

DF4820HD-DN/IR

HD-IR Camera, 2 Megapixel, 1080p/30, H.264, Day/Night (ICR), Integrated IR Illumination, Motor-driven Varifocal Lens, One-Push Autofocus, P-Iris, PoE, Outdoor Wall Mount Bracket



The **DF4820HD-DN/IR** is a **weather-proof 2-megapixel HD network camera** with automatic **Day/Night** switching and integrated **infrared illumination**. The camera provides **real-time Full HD video (1080p/30)** using the **H.264** codec, currently, the most advanced standard for **high-efficiency video compression**.

Besides a comprehensive set of automatic and manual image optimization functions and many other setting options, it features automatic **Day/Night** operation supported by integrated **ambient light sensing**, a **removable IR cut filter (ICR)** and an integrated **homogeneous IR illumination** provided by **semi-covert 850 nm high power LEDs** in order to meet even the most demanding of surveillance conditions.

In addition, the camera is equipped with a **motor-driven P-Iris megapixel varifocal lens**. Focal length (zoom), focus and iris (aperture) can be configured conveniently with a web browser. The **P-Iris control** technology, designed for a precise and automatic adjustment of the best iris position (optimum aperture), thereby realizes a significantly improved image quality¹⁾ with excellent contrast, brilliant clarity and enhanced detail resolution combined with a greater depth of field, under almost all lighting conditions.

In conjunction with the **Digital Image Shift** function, which provides for a **subsequent digital fine alignment of the image section**, a convenient and straightforward installation process of the camera is guaranteed.

Built into an **IP66-rated weather-proof enclosure**, the camera is designed for both indoor and for outdoor applications. The camera is operated via **Power over Ethernet** which allows for an easy, quick and cost-effective cabling and commissioning.

Features

- 1/2.5" CMOS image sensor
- Pure Digital Signal Processing
- Real-time Full HD video (1080p/30)
- Automatic Day/Night switching supported by integrated ambient light sensing and ICR function
- Homogeneous IR (infrared) illumination provided by integrated semi-covert 850 nm high power LEDs
- IR illumination range up to approx. 25 meters with a beam angle up to approx. 50 degrees
- Adjustable infrared intensity and Day/Night switching threshold level
- Minimum illumination 0 lux (with IR LED On)
- Motor-driven megapixel varifocal lens
- Zoom, focus and iris control conveniently adjustable via web browser
- One-Push AF with manual fine adjustment
- P-Iris control
- Resolution: SD (up to D1), HD (720p, 1080p, 2MP)
- Video compression: H.264, MJPEG
- Frame rate up to 30 fps
- Simultaneous Dual- or Tri-Streaming
- Automatic White Balance (ATW, One-Push AWB)
- Automatic Gain Control (AGC)
- Automatic Electronic Shutter (AES)
- Comprehensive set of image optimization functions like brightness, contrast, saturation and sharpness
- 3D Digital Noise Reduction (3D DNR)
- Privacy Zone Masking (hiding/masking of protected areas)
- Flip function (horizontal, vertical or both)
- Digital Image Shift
- Motion detection²⁾ with selectable sensitivity
- Alarm notification via DaVid Protocol²⁾, e-mail and FTP image upload
- Local video memory: SDHC card slot integrated
- Integrated microphone
- Voltage supply via PoE (Class 0, IEEE 802.3af)
- Weather-proof
- Outdoor wall mount bracket (with internal cable routing)
- ONVIF compliant
- DIN EN 50130-4 compliant

1) Compared to conventional DC auto iris lenses
2) Function in preparation

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Variants/Options

Variants	
005515	DF4820HD-DN/IR HD-IR camera, 2 megapixel, 1080p/30, H.264, Day/Night (ICR), integrated IR illumination, motor-driven varifocal lens, One-Push Autofocus, P-Iris, PoE, outdoor wall mount bracket, F1.2–F2.3 / 3–9mm
Power Supply	
004316	 PoE Midspan 30W Midspan power supply unit, 1× Ethernet port, 10/100/1000Base-T, 802.3at, 802.3af, 30 W
Wall Mount	
004386	 WCPA – Support Plate Adapter³⁾ Reinforcing support plate WCPA for adapting the wall brackets WBMA, WBOVA2 and IR housing wall mount bracket
Corner Mount	
004390	 WCWA – Corner Mount Adapter³⁾ Corner mount adapter WCWA for corner mounting
Pole Mount 65–110 mm	
004387	 WSFPA – Pole Mount Adapter³⁾ Pole mount adapter WSFPA for pole diameters 65–110 mm (2.6–4.3")
Pole Mount 210–225 mm	
004386	 WCPA – Support Plate Adapter³⁾ Reinforcing support plate WCPA for adapting the wall brackets WBMA, WBOVA2 and IR housing wall mount bracket
004388	 DBHWGC – Pole Mount Adapter³⁾ Pole mount adapter DBHWGC for pole diameters 210–225 mm (8.3–8.6")

³⁾ Note: The color of this mounting accessories (gray-white) differs from that of the IR camera / wall mount bracket (white).

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Specifications

Sensor

Type	1/2.5" CMOS image sensor
Signal processing	Pure Digital Signal Processing
Image capture	Progressive Scan
Minimum illumination	IR LED Off: 0.5lux (F1.2, 50IRE) IR LED On: 0 lux
Dynamic Range	Max. 70 dB ⁴⁾

Functions

Day/Night switching	Yes, using ambient light sensing and ICR function (switching threshold level adjustable)
B/W (black-and-white) mode	Automatic ⁵⁾ (in Night mode)
Automatic Electronic Shutter (AES)	1/25(30)–1/2500 s
3D Digital Noise Reduction (3D DNR)	On/Off
Automatic Exposure (AE) Presets	Outdoor, Indoor, Low light
Exposure metering mode	Average metering (light information from entire scene), centre-weighted average metering, spot metering
Brightness adjustment	Automatic (ALC)/Manual
Gain control	Automatic (AGC)
White balance	ATW (Auto Tracking White Balance) One-Push AWB (Automatic White Balance) MWB (Manual White Balance)
Privacy Zone Masking	Yes (max. 20% of the entire image)
Flip function	Horizontal, vertical or both
Digital Image Shift ⁶⁾	Yes
Motion detection ⁷⁾ (VMD)	With selectable sensitivity (5 levels)
Alarm notification	Via DaVID Protocol (Dallmeier Video Protocol) to PGuard advance ⁷⁾ , e-mail, FTP image upload
Configuration	Via web browser
Languages	German, English, Spanish, French, Italian

Lens

Type	<i>For specifications and available angles of view see "Lens Specifications" on page 5.</i>
Zoom control (Tele–Wide)	Motor-driven (controllable via web browser)
Focus control (Far–Near)	Motor-driven (controllable via web browser: One-Push AF with manual fine adjustment)
Iris control	P-Iris (motor-driven, controllable via web browser)

Format and Encoding

Video standard	SDTV (PAL/NTSC), HDTV (SMPTE 296M, SMPTE 274M)
Resolution	Encoder 1: 4CIF (704 × 576) / 4SIF (704 × 480) D1 PAL (720 × 576) / D1 NTSC (720 × 480) 720p (1280 × 720) 1080p (1920 × 1080) 2MP (1600 × 1200) Encoder 2: Wide-CIF (480 × 288 / 384 × 288) VGA (640 × 352 / 640 × 480) Encoder 3: 192 × 128
Video compression	H.264, MJPEG
Audio compression	G.711
Frame rate	Up to 30 fps with 4SIF Up to 30 fps with D1 Up to 30 fps with 720p Up to 30 fps with 1080p Up to 30 fps with 2MP
Video bit rate	0.25–10 Mbps, CBR (constant bit rate) or VBR (variable bit rate)
Audio bit rate	64 kbps
Video streaming	Simultaneous Dual- or Tri-Streaming (number of simultaneous streams depends on compression method, resolution and bit rate)
Transfer format	Progressive (full image)
Live streaming transmission method	Unicast, Multicast

4) According to the sensor manufacturer's specifications

5) Without colour information, or rather in black-and-white mode, the image quality in low light conditions will be much clearer (e.g. less colour noise).

6) Digital Image Shift = Provides digital fine alignment of the image section

7) Function in preparation

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Specifications (Continuation)

Protocols

Ethernet protocols IPv4, TCP, UDP, ARP, ICMP, DHCP, NTP, HTTP, RTSP, IGMP V2, FTP, SMTP, RTP, RTCP
 SNMP support Yes

Connections

Power & Ethernet 1× RJ45 plug (10BASE-T-/100BASE-TX-PoE)

IR Illumination

Type Semi-covert 850 nm high power LEDs
 IR intensity Adjustable
 Photocell Adjustable Day/Night switching threshold level
 Range Up to approx. 25 m
 Beam angle Homogeneous illumination up to approx. 50°

Miscellaneous

Ambient light sensor Integrated
 Microphone Integrated
 Local video memory SDHC card slot integrated
 Programming interface Open platform for integration into third-party systems using API and ActiveX⁸⁾
 ONVIF compliance Core Specifications 1.01 & 1.02

Electrical Data

Voltage supply Power over Ethernet (PoE Class 0)
 PoE standard IEEE 802.3af
 Power consumption Max. 12.95 W

Mechanical Data

Dimensions See technical drawings
 Weight Approx. 2 kg (4.41 lb)
 Colour White

Environmental Conditions

Operating temperature -40°C to +50°C (-40°F to 122°F), minimum start-up temperature: -30°C (-22°F)
 Relative humidity 0%–90% RH, non-condensing
 IP rating IP66

Approvals/Certifications

Type CE, FCC, ACA, DGUV Test, UL, DIN EN 50130-4 compliant

8) ActiveX is a trademark or registered trademark of Microsoft Corporation headquartered in Redmond, Washington, USA

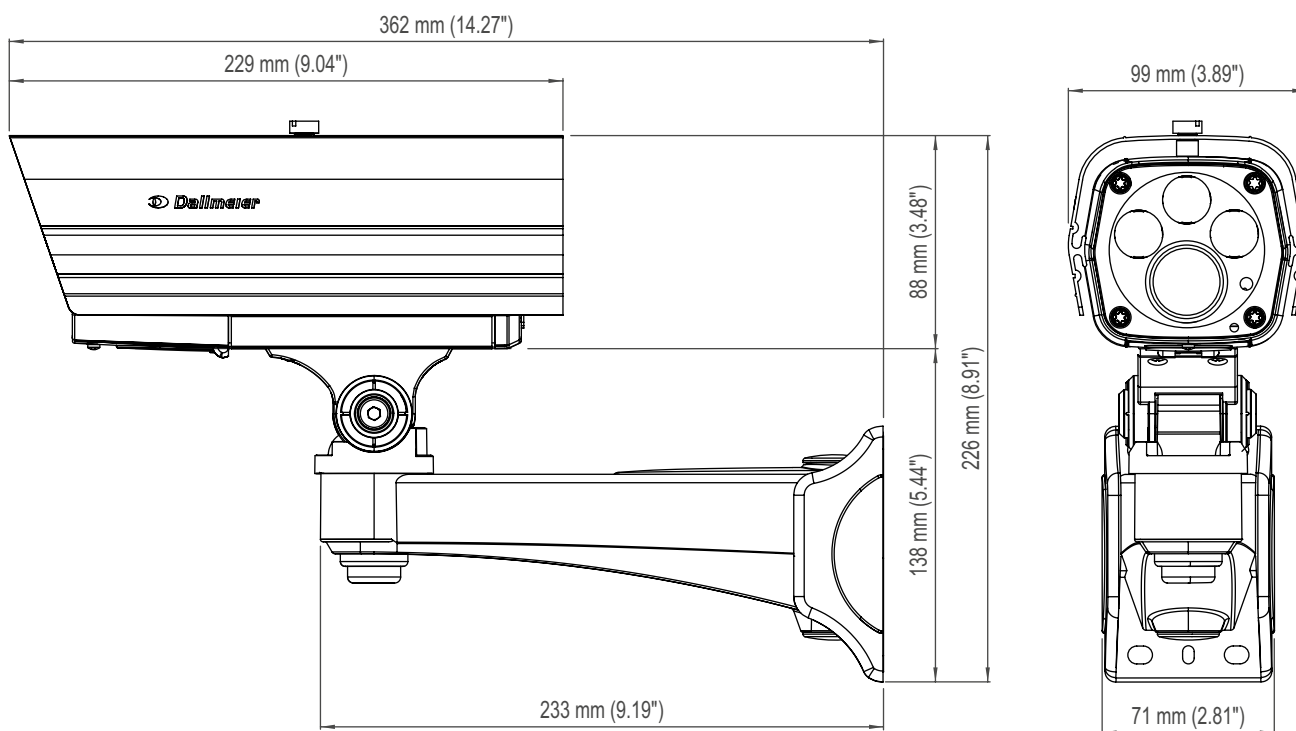
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Lens Specifications

Lens F1.2–F2.3 / 3–9 mm	
Type	Motor-driven megapixel varifocal lens
Format	1/2.5"
Mount	Board lens
Focal length	3–9 mm
Iris range (at wide end)	F1.2–360 (Closed)
Iris range (at tele end)	F2.3–360 (Closed)
Iris control	P-Iris (motor-driven)
Zoom	Motor-driven
Focus	Motor-driven
MOD (Minimum Object Distance)	0.5 m
IR corrected	Yes
Available angles of view ⁹⁾ (H × V) at wide end	approx. 57° × 37° with D1 NTSC approx. 57° × 45° with D1 PAL approx. 62° × 47° with 4SIF approx. 62° × 47° with 4CIF approx. 80° × 42° with 720p approx. 80° × 42° with 1080p approx. 65° × 47° with 2MP
Available angles of view ⁹⁾ (H × V) at tele end	approx. 20° × 14° with D1 NTSC approx. 20° × 16° with D1 PAL approx. 21° × 17° with 4SIF approx. 21° × 17° with 4CIF approx. 27° × 15° with 720p approx. 27° × 15° with 1080p approx. 22° × 17° with 2MP

Dimensions



9) The specifications (±5%) are based on a field of view without vignetting. Minor deviations with lenses may be a result of manufacturing tolerances and do not constitute a defect.