automated ticketing systems, traffic enforcement, and smart parking solutions.

#### **Camera Trainer**

The Camera Trainer program uses machine learning to allow the user to define objects of interest and generate detectors for them.

#### **Auto-calibration**

The camera offers auto-calibration by transforming 2D pixels into 3D real world measures, such as size, speed and geolocation of objects for tracking use cases. Al technology allows the camera to detect and analyze persons and vehicles in the scene to determine calibration parameters. Calibration efforts

are now reduced to a single click, followed by the usual human verification. This reduces the calibration effort or time investment, ensuring optimal accuracy while keeping costs to a minimum.

#### Intelligent streaming

Smart encoding capabilities, utilizing video analytics, reduce bandwidth consumption to extremely low levels. Only relevant information in the scene, such as motion or objects found through analytics, needs to be encoded. The camera is capable of quad streaming, allowing it to deliver independent and configurable streams for live viewing, recording, or remote monitoring via constrained bandwidths. Each of these streams can be adapted independently to deliver high-quality video, perfectly tailored to purpose, while reducing bit rate by up to 90% compared to a standard camera.

#### **Electronic image stabilization**

The image quality of a camera can be affected if its mounting is unstable or prone to vibration. The larger the zoom value, the bigger the impact of these vibrations will be, making images unusable and causing fatigue for the user. The camera's image stabilization algorithm uses the built-in gyro sensor to detect continuous vibration and to correct the shaky video in the vertical and horizontal axis. This results in a stable and smooth video on the monitor. The EIS crop factor is adjustable. This helps the camera deliver exceptional image clarity, by allowing you to optimize the balance between field of view and the maximum vibration amplitude.

#### **DORI** coverage

DORI (Detect, Observe, Recognize, Identify) is a standard system (EN-62676-4) for defining the ability of a person viewing the video to distinguish persons or objects within a covered area. The maximum distance at which a camera/lens combination can meet these criteria is shown below:

6 MP Camera with 3.9 mm - 10 mm lens\*

DORI	DORI definition	Distance	Horizontal width
Detect	25 px/m	40 m / 162 m	131 m
	8 px/ft	125 ft / 505 ft	408 ft
Observe	63 px/m	16 m / 64 m	52 m
	19 px/ft	53 ft / 213 ft	172 ft
Recognize	125 px/m	8 m / 32 m	26 m
	38 px/ft	26 ft / 106 ft	86 ft
Identify	250 px/m	4 m / 16 m	13 m
	76 px/ft	13 ft / 53 ft	43 ft

<sup>\*</sup>The numbers in this table do not reflect IVA distances. For IVA distances, refer to the lens calculator / Bosch IP video design tool.

#### Scene modes

Multiple configurable modes are provided with the best settings for a variety of applications. With one click, fully optimized image settings can be selected to suit the conditions. Different scene modes can be selected for different situations such as sodium lighting, fast moving objects or dark environments.

## Resists rain, dust, and tampering with reliable operation across a wide temperature range

Suitable for indoor and outdoor usage. The robust design of the camera is rated to IP66 / IP67 and IK11 standards, safeguarding the camera and its bubble against rain and dust while also offering protection against vandalism and tampering. The camera can operate in a wide ambient temperature range between -50°C up to +60°C (-58°F to +140°F).

#### **Full Remote Commissioning**

Installing a professional IP video surveillance camera has never been so easy. In fact, as an installer, you'll never want to go back to the old methods of installing cameras again. We've simplified the installation and commissioning stages to such a degree that they can be done in very little time. With the FLEXIDOME 8100i IR 6MP camera's remote commissioning functionality there's no need to go up and down ladders. Using a PC or a mobile device with the Bosch Project Assistant app, you can pan, tilt, roll and zoom (PTRZ) and point the camera to the required field of view with a single click - without ever having to touch the camera or lens. Remote configuration and commissioning can also be done at a later stage once all cameras have been installed. Simply connect the Bosch Project Assistant app, available for iOS, Windows or Android to the camera wirelessly to the local network. Or connect to the camera remotely via the network using the camera's web interface or the Bosch Configuration Manager.

#### Easy installation

The mechanical design follows the Bosch installation philosophy by using an installation surface mount box (SMB) and easy cable management.

Power can be supplied via Power-over-Ethernet plus

Power can be supplied via Power-over-Ethernet plus (PoE+). With this configuration, only a single cable connection is required to view, power, and control the camera. Using PoE+ makes installation easier and more cost effective, as cameras do not require a local power source.

The AVF (Automatic Varifocal) feature makes it easy for installers to adjust zoom position without opening the camera. The automatic motorized zoom/focus adjustment with 1:1 pixel mapping ensures the camera is always accurately focused.

#### **Data security**

Special measures ensure the highest level of security for device access and data transport. On initial setup, the camera is only accessible over secure

channels and enforces a password. Web browser and viewing client access can be protected using HTTPS or other secure protocols that support state-of-the-art TLS 1.2 with updated cipher suites including AES encryption with 256 bit keys. No software can be installed in the camera, and only authenticated firmware can be uploaded. A three-level password protection with security recommendations allows users to customize device access.

Network and device access can be protected using 802.1x network authentication with EAP/TLS. Superior protection from malicious attacks is guaranteed by the Embedded Login Firewall, onboard Trusted Platform Module (TPM) and Public Key Infrastructure (PKI) support.

The advanced certificate handling offers:

- Self-signed unique certificates automatically created when required
- Client and server certificates for authentication
- · Client certificates for proof of authenticity
- · Certificates with encrypted private keys
- · 4096 key length

#### Advanced edge recording

Advanced edge recording provides the reliable storage solution possible due to the combination of the following functionalities:

- Dual microSD cards that can be set up as either:
  - Mirrored, for redundant storage
  - Failover, for extended service intervals
  - Extended, for maximum retention time
- Industrial microSD card support allows for extreme lifetime
- Health monitoring on industrial microSD card (slot 1) provides early service indication

#### **Cloud-based services**

The device can leverage the Bosch Remote Portal for device management, activation of services, and management of software licenses. This enables you to easily connect your device into a cloud-based platform, where you can manage all your devices in a centralized location.

Using the Bosch Security Cloud, you can configure, troubleshoot, and update supported devices using the browser-based interface or standard tools. With one click on Remote Portal, you can activate additional value-added services, such as Alarm Management in Cloud VMS, or VideoView+. VideoView+ provides an easy-to-use and cost-effective solution to remotely connect to your device from anywhere, at any time. Leverage the power of the Bosch cloud to monitor your premises and get notified about any incident. VideoView+ also enables live streaming, locally and from remote, of up to 8 concurrent devices via Video Security Client, or of up to 4 concurrent devices on the Android and iOS app

clients. This includes replay and export functionality, as well as forensic search to define and perform search criteria for recorded events.

#### System integration and ONVIF conformance

The camera conforms to the ONVIF Profile S, ONVIF Profile G, ONVIF Profile M, and ONVIF Profile T specifications. For H.265 configuration, the camera supports Media Service 2, which is part of ONVIF Profile T. Compliance with these standards guarantees interoperability between network video products regardless of manufacturer.

Third-party integrators can easily access the internal feature set of the camera for integration into large projects. Visit the Bosch Integration Partner Program (IPP) website (ipp.boschsecurity.com) for more information.

#### **Bosch Remote Portal**

With the secure cloud infrastructure, Remote Portal, you can manage your connected Bosch devices. From the Remote Portal you can:

- Complete initial configuration of your connected Bosch devices (online or offline).
- · Update firmware for single or multiple devices.
- · Manage certificates.
- Monitor the health of your connected Bosch devices.

#### Modular camera mounts and accessories

A full line of modular camera mounts and accessories are available that allow a consistent design across different platforms and a wide range of installation possibilities.

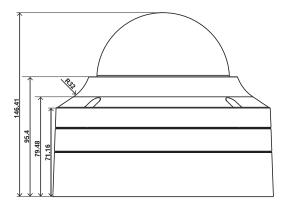
Several dedicated accessories are available that seamlessly fit to the camera and expand the different installation options over previous generations. Available options include: a paintable cover, an oncamera weather protector, a clear, tinted or hydrophilic bubble, in-ceiling mounting kits, a surveillance cabinet with power and fiber optic options and different mounting options.

#### **Regulatory information**

Standards	Туре
Emission	EN 55032 (class A), EN IEC 61000-6-4, EN 50121-4 (EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6), CFR 47 FCC, part 15B (class A), ICES-003, AS/ NZS CISPR 32
Immunity	EN 55035, EN IEC 61000-6-2, EN 50130-4 (EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6), EN 50121-4 (EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6)
Environmental	EN 50130-5 Class IV-A (EN 60068-2-2, EN 60068-2-5, EN 60068-2-6, EN 60068-2-18, EN 60068-2-27, EN 60068-2-30, EN 60068-2-42, EN 60068-2-52, EN 60068-2-75,

Standards	Тур	Туре	
	coml	0068-2-78, EN 60529), UL 2043 when bined with NDA-8002-PLEN, Nema TS 2 ion 2	
,		2368-1, UL 62368-1, CSA 62368-1, IEC 71, EN 62471	
Image performand	ce IEC 6	62676-5	
HD		TE 296M-2001 (Resolution: 1280x720)	
	SMP	SMPTE 274M-2008 (Resolution: 1920x1080)	
Color representation ITU		R BT.709-6	
ONVIF conformance		EN 50132-5-2, EN 62676-2	
Impact protection		EN 62262 (IK11)	
' '		0529 (IP66/IP67), ISO 20653 (IP6K9K), DE (Type 4X)	
EC		1/65/EU RoHS (EN IEC 63000), 1999/45/ nd 1907/2006 REACH, 2012/19/ VEEE, 94/62/EC Packaging	
Marks CE, cULus, WEEE, RCM, VCCI, BIS, KCC, Chi RoHS, Cmim			
Compliance	ompliance NDAA compliant		
Region	Regulatory	compliance/quality marks	
Global	IEC 62443	Industrial Cyber Security Capability	
USA	UL CAP	Cybersecurity Assurance Program	

#### Installation/configuration notes



#### Dimensions in mm (inch)

Parts included		
Quantity	Component	
1	FLEXIDOME 8100i IR 6MP camera	
1	T-20 security Torx bit	
1	Mini screwdriver	

Quantity	Component
1	IP66 rubber grommet
1	IP67 grommet
1	Network patch cable 50 cm
3	Identification label
1	Quick installation guide
1	Safety and security information

#### **Technical specifications**

#### **Electrical**

PoE input	PoE+ IEEE 802.3at Type 2, Class 4 PoE+ and auxiliary power can be connected simultaneously for re- dundant operation
Input voltage (VAC)	24 VAC ±10%
Input voltage (VDC)	12 VDC - 26 VDC ±10%
Power consumption PoE (W) (typical – maximum)	7 W – 25.5 W
Power consumption VAC (VA) (typical – maximum)	12 VA – 38.4 VA
Power consumption VAC (W) (typical – maximum)	6.9 W – 20.7 W
Power consumption VDC (W) (typical – maximum)	7.2 W – 28.4 W

#### Sensor

Total sensor pixels	6 MP approx.
Sensor type	1/1.8 inch CMOS; 2.3 µm
Effective pixels (H x V)	3,264 x 1,840

#### Sensitivity

Low light technology	starlight
Color (lx) (sensitivity measured according to IEC 62676 Part 5)	0.0360 lx (F1.6)
Monochrome (lx) (sensitivity measured according to IEC 62676 Part 5)	0.0054 lx (F1.6)
High Dynamic Range (HDR) (dB)	120 dB HDR

#### Optical

Lens focal length (mm)	3.9 mm – 10 mm
Iris control	P-iris
Horizontal field of view (°)	117° – 44°
Vertical field of view (°)	62° – 24°
Lens aperture (/F)	F1.6-F2.7
Zoom/focus control	Motorized

#### **Night vision**

IR function	On; Off; Auto; Intelligent IR
IR intensity	Manually adjustable; Automatic; Intelligent intensity
Built-in IR (m)	30 m
Built-in IR (ft)	98 ft
Wavelength (nm)	850 nm

#### **Video streaming**

<u> </u>	
Video compression	H.264 (ISO/IEC 14496-10); M- JPEG; H.265/HEVC
Sensor mode	25 fps, HDR, 3072 x 1728 (5.3 MP) 30 fps, HDR, 3072 x 1728 (5.3 MP) 25 fps, 3264 x 1840 (6 MP) 30 fps, 3264 x 1840 (6 MP)
Streaming	Multiple configurable streams in H.265; H.264 and M-JPEG; Config- urable framerate and bandwidth; Bosch Intelligent Streaming
Frame rate (fps)	1 fps – 30 fps
Camera processing latency	<67ms
GOP structure	IP; IBP; IBBP
Video signal-to-noise ratio (dB)	>55 dB
Resolution	6MP 3264 x 1840, 5.3MP 3072 x 1728, 4.1MP 2688 x 1512, 3MP 2304 x 1296, 2.8MP (4:3) 1920 x 1440, HD 1080p 1920 x 1080, 1.3MP 1536 x 864, 1.3MP (5:4) 1280 x 1024,

	HD 720p 1280 x 720, SD 432p 768 x 432, SD 480p (4:3) 720 x 480, VGA (4:3) 640 x 480
Video functions	
ALC	Mode (standard, fluorescent), Level Average vs. peak, Speed, Maximum gain; Adjustable
Shutter modes	Automatic Electronic Shutter (AES); 1/25 min; 1/15,000 max; Default shutter
Day/night modes	Auto (adjustable switch points); Color; Monochrome
WDR technology	HDR
Field of view adjustment	Motorized pan, tilt, roll; Autofocus
Camera functionality	Mirror image; Rotation 90°; Rotation 180°; Rotation 270° including upright mode; Backlight compensation (BLC); Intelligent dynamic noise reduction; Contrast enhancement; Sharpness enhancement; Intelligent defog; Pixel counter; Tamper detection; Saturation; Brightness
Camera LED	Auto disable; Enable; Disable
White balance (K)	2,000 K - 10,000 K
White balance modes	Basic; Standard; Dominant color; Manual mode; Hold mode; 4 auto- matic modes; Sodium lamp
Number of privacy masks	8 independent areas, fully program- mable
Display stamping	Name; Logo; Date/time; Alarm message
Scene modes	Traffic; Night optimized; Vibrant; Low bitrate; Sports & gaming; Retail Intelligent AE; Indoor; Outdoor; Li- cense plate recognition
Positioning	Mounting height; Coordinates
Video content analysis	
Analysis type	IVA Pro Buildings; IVA Pro Perimeter IVA Pro Privacy; Camera Trainer

Alarm triggers  Any object; Object in field; Line crossing; Enter / leave field; Loitering; Follow route; Idle / removed object; Counting; Occupancy; Crowd density estimation; Condition change; Similarity search; Flow / counter flow; Objects stopping or starting to move  Object filters  Duration; Size; Aspect ratio; Speed; Direction; Color; Object classes (6)  Tracking modes  Standard (2D) tracking; 3D tracking; 3D people tracking; Ship tracking; Museum mode  Calibration  3D auto calibration  Number of possible alarm rules (simultaneously)  Additional functionalities  Tamper detection  IVA Pro Traffic; IVA Pro Appearance; IVA Pro Personal Protective Equipment; IVA Pro Visual Gun Detection; Intelligent Audio Analytics: T3 / T4 alarm detection  Available with a future FW release: IVA Pro License Plate; IVA Pro Dangerous Goods Signs; IVA Pro License Plate; IVA Pro Vehicle Make Model; Intelligent Audio Analytics: Gunshot detection  Storage  Internal storage  5-s-pre-alarm-recording  Memory card slot  Dual micro SDHC; Dual micro SDXC; Dual micro SDXC; Dual micro SD card up to 2 TB  Dual micro SD-card slot configurations  Mirror (redundant storage); Failover (extended service interval); Extend (maximum retention time); Automatic Network Replenishment		
Direction; Color; Object classes (6)  Tracking modes  Standard (2D) tracking; 3D tracking; 3D people tracking; Ship tracking; Museum mode  Calibration  3D auto calibration  Number of possible alarm rules (simultaneously)  Additional functionalities  Tamper detection  Supported analytics  IVA Pro Traffic; IVA Pro Appearance; IVA Pro Personal Protective Equipment; IVA Pro Visual Gun Detection; Intelligent Audio Analytics: T3 / T4 alarm detection  Available with a future FW release: IVA Pro License Plate; IVA Pro Vehicle Make Model; IVA Pro Dangerous Goods Signs; IVA Pro License Plate + Make Model; Intelligent Audio Analytics: Gunshot detection  Storage  Internal storage  5-s-pre-alarm-recording  Memory card slot  Dual micro SDHC; Dual micro SDXC; Dual micro SDXC; Dual micro SD card up to 2 TB  Dual micro SD-card slot configurations  Mirror (redundant storage); Failover (extended service interval); Extend (maximum retention time); Auto-	Alarm triggers	crossing; Enter / leave field; Loitering; Follow route; Idle / removed object; Counting; Occupancy; Crowd density estimation; Condition change; Similarity search; Flow / counter flow; Objects stopping or
3D people tracking; Ship tracking; Museum mode  Calibration 3D auto calibration  Number of possible alarm rules (simultaneously)  Additional functionalities Tamper detection  Supported analytics IVA Pro Traffic; IVA Pro Appearance; IVA Pro Personal Protective Equipment; IVA Pro Visual Gun Detection; Intelligent Audio Analytics: T3 / T4 alarm detection  Available with a future FW release: IVA Pro License Plate; IVA Pro Dangerous Goods Signs; IVA Pro License Plate + Make Model; Intelligent Audio Analytics: Gunshot detection  Storage  Internal storage 5-s-pre-alarm-recording  Memory card slot Dual micro SDHC; Dual micro SDXC; Dual micro SD card up to 2 TB  Dual micro SD-card slot configurations Mirror (redundant storage); Failover (extended service interval); Extend (maximum retention time); Auto-	Object filters	
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dio Analytics: Gunshot detection  Storage  Internal storage  5-s-pre-alarm-recording  Memory card slot  Dual micro SDHC; Dual micro SDXC; Dual micro SD card up to 2 TB  Dual micro SD-card slot configura- tions  Mirror (redundant storage); Failover (extended service interval); Extend (maximum retention time); Auto-	Supported analytics	IVA Pro Personal Protective Equipment; IVA Pro Visual Gun Detection; Intelligent Audio Analytics: T3 / T4 alarm detection  Available with a future FW release: IVA Pro License Plate; IVA Pro Dangerous Goods Signs; IVA Pro License
Internal storage  5-s-pre-alarm-recording  Memory card slot  Dual micro SDHC; Dual micro SDXC; Dual micro SD card up to 2 TB  Dual micro SD-card slot configura- tions  Mirror (redundant storage); Failover (extended service interval); Extend (maximum retention time); Auto-		_
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Dual micro SD card up to 2 TB  Dual micro SD-card slot configura- tions  Mirror (redundant storage); Failover (extended service interval); Extend (maximum retention time); Auto-	Internal storage	5-s-pre-alarm-recording
tions (extended service interval); Extend (maximum retention time); Auto-	Memory card slot	
	<del>_</del>	(extended service interval); Extend (maximum retention time); Auto-
Inputs and outputs		

Shielded RJ45

10 kOhm typical; max. 1 Vrms

1.5 kOhm typical; 1 Vrms

Yes

Ethernet

Audio line in

Audio line out

Built-in microphone

Alarm inputs	2
Alarm outputs	1
Power output	12 VDC, max 50mA
Surge protection	1 kV; 1 kA to ground (8/20 μs)
Fiber optics (sold separately)	The Fiber Optic Ethernet Media Converter kit (VG4-SFPSCKT) installed inside a Surveillance Cabinet (NBA-7070-PA0, NBA-7070-PA1 or NBA-7070-PA2) provides the fiber optic interface to the mounted camera
Audio	
Compression and sampling rate	G.711 8 kHz; L16 16 kHz; AAC-LC 80kbps 16 kHz; AAC-LC 48kbps 16 kHz
Minimum signal-to-noise ratio (dB)	>50 dB
Audio streaming	Full duplex; Half duplex
Network	
Protocols / standards	IPv4; IPv6; UDP; TCP; HTTP; HTTPS RTP/SRTP/RTCP; RTSP/RTSPS; IGMP V2/V3; ICMPv6; FTP/Secure FTP; ARP; DHCP; APIPA (Auto-IP, link local address); NTP (SNTP); SNMP (V1, MIBII); SNMP (V3, MIBII); 802.1x, EAP/TLS; DNS; DNSv6; SMTP; iSCSI; UPnP (SSDP); DiffServ (QoS); LLDP; SOAP; CHAP; Digest authentication, SCEP
Ethernet type	10/100/1000BASE-T; Auto-sensing; Full / half duplex
Conformity	ONVIF Profile S; ONVIF Profile G; ONVIF Profile T; Auto-MDIX; ONVIF Profile M
Platform	
Common Product Platform	CPP14
Data security	
Crypto coprocessor (TPM)	RSA 4096 bit; AES/CBC 256 bit
PKI	X.509 certificates
End-to-end encryption	Full end-to-end with supported VMS

Encryption	TLS 1.2; AES 256; AES 128; TLS 1.3
Local storage encryption	XTS-AES
Video authentication	MD5; SHA-1; SHA-256; Checksum
Firmware protection	Signed firmware; Secure boot; Software sealing

#### Mechanical

Material	Housing: Aluminum
Bubble material	Clear polycarbonate
Pan range (°)	0° – 361°
Tilt range (°)	-3° – 85°
Roll range (°)	-95° – 95°
Dimensions (Ø x H) (mm)	175 mm x 148 mm
Dimensions (Ø x H) (in)	6.9 in x 5.7 in
Weight (kg)	2.30 kg
Weight (lb)	5.07 lb
Color (RAL)	RAL 9003 Signal white
Mounting type	Surface-mounted

#### Environmental

Operating temperature (°C) $ -50  ^{\circ}\text{C} - 60  ^{\circ}\text{C}; \text{ Up to } 74  ^{\circ}\text{C according to NEMA TS } 2\text{-}2021, \text{ para } 2.1.5.1  \text{ using fig. } 2.1  \text{ test profile} $ $ -58  ^{\circ}\text{F} - 140  ^{\circ}\text{F}; \text{ Up to } 165  ^{\circ}\text{F}  \text{ according to NEMA TS } 2\text{-}2021, \text{ para } 2.1.5.1  \text{ using fig. } 2.1  \text{ test profile} $ $ -30  ^{\circ}\text{C} - 70  ^{\circ}\text{C} $ $ -30  ^{\circ}\text{C} - 70  ^{\circ}\text{C} $ $ -22  ^{\circ}\text{F} - 158  ^{\circ}\text{F} $ $ -22  ^{\circ}\text{F} - 158  ^{\circ}\text{F} $ $ -60  ^{\circ}\text{C}; \text{ Up to } 165  ^{\circ}\text{F}  \text{ according to NEMA TS } 2\text{-}2021, \text{ para } 2.1.5.1  \text{ using fig. } 2.1  \text{ test profile} $ $ -30  ^{\circ}\text{C} - 70  ^{\circ}\text{C} $ $ -22  ^{\circ}\text{F} - 158  ^{\circ}\text{F} $ $ -22  ^{\circ}\text{F} - 158  ^{\circ}\text{F} $ $ -40  ^{\circ}\text{C} $ $ -40  ^{\circ}\text{C} $ $ -40  ^{\circ}\text{C} $ $ -60  ^{\circ}\text{C}; \text{ Up to } 165  ^{\circ}\text{F}  \text{ according to NEMA TS } 2\text{-}2021, \text{ para } 2.1.5.1  \text{ using fig. } 2.1  \text{ test profile} $ $ -30  ^{\circ}\text{C} - 70  ^{\circ}\text{C} $ $ -22  ^{\circ}\text{F} - 158  ^{\circ}\text{F} $ $ -20  ^{\circ}\text{C} - 70  ^{\circ}\text{C} $ $ -40  ^{\circ}\text{C} $ $ -40  ^{\circ}\text{F} $ $ -93  ^{\circ}\text{C} - 100  ^{\circ}\text{C} $ $ -98  ^{\circ}\text{C} - 100  ^{\circ}\text$		
cording to NEMA TS 2-2021, para 2.1.5.1 using fig. 2.1 test profile  Storage temperature (°C) -30 °C - 70 °C  Storage temperature (°F) -22 °F - 158 °F  Cold start temperature (°C) -40 °C  Cold start temperature (°F) -40 °F  Operating relative humidity, noncondensing (%) 5% – 93%  Operating relative humidity, condensing (%) 5% – 100%	Operating temperature (°C)	ing to NEMA TS 2-2021, para
Storage temperature (°F)  Cold start temperature (°C)  Cold start temperature (°F)  -40 °C  -40 °F  Operating relative humidity, noncondensing (%)  Operating relative humidity, condensing (%)  5% – 100%	Operating temperature (°F)	cording to NEMA TS 2-2021, para
Cold start temperature (°C)  Cold start temperature (°F)  Operating relative humidity, noncondensing (%)  Operating relative humidity, condensing (%)  5% – 100%	Storage temperature (°C)	-30 °C − 70 °C
Cold start temperature (°F)  Operating relative humidity, noncondensing (%)  Operating relative humidity, condensing (%)  5% – 93%  5% – 100%	Storage temperature (°F)	-22 °F – 158 °F
Operating relative humidity, non-condensing (%)  Operating relative humidity, condensing (%)  5% – 93%  5% – 100%	Cold start temperature (°C)	-40 °C
condensing (%)  Operating relative humidity, condensing (%)  5% – 100%	Cold start temperature (°F)	-40 °F
densing (%)		5% – 93%
Storage relative humidity (%) 0% – 98%		5% – 100%
	Storage relative humidity (%)	0% – 98%

Impact protection	IK11
IP rating	IP66; IP67; IP6K9K
Degree of protection	NEMA type 4X
Country of origin	Portugal

#### **Ordering information**

## NDE-8703-RL Fixed dome 6MP HDR 3.9-10mm PTRZ IP67

Fixed dome camera 6 MP with starlight, HDR, IVA Pro Buildings, IVA Pro Perimeter, IVA Pro Privacy, IP66/IP67, IK11, H.264/H.265, 3.9-10 mm lens, IR Order number **NDE-8703-RL** 

#### **Accessories**

#### NDA-8000-CBL Clear replacement bubble

Clear replacement bubble.
Order number **NDA-8000-CBL** 

#### **NDA-8000-TBL Tinted Bubble**

Tinted bubble for FLEXIDOME IP 8000i and FLEXIDOME 8100i cameras

Order number NDA-8000-TBL

#### NDA-8000-HCBL Hydrophilic bubble

Hydrophilic bubble for FLEXIDOME IP 8000i and FLEXIDOME 8100i cameras

Order number NDA-8000-HCBL

#### NDA-8000-WPIR On-camera weather protector IR

On camera weather protector for FLEXIDOME 8100i IR cameras

Order number NDA-8000-WPIR

#### NDA-8000-PIPWIR Pendant interface plate, outdoor IR

Pendant interface plate with weather protector for FLEXIDOME 8100i IR cameras

Order number NDA-8000-PIPWIR

#### NDA-8002-PLEN In-ceiling plenum rated kit

Plenum-rated in-ceiling mount kit for FLEXIDOME IP 8000i and FLEXIDOME 8100i cameras.

Order number NDA-8002-PLEN

#### NDA-8002-IC In-ceiling mount kit

In-ceiling mount kit with microphone support for FLEXIDOME 8000i and FLEXIDOME 8100i cameras.

Order number NDA-8002-IC

#### NDA-8000-PCIR Paintable cover, 4 pcs, IR

Paintable cover for FLEXIDOME 8100i IR cameras

Order number NDA-8000-PCIR

#### NDA-U-WMT Pendant wall mount

Universal wall mount for dome cameras, white Order number **NDA-U-WMT** 

#### NDA-U-PMT Pendant pipe mount, 12" (31cm)

Universal pipe mount for dome cameras, 31 cm, white Order number **NDA-U-PMT** 

#### NDA-U-PMTE Pendant pipe extension, 20" (50cm)

Extension for universal pipe mount, 50 cm, white Order number **NDA-U-PMTE** 

#### NDA-U-PSMB Pendant wall/ceiling mount SMB

Surface mount box (SMB) for wall mount or pipe mount.

Order number NDA-U-PSMB

#### NDA-U-PMAS Pole mount adapter small

Pole mount adapter small

Universal pole mount adapter, white; small.

Order number NDA-U-PMAS

#### NDA-U-PMAL Pole mount adapter large

Universal pole mount adapter, white; large Order number **NDA-U-PMAL** 

#### **NDA-U-RMT Pendant parapet mount**

Universal roof mount for dome cameras, white, for outdoor usage

Order number NDA-U-RMT

#### NDA-U-CMT Corner mount adapter

Universal corner mount, white Order number **NDA-U-CMT** 

#### NDA-U-PA0 Surveillance cabinet 24VAC

Surveillance cabinet, 24 VAC input, 24 VAC output, IP66 Order number **NDA-U-PA0** 

#### NDA-U-PA1 Surveillance cabinet 120VAC

Surveillance cabinet, 100 - 120 VAC 50/60 Hz input, 24 VAC output, IP66

Order number NDA-U-PA1

#### NDA-U-PA2 Surveillance cabinet 230VAC

Surveillance cabinet, 230 VAC input, 24 VAC output, IP66

Order number NDA-U-PA2

#### NDA-U-WMP Wall mount plate

Back plate for universal wall mount, corner mount and pole mount, white, IP66

Order number NDA-U-WMP

#### NDA-U-PMTS Pendant pipe mount, 4" (11 cm)

Universal pendant pipe mount for dome cameras, 11 cm (4"), white

Order number NDA-U-PMTS

#### NDA-U-DWMT Dual pendant wall mount

Universal dual wall mount for dome cameras

Order number NDA-U-DWMT

#### LTC 9230/01 Parapet roof mount adapter

Flat Roof Mount Adapter for mounting a unit in an upright position on a flat surface.

Order number LTC 9230/01

#### NBA-7070-PA0 Surveillance cabinet 24VAC

Surveillance cabinet, 24 VAC, IK10 Order number **NBA-7070-PA0** 

#### NBA-7070-PA1 Surveillance cabinet 120VAC

Surveillance cabinet, 120 VAC, IK10 Order number **NBA-7070-PA1** 

#### NBA-7070-PA2 Surveillance cabinet 230VAC

Surveillance cabinet, 230 VAC, IK10 Order number **NBA-7070-PA2** 

#### NDA-8000-CND Conduit adapter, 4 pcs

Conduit adapter for cameras, 4 pcs

Order number NDA-8000-CND

#### **Software Options**

#### **MVC-IVA-TRA IVA Pro Traffic**

Video analytics software based on deep neural network technology for traffic monitoring and Automatic Incident Detection.

Order number MVC-IVA-TRA

#### MVC-IVA-APC IVA Pro Appearance

Video analytics software based on deep neural network technology for extracting people appearance for a later forensic search; can be used as a surveillance or counting solution

Order number MVC-IVA-APC

#### **MVC-IVA-PPE IVA Pro PPE**

Video analytics software based on deep neural network technology for detecting personal protective equipment.

Order number MVC-IVA-PPE

#### MVC-IVA-LPR IVA Pro License Plate

Video analytics software based on deep neural network technology for detecting license plate information.

#### Order number MVC-IVA-LPR

Video analytics software based on deep neural network technology for detecting vehicle information.

Order number MVC-IVA-MMR

#### MVC-IVA-DGS IVA Pro Dangerous Good Signs

MVC-IVA-MMR IVA Pro Vehicle Make Model

Video analytics software based on deep neural network technology for detecting dangerous good signs.

Order number MVC-IVA-DGS

#### MVC-IVA-LPRX IVA Pro License Plate + Make Model

Video analytics software based on deep neural network technology for detecting license plate and vehicle information.

Order number MVC-IVA-LPRX

#### MVC-IVA-VGD IVA Pro Visual Gun Detection

Video analytics software based on deep neural network technology, designed to detect upright persons and brandished guns.

Order number MVC-IVA-VGD

#### MVC-IAA-GUN Gunshot Detector License, perpetual

Gunshot Detector License, perpetual

Order number MVC-IAA-GUN



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