

## NDE-5704-A Fixed dome 8MP HDR 3.2-10.5mm IP66

### FLEXIDOME outdoor 5100i



- ▶ 4K ultra HD for highly detailed images
- ▶ Starlight camera technology with excellent low-light performance
- ▶ IVA Pro brings highly reliable deep-learning based detection of persons and vehicles to scenes ranging from sterile zones to crowded and congested
- ▶ High Dynamic Range to see every detail in both bright and dark areas of the scene

The camera is a versatile and professional surveillance camera for outdoor monitoring. It delivers exceptional image quality, starlight performance and High Dynamic Range at resolution 4K ultra HD for highly detailed image for demanding security and surveillance network requirements. Built-in Intelligent Video Analytics Pro (IVA Pro) enriches full situational awareness and triggers relevant alerts.

The cameras offer a 1/2.8" sensor and HDR technology at resolution 4K ultra HD that provides high performance in extreme low light environments. The modular structure design uses a click and rotate mechanism on mounting plate or base that requires no hardware to secure the camera to housing for fast installation, including compatibility with various mounting options.

#### Functions

##### **H.265 high-efficiency video encoding**

The camera is designed on the most efficient and powerful H.264 and H.265/HEVC encoding platform. The camera is capable of delivering high-quality and high-resolution video with very low network load. With a doubling of encoding efficiency, H.265 has become the new compression standard of choice for IP video surveillance systems.

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

The camera comes with IVA Pro Buildings pre-installed and brings highly reliable deep-learning based detection and tracking of persons and vehicles to scenes ranging from sterile zones to crowded and

congested. Being extremely resistant to false triggers caused by challenging environments with rain, wind (moving trees), snow, hail, and water reflections as well as shadows and bugs, it reliably detects, tracks, and classifies objects. A smart set of alarm and counter rules allows to alert you when predefined alarms are triggered, and to forensically search with high efficiency through recordings. Configuration effort is minimized and made easy by removing the need for calibration.

Optionally the camera can be licensed with IVA Pro Perimeter or IVA Pro Traffic to optimize the camera analytics for specific enterprise use-cases.

##### **Two-way audio**

Two-way audio allows the operator to communicate with visitors or intruders via an external audio line input and output. By using the external microphone, audio detection can be used to generate alarms to alert the security operator quicker and act more proactively.

##### **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:

PRELIMINARY







Camera processing latency	<120 ms (at 8MP30) (Camera-internal latency only, achievable with settings excluding all image enhancements)
GOP structure	IP; IBP; IBBP
Frame rate (fps)	1 fps – 30 fps
Video signal-to-noise ratio (dB)	>55 dB

### Video resolution

4K UHD	3840 × 2160
Upright mode 4K UHD	2160 × 3840
6MP	3264 × 1840
Upright mode 6MP	1840 × 3264
4MP	2688 × 1612
Upright mode 4MP	1612 × 2688
2.8MP (4:3)	1920 × 1440
1080p HD	1920 × 1080
1.3 MP	1536 × 864
1.3 MP (5:4)	1280 × 1024
HD 720p	1280 × 720
SD 432p	768 × 432

### Video functions

Day/night modes	Auto (adjustable switch points); Color; Monochrome
Camera functionality	Mirror image; Rotation 90°; Rotation 180°; Rotation 270° including upright mode; Backlight compensation (BLC); Sharpness enhancement; Intelligent defog; Pixel counter; Saturation; Brightness; Video watermarking; Display stamping; Location; Electronic image stabilization (gyro-based)
White balance (K)	2,500 K – 10,000 K
White balance modes	Basic; Standard; Sodium vapor; Manual mode; Hold mode; 3 automatic modes

Shutter modes	Automatic Electronic Shutter (AES); 1/25 min; 1/15,000 max; Default shutter
Number of privacy masks	8
Scene modes	Multiple default modes

### Video content analysis

Analysis type	Intelligent Video Analytics Pro Buildings
Alarm triggers	Any object; Object in field; Line crossing; Enter / leave field; Loitering; Follow route; Counting; Occupancy; Condition change; Similarity search; Objects stopping or starting to move
Object filters	Duration; Size; Aspect ratio; Direction; Color; Object classes
Object classes	Available by default: Person, Vehicle Available with optional IVA Pro: Bicycle, Motorcycle, Truck, Bus
Audio detection	Detection of audio to generate an alarm
Supported analytics	IVA Pro Perimeter (license); IVA Pro Traffic (license)

### Optical

Lens type	3.2 to 10.5 mm
F-stop	1.6
Iris control	P-iris
IR corrected	Yes
Day / Night	Switchable IR-cut filter
Zoom/focus control	Motorized
Horizontal field of view	105° - 31°
Vertical field of view	57° - 18°

### Inputs and outputs

Audio line in	0.6 Vrms max, 10 kOhm typical
Audio line out	1.0 Vrms at 10 kOhm typical
Ethernet	Shielded RJ45

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**Audio**

Audio input	Line-in; Mic-level input
Audio output	Line-out
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

**Storage**

Internal storage	5-s-pre-alarm-recording
Memory card slot	Micro SDHC; Micro SDXC (a memory card of Class 6 or higher is recommended for HD recording)
Memory card capacity (GB)	32 GB for Micro SDHC; 2 TB for Micro SDXC
Industrial SD cards	Extreme lifetime and health monitoring support that provides early service indication (if supported by the SD card)
Recording mode	Continuous (ring); Scheduled; Alarm; Event

**Data security**

Crypto coprocessor (TPM)	AES/CBC 256 bit; RSA 4096 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

**Capacity**

Number of RJ45 connections	1
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**Connectivity**

Number of USB ports	1 (USB 2.0 Type C, for use with wireless USB dongle for setup and commissioning, sold separately)
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**Network**

Ethernet type	10/100BASE-T; Auto-sensing; Full / half duplex
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**System integration**

Protocols / standards	IPv4; IPv6; UDP; TCP; HTTP; HTTPS; RTP/RTCP; IGMP V2/V3; ICMP; ICMPv6; RTSP; FTP; ARP; DHCP; APIPA (Auto-IP, link local address); NTP (SNTP); SNMP (V1, MIBII); SNMP (V3, MIBII); 802.1x, EAP/TLS; DNS; DNSv6; DDNS (DynDNS.org, selfHOST.de, no-ip.com); SMTP; iSCSI; UPnP (SSDP); DiffServ (QoS); LLDP; SOAP; CHAP; Digest authentication
Conformity	ONVIF Profile S; ONVIF Profile G; ONVIF Profile T; Auto-MDIX; ONVIF Profile M

**Mechanical**

3-axis adjustment (pan / tilt / rotation)	355° / 85° / 350°
Dimensions (Ø x H) (mm)	148 mm x 122 mm
Dimensions (Ø x H) (in)	5.83 in x 4.80 in
Weight (g)	1,130 g
Weight (lb)	2.49 lb
Color	White, Black
Color in RAL	RAL 9003 Signal white, RAL 9017 Traffic black
Gyroscope	Yes
Bubble material	Clear polycarbonate, clear with anti-scratch coating
Material	Aluminum
Material finish	Dehumidifying membrane; Waterproof connection area
Mounting type	Surface-mounted (cable box included); 4-inch square junction box, single and double gang box, 1/4-inch 20 UNC screw thread
Conduit	3/4-inch NPT (M25) and 1/2-inch NPT (M20) conduit side entry

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**Environmental**

Operating temperature (°C)	-40 °C – 55 °C for continuous operation; Up to 74 °C according to NEMA TS2-2003 (R2008), para 2.1.5.1 using fig. 2.2.7.3~2.2.7.7 test profile
Operating temperature (°F)	-40 °F – 131 °F for continuous operation; Up to 165 °F according to NEMA TS2-2003 (R2008), para 2.1.5.1 using fig. 2.2.7.3~2.2.7.7 test profile
Cold start temperature (°C)	-20 °C
Cold start temperature (°F)	-4 °F
Storage temperature (°C)	-30 °C – 70 °C
Storage temperature (°F)	-22 °F – 158 °F
Operating relative humidity, non-condensing (%)	5% – 93%
Operating relative humidity, condensing (%)	5% – 100%
Storage relative humidity (%)	0% – 98%
Impact protection	IK10
IP rating	IP66
Degree of protection	NEMA type 4X
Usage	Outdoor
Sustainability	PVC-free
Country of origin	Thailand

**Ordering information**

**NDE-5704-A Fixed dome 8MP HDR 3.2-10.5mm IP66**  
Professional IP fixed dome camera for outdoor 30 fps surveillance with H.264/H.265 and IVA Pro Buildings, 8 MP, IP66, IK10  
NDAA compliant  
Order number **NDE-5704-A**

**Accessories**

**NDA-5070-IC In-ceiling mount kit**  
In-ceiling mount kit for FLEXIDOME indoor 5100i, FLEXIDOME indoor 5100i IR, FLEXIDOME outdoor 5100i, and FLEXIDOME outdoor 5100i IR  
Order number **NDA-5070-IC**

**NDA-5070-PLEN In-ceiling plenum kit, 148mm**

Plenum-rated in-ceiling mount kit for FLEXIDOME indoor 5100i, FLEXIDOME indoor 5100i IR, FLEXIDOME outdoor 5100i, and FLEXIDOME outdoor 5100i IR  
Order number **NDA-5070-PLEN**

**NDA-5070-PIPW Pendant interface plate with weather cap**

Pendant interface plate including weather protector for FLEXIDOME outdoor 5100i and FLEXIDOME outdoor 5100i IR  
Order number **NDA-5070-PIPW**

**NDA-5070-LWMT L shape wall mount for FLEXIDOME 5100i**

L-shaped wall mount for FLEXIDOME indoor 5100i, FLEXIDOME indoor 5100i IR, FLEXIDOME outdoor 5100i, FLEXIDOME outdoor 5100i IR, and FLEXIDOME IP 3000i IR  
Order number **NDA-5070-LWMT**

**NDA-5070-PIP Pendant interface plate NDE-570\***

Pendant interface plate for FLEXIDOME outdoor 5100i, and FLEXIDOME outdoor 5100i IR  
Order number **NDA-5070-PIP**

**NDA-5070-PC Paintable cover, FLEXIDOME 5100i, 4pcs**

Paintable cover (4 pieces) for FLEXIDOME 5100i and FLEXIDOME 5100i IR  
Order number **NDA-5070-PC**

**NDA-5070-CBL Bubble, clear for FLEXIDOME 5100i**

Clear replacement bubble for FLEXIDOME indoor 5100i and FLEXIDOME outdoor 5100i  
Order number **NDA-5070-CBL**

**NDA-5070-TBL Bubble, tinted for FLEXIDOME 5100i**

Tinted bubble for FLEXIDOME indoor 5100i and FLEXIDOME outdoor 5100i  
Order number **NDA-5070-TBL**

**NDA-U-CBB Conduit back box, 148mm**

Outdoor conduit back box, 148mm, IP66 rated  
Order number **NDA-U-CBB**

**NDA-U-CMT Corner mount adapter**

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

**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-PSMB Pendant wall/ceiling mount SMB**

Surface mount box (SMB) for wall mount or pipe mount.  
Order number **NDA-U-PSMB**

**NDA-U-WMT Pendant wall mount**

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

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**NDA-U-WMTG Pendant wall mount, gang box**

Universal wall mount, compatible with gang box installation for fixed dome cameras only, white  
Order number **NDA-U-WMTG**

**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-PMTG Pendant pipe mount, gang box**

Universal pipe mount, compatible with gang box installation for fixed dome cameras only, white  
Order number **NDA-U-PMTG**

**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-RMT Pendant parapet mount**

Universal roof mount for dome cameras, white, for outdoor usage  
Order number **NDA-U-RMT**

**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**

**NPD-3001-WAP Portable installation tool**

Bosch camera portable and wireless installation tool  
Order number **NPD-3001-WAP**

**NPD-5001-POE Midspan, 15W, single port, AC in**

Power-over-Ethernet midspan injector for use with PoE enabled cameras; 15.4 W, 1-port  
Weight: 200 g (0.44 lb)  
Order number **NPD-5001-POE**

**NPD-5004-POE Midspan, 4 port x 15W, AC in**

Power-over-Ethernet midspan injector for use with PoE enabled cameras; 15.4 W, 4-ports  
Weight: 620 g (1.4 lb)  
Order number **NPD-5004-POE**

**MSD-064G IP SECURITY MICROSD CARD 64GB**

64 GB industrial microSD card with health status monitoring  
Order number **MSD-064G**

**MSD-128G IP SECURITY MICROSD CARD 128GB**

128 GB industrial microSD card with health status monitoring  
Order number **MSD-128G**

**MSD-256G IP SECURITY MICROSD CARD 256GB**

256 GB industrial microSD card with health status monitoring  
Order number **MSD-256G**

**MNT-ICP-FDC Drop ceiling support kit for FLEXIDOME**

Suspension ceiling support kit for FLEXIDOME IP 2000/4000/5000/5100i/7000 (except RD series) and panoramic 5000/7000 series cameras  
Order number **MNT-ICP-FDC**

**NCA-WLAN-EU Wireless installation dongle EU**

Wireless installation dongle for wireless commissioning  
Order number **NCA-WLAN-EU**

**NCA-WLAN-NA Wireless installation dongle NA**

Wireless installation dongle for wireless commissioning for North America  
Order number **NCA-WLAN-NA**

**NDA-5070-COV Conduit cover for NDE-570\*, 50pcs**

Conduit cover without knockout for FLEXIDOME outdoor 5100i and FLEXIDOME outdoor 5100i IR  
Order number **NDA-5070-COV**

**Software Options****MVC-IVA-PER IVA Pro Perimeter**

Video analytics software for mission-critical perimeter security.  
Order number **MVC-IVA-PER**

**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**

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PRELIMINARY