

NDP-5523-Z30L PTZ 4MP HDR 30x IP66 pendant IR

AUTODOME IP starlight 5100i IR



Specially designed for covertness, and tuned for applications where surveillance in scenes with changing light levels is necessary, the camera has an integrated 30X optical zoom to identify people at a distance of more than 320 m (1050 ft).

The new HDR technology (HDR X) is ideal for PTZ cameras. With the motion-optimized HDR feature, operators can use HDR imaging in scenes with challenging light levels without seeing blur when the camera is moving.

With a 1/1.8-inch, ultra HD sensor and integrated IR and white light illumination, the camera provides superior low-light and no-light performance for outstanding image quality with sharp focus details and excellent color reproduction even under challenging lighting conditions.

The integrated, rain-sensing wiper automatically wipes water from the camera window to ensure outstanding image quality in bad weather.

Parts included

Quantity	Component
1	AUTODOME IP starlight 5100i camera
1	Screwdriver, T15 Torx
4	MAC address labels
1	Pendant interface plate
1	M4 screw
1	Quick Installation Guide

- ▶ 30X, 4MP high detail at fast speeds (60 fps)
- ▶ Starlight technology with 1/1.8 inch ultra HD sensor for excellent low-light performance
- ▶ HDR X technology with up to 133dB dynamic range and fewer motion-related artifacts
- ▶ Combination of 320 m (1050 ft) IR (850 nm) + White light LEDs
- ▶ Rain-sensing wiper for improved images in rain and in dirty urban conditions

Quantity	Component
1	Safety instructions

Technical specifications

Sensor type	1/1.8 inch ultra HD CMOS
Sensor resolution	2688 x 1520 (4 MP)
Lens	30x motorized zoom 6.6 mm to 198 mm F1.5 to F4.8
Optical zoom Field of view (FOV)	2.1° to 58.5°
Focus	Automatic with manual override
Iris	Automatic with Iris priority feature
Digital zoom	16x
Video sensitivity	3100K, reflectivity 89%, 1/30, F1.5, 30 IRE
Color	0.0101 lux
Monochrome	0.0016 lux
High dynamic range	133dB
Measured according to IEC 62676 Part 5	108dB

Gain Control	AGC, Variable 6 dB to 78 dB
Electronic Shutter Speed (AES)	0.64 sec to 1/66666 sec
Signal-to-Noise Ratio (SNR)	>55 dB
Day/Night switch	Automatic IR cut filter
Backlight Compensation (BLC)	On / Off / Intelligent Auto Exposure (IAE)
White Balance	Basic auto, Standard auto, Sodium lamp auto, Dominant color auto, Manual
Day/Night (mode)	Monochrome, Color, Auto
Defog mode feature	Improves visibility when viewing foggy or other low-contrast scenes.

Sector/Titling	16 independent sectors with 20 characters per title
Privacy Masks	32 individually configurable privacy masks
Privacy Masks pattern	Black, White, Gray, Auto (average background color)
Supported Languages	English, German, Spanish, French, Italian, Dutch, Polish, Portuguese, Russian, Japanese, Chinese (simplified)

Other functions	Intelligent Auto Exposure, Intelligent Dynamic Noise Reduction, Intelligent Streaming, Intelligent Defog, snap to zoom, VideoSDK, Bosch Video Client, BVMS, BVMS Viewer
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Video Content Analysis	
Analysis type	Essential Video Analytics
Configurations	Silent VCA / Profile 1/2 / Scheduled / Event triggered
Alarm rules (combinable)	Any object Object in field Line crossing Enter / leave field Loitering Follow route Idle / removed object Counting Occupancy Crowd density estimation Condition change

Video Content Analysis	
	Similarity search
Object filters	Duration Size Aspect ratio Speed Direction Color Object classes (4)
Calibration / Geolocation	Accelerometer data and camera height
Tamper detection	Maskable
Detection	Audio

Illumination

Number of LEDs, IR array	4
Wavelength	850 nm
Beam angle	10° FWHM (narrow) 54° FWHM (wide)

Performance Range, IR illuminator (based on DCRI criteria)

Detection	320 m (1050 ft)
Observation	250 m (820 ft)
Recognition	150 m (492 ft)
Identification	100 m (329 ft)

Number of LEDs, White light array	2
Color temperature	5600-6300K
Beam angle	55° FWHM
Light intensity (3m)	90 lux

Performance Range, White light (based on DCRI criteria)

Detection	60 m (197 ft)
Observation	50 m (164 ft)
Recognition	30 m (98 ft)
Identification	20 m (66 ft)

Mechanical

Pan speed	Normal: 0.1°/s - 120°/s (Pan) Turbo mode: 0.1°/s - 240°/s (Pan)
Tilt speed	Normal: 0.1°/s - 100°/s (Pan)
Pre-position speed	Pan: 240°/s Tilt: 100°/s
Pan Range	360° continuous
Tilt Angle	-90° to 5° (Auto-flip 190°)
Pre-position Accuracy	± 0.1° typ.
Pre-positions	256
Tours	Recorded tours: two (2), maximum total duration 15 minutes (depending on the amount of commands sent during recording) Pre-position tour: one (1), consisting of up to 256 scenes consecutively, and one (1), customized up to 64 scenes

Electrical

Power source	24 VAC IEEE 802.3at, Class 4 standard (PoE+) IEEE802.3bt, Type 3 standard
Power consumption (24 VAC / IEEE802.3bt, Type 3 standard)	21.2W / 29.5VAC (Heater OFF, Illumination OFF) Maximum 39.4W / 55.2VAC (Heater ON, Illumination ON) When using 24VAC power or IEEE802.3bt, the camera operates with heater and full intensity of IR and White light.
Power consumption (IEEE 802.3at)	Standard operation: 20.4W (Illumination OFF) Maximum consumption: 25W (Illumination ON) When using PoE+, the heater is always OFF. The maximum output of both IR and White light is only half intensity.

Network

Video compression	H.265 H.264 M-JPEG
Streaming	Four (4) streams: Two (2) configurable streams in H.264 or H.265 One (1) I-frame-only stream based on first stream One (1) M-JPEG Stream
Maximum frame rate	60fps at all resolutions
IP delay (typical)	60 fps: 200 ms

Ethernet	10/100BASE-T
Encryption	TLS 1.0, SSL, DES, 3DES, AES
Protocols	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, V3, MIB-II), 802.1x, DNS, DNSv6, DDNS (DynDNS.org, selfHOST.de, no-ip.com), SMTP, iSCSI, UPnP (SSDP), DiffServ (QoS), LLDP, SOAP, Dropbox™, CHAP, digest authentication
Interoperability	ONVIF Profile S, ONVIF Profile G, ONVIF Profile T, GB/T 28181

Resolution

1440p	2560 x 1440
1080p HD	1920 x 1080
720p HD	1280 x 720
1.3MP 5:4 (cropped)	1280 x 1024
D1 4:3 (cropped) (4:3)	704 x 576
640x480	640x480
432p SD	768 x 432
288p SD	512 x 288
144p SD	256 x 144

The average typical optimized bitrate in kbits/second for various frame rates is shown in the table below:

Bitrate 2560 x 1440

FPS	H.264	H.265
60	8980	6720
30	5480	4120
25	4820	3620
15	3380	2520
8	2180	1640
4	1340	1000
2	840	620
1	520	380

Actual bitrate may vary depending on the scene, picture settings, and encoder profile settings.

Audio

Compression	G.711, 8kHz sampling rate L16, 16kHz sampling rate AAC, 16kHz sampling rate
Interface	1/1 Channel In/Out

Local Storage

Memory card slot	Support a memory card with a maximum of 32 GB (microSDHC) / 2 TB (microSDXC) (user-supplied). (An SD card of Class 6 or higher is recommended for HD recording.)
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User Connections

Ethernet	RJ45 10/100 Base-T
Alarm Inputs	2
Alarm Outputs	1 relay output 5 VDC, 150 mA maximum
Audio	1x mono line in, 1x mono line out
Signal line in	94 kOhm typical, 1 Vrms maximum
Signal line out	1 kOhm typical, 1 Vrms maximum

Environmental

Ingress Protection Rating/ Standard	IP66
External Mechanical Impact (IK Code or Impact rating)	IEC 62262 IK10 (excluding glass window/wiper)
Operating temperature (Input voltage 24 VAC)	-40°C to +60°C (-40 °F to +140 °F)
Operating temperature (Input voltage 802.3bt)	-20 °C to +60°C (-4 °F to +140 °F) OR -40 °C to +60 °C (-40 °F to +140 °F) ???
Operating temperature (Input voltage 802.3at)	-20 °C to +60°C (-4 °F to +140 °F) OR -40 °C to +60 °C (-40 °F to +140 °F) ???
Humidity	Up to 90% relative humidity (RH) (non-condensing)
Storage temperature	-40 °C to +60 °C (-40 °F to +140 °F)

Construction

Dimensions (W x D)	285 mm x 456 mm (11. in. x 18 in.)
Weight	9.9 kg (21.8 lb)
Material, housing	Aluminum
Material, sunshield	Aluminum
Material, window	Flat glass
Standard Color	White (RAL 9003)
Standard Finish	Corrosion-resistant, powder coat paint
Wiper	Integrated, long-life silicone wiper

Ordering information

NDP-5523-Z30L PTZ 4MP HDR 30x IP66 pendant IR
PTZ dome camera, 4MP HDR, 30x optical zoom, clear, IP66 pendant, IR
Order number **NDP-5523-Z30L | F.01U.359.951**

Services

EWE-AD5HD-IW 12mths wrty ext AUTODOME IP 5000 HD
12 months warranty extension without moving parts, wear parts are excluded
Order number **EWE-AD5HD-IW | F.01U.346.303**

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