

NWC-0495 DinionXF Day/Night IP Cameras

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Invented for life



- ▶ High quality Day/Night IP camera with mechanically switching IR-filter
- ▶ 15-bit DSP technology with XF-dynamic extended dynamic range
- ▶ DVD-quality, 4CIF video at up to 30 IPS
- ▶ Storage efficient tri-streaming: Dual MPEG-4/H.264 and M-JPEG simultaneously
- ▶ Power over Ethernet (IEEE 802.3af compliant)

Dinion^{XF} Day/Night IP cameras are modern, hybrid systems that support legacy-direct analog output, as well as modern network delivery. They can stream video simultaneously on both channels. Equipped with 15-bit DSP with XF-dynamic, they have an extended dynamic range for sharper, more detailed images with outstanding color reproduction. Supporting the award-winning Dinion^{XF} digital imaging technology, they provide proven, dependable service for the most demanding security and surveillance requirements.

Functions

Unsurpassed flexibility

The Dinion^{XF} Day/Night IP is a true hybrid camera. Equipped with both Ethernet and BNC connections, it can simultaneously stream IP video across a local or wide area network, and CVBS video via coaxial cable to support existing analog equipment. It can fit seamlessly into an existing analog system, making use of installed equipment, while providing new IP-based functionality.

There are many ways to access the camera's video: on a PC using a web browser, using Bosch's DiBos Digital Video Recorder, with VIDOS or BVMS video management systems, or via a Bosch IP video decoder for viewing on an analog CVBS or VGA monitor. The BNC connection provides direct input to a

conventional analog matrix switcher or DVR, further enhancing the camera's viewing and recording flexibility.

ONVIF

ONVIF (Open Network video Interface Forum) compliancy ensures integration with third party management systems and video network devices.

H.264 Baseline Profile Encoding

Firmware version 4.0 and higher enables the camera to use H.264 Baseline Profile to encode the video signal. This reduces the required bit rate for a given quality setting, or increases the quality while keeping the bit rate setting.

Because H.264 Baseline Profile does not support field encoding, interlaced video is not possible, thus resolution is limited to a maximum of 2CIF. H.264 encoding requires double the performance in respect to MPEG-4. Frame rate values must therefore be divided by two.

Efficient bandwidth and storage management

The cameras use H.264/MPEG-4 compression, bandwidth throttling, and multicasting capabilities to manage bandwidth and storage requirements efficiently, while delivering the best image quality and resolution. Bosch's innovative tri-streaming feature enables Dinion^{XF} Day/Night IP cameras to generate two

independent H.264/MPEG-4 streams and a M-JPEG stream simultaneously. This allows streaming of high-quality images for live viewing, while recording at a reduced frame rate, and streaming M-JPEG images to a remote PDA device at the same time. The M-JPEG video stream also provides easy integration with third-party JPEG or M-JPEG-compatible video management systems.

The Dinion^{XF} Day/Night IP cameras offer unparalleled recording options. Attached to the network, they can use iSCSI devices directly, as well as Network Video Recorders (NVRs). The iSCSI RAID5 storage support enables the cameras to function as a conventional DVR, while streaming high-performance live video across the network. The cameras also offer 10 Mb internal RAM storage.

Cost effective, simple installation

Dinion^{XF} IP cameras contain a built-in Power over Ethernet-(PoE) compliant network adapter. Power over Ethernet transmits power from the network switch, over the Ethernet cable, directly to the camera. This makes installation easier and less expensive, because cameras can now be installed in places where AC power is not available.

The on-screen display (OSD) simplifies back focus adjustment and network configuration, minimizing installation and support costs. The Lens Wizard automatically detects the lens type and helps focus the lens at the maximum opening to maintain proper focus throughout the 24-hour cycle. Unlike other IP cameras, no network connection, PC configuration utilities, or other tools are required to set up Dinion^{XF} Day/Night IP cameras.

Superior image quality

With a 1/3-inch CCD and Bosch's advanced digital signal processing, the Dinion^{XF} Day/Night IP provides outstanding image quality in virtually all situations. The highly accurate 15-bit digital signal is automatically processed to reveal every detail of the image in both the high and low-light areas of the scene simultaneously. MPEG-4 compression technology provides DVD-quality, 4CIF video at frame rates of up to 30 images per second for NTSC, and up to 25 IPS for PAL. Bosch's advanced H.264 compression technology reduces bandwidth and storage needs by up to 30% compared to traditional MPEG-4 IP compression.

In night mode, the NWC-0495 enhances low light viewing by switching the IR (infrared) filter out of the optical path and providing a monochrome image. The camera can switch from color to monochrome mode automatically by sensing the illumination level, manually via the alarm input, or remotely via a web browser. An internal, through-the-lens IR detector enhances monochrome mode stability by preventing the camera from returning to color mode when IR-illumination is dominant.

Intelligence

The Dinion^{XF} Day/Night IP supports increased intelligence at the edge that provides powerful tamper detection for various combined picture cases arising from: video loss, masking, hooding, defocusing, and diverted camera. Bosch also offers Intelligent Video Motion Detection (IVMD) as an additional licensable option. This provides Video Content Analysis (VCA) directly at the video input for even more advanced VCA.

Controls and indicators

- 5 control keys
- Lock slider
- Status LED

Interconnections

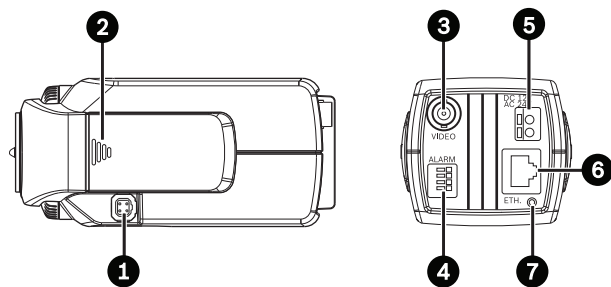
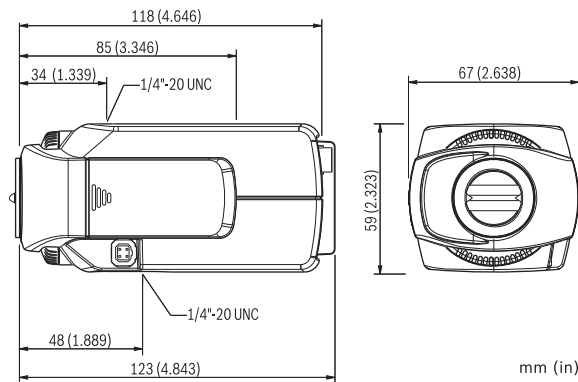
- BNC, video out
- 4-pole push in, alarm in, relay out
- 2-pole push in, external power
- RJ45

Certifications and approvals

Safety	acc. to EN 60950-1 (CE)
	acc. to UL 60950-1; CAN/CSA E 60950-1
Immunity	acc. to EN 50130-4 (CE)
Emission	acc. to EN 55022 class B (CE)
	acc. to EN 61000-3-2 (CE); EN 61000-3-3 (CE)
	acc. to FCC CFR 47 Part 15, Class B
	acc. to AS/NZS CISPR 22 (equal to CISPR 22)
Vibration	Camera with 500 g (1.1 lb) lens according to IEC60068-2-6

Region	Certification	
Europe	CE	Declaration of Conformity
USA	FCC	

Installation/configuration notes



Dimensions in mm (in)

1	Lens connector	5	Power supply input
2	Control buttons	6	10/100 Base-T Fast Ethernet
3	BNC video output	7	LED (power, link, traffic)
4	Alarm in, relay out		

Parts included

Quantity	Components
1	Dinion ^{XF} Day/Night IP Camera
1	Spare lens connector
1	C/CS mount conversion ring
1	Quick Installation Guide
1	CD-ROM with manual

Technical specifications

Electrical

Power	
Input Voltage	+11 to +36 VDC (700 mA)
	12 to 28 VAC (700 mA)
	Power over Ethernet

Power Consumption	8 VA (max)
Connector	2-pole push in

Video	
Video Compression	MPEG-4/H.264; M-JPEG
GOP Structure	I, IP
Data Rate	9.6 Kbps to 6 Mbps (const. and variable)
Sensor	1/3 in. interline CCD
Sensor Matrix	
PAL	752x582
NTSC	768x494

Resolutions and Frame Rates	PAL	NTSC
4CIF: 25/30 IPS	704 x 576	704 x 480
2CIF: 25/30 IPS	704 x 288	704 x 240
half D1: 25/30 IPS	352 x 576	352 x 480
CIF: 25/30 IPS	352 x 288	352 x 240
QCIF: 25/30 IPS	176 x 144	176 x 120

Video out	
Signal	1 x Analog composite (NTSC or PAL)
Connector	BNC, 75 Ohm
Video S/N	50 dB
Sensitivity	
Night Mode	(F1.2, 50% signal, scene reflect. 89%)
Color	0.08 lx (0.008 fc)
	0.59 lx (0.059 fc)

Minimum Illumination	
Night Mode	0.0038 lx (0.00038 fc)
Color	0.024 lx (0.0024 fc)
BLC	Off/area/level selectable
Gain	Auto, selectable to 28 dB (max)
White Balance	ATW (2500 to 10000 K)/AWB hold/man. WB selectable
Auto Black	On/off selectable
Sensitivity Up (SensUp)	Off/auto continuous up to 10 x
Dynamic Range	Up to 32 x
Dynamic Noise Reduction	Off/auto selectable
Contour	Sharpness enhancement, level selectable

Electronic shutter	Fixed, flickerless, default
PAL (auto)	1/50 s to 1/500000 s (auto)
NTSC (auto)	1/60 s to 1/500000 s (auto)
Alarm In	+5 VDC nominal, +40 VDC max.
Relay Out	30 VAC (max.) or +40 VDC, 10 VA continuous (max. 0.5 A)

Software control

Unit Configuration	Via web browser or Configuration Manager
Motion Detection	On/off
Flicker Control	50/60 Hz, selectable
Aperture correction	Horizontal and vertical, symmetrical
Firmware	Flash ROM, remote update

Network

Protocols	Telnet, RTP, HTTP, ARP, TCP, UDP, IP, ICMP, IGMPv2/v3, SNMP, 802.1x
Ethernet	10/100 Base-T, auto-sensing, half/full duplex, RJ45
Overall Unit Delay	100 ms (MPEG-4)
PoE	IEEE 802.3af compliant

Mechanical

Dimensions (H x W x D)*	59 x 67 x 123 mm (2.32 x 2.64 x 4.84 in.)
Weight (without lens)	Approx. 0.45 kg (1 lb)
Mounting	¼ in. tripod on top and bottom
Color	Gray, black, and wine red
Lens Mounting	C/CS, 5 mm (0.2 in) max. lens protrusion

* Without lens

Environmental

Operating Temperature	0 °C to +40 °C (+32 °F to +104 °F)
Storage Temperature	-25 °C to +70 °C (-13 °F to +158 °F)
Humidity	20% to 80% relative humidity (noncondensing)

Ordering information

NWC-0495-10P DinionXF Day/Night IP Camera

1/3-inch, high performance, 24 VAC / 12 VDC / PoE,
50 Hz

Order number **NWC-0495-10P**

NWC-0495-20P DinionXF Day/Night IP Camera

1/3-inch, high performance, 24 VAC / 12 VDC / PoE,
60 Hz

Order number **NWC-0495-20P**

Software Options

NWC-04X5-FS1

Dinion IP IVMD 1.0 VCA software license

Order number **NWC-04X5-FS1**

NWC-04X5-FS2

Dinion IP IVMD 2.0 VCA software license

Order number **NWC-04X5-FS2**

NWC-04X5-FS3

Dinion IP IVA 3.0 VCA software license

Order number **NWC-04X5-FS3**

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