

# DF5200HD-IR-ANPR

HD Camera for SEDOR® ANPR Server, 2MP, Integrated IR Illumination, One-Push Autofocus, PoE, Outdoor Wall Mount Bracket



The **DF5200HD-IR-ANPR** is a special camera with integrated IR illumination. The images provided by the camera are optimized for the automatic recognition of vehicle number plates<sup>1)</sup> on a **SEDOR® ANPR Server**<sup>2)</sup> appliance.

Equipped with the most **advanced sensor and encoder technology**, a powerful **IR illumination** and a **special optical filter**, the camera provides high-resolution and monochrome video footage. This is the ideal base for a precise and fast **24-hour number plate recognition**, regardless of environmental conditions or changing lighting at day and night.

## Infrared range

The camera features an **outstanding infrared sensitivity** and permanently supplies infrared images with excellent contrast.

The restriction on the infrared range allows for the elimination of disturbing **daylight and ambient conditions**. In addition, the intense **IR reflection of modern number plates is optimally utilized**. This enables recordings with brilliant clarity and highest detail resolution, ideal for a precise number plate recognition in a 24/7 operation.

## Integrated IR illumination

The outstanding infrared sensitivity of the camera is supported by the **integrated homogeneous IR illumination**. It is based on semi-covert 850 nm **high power LEDs** and permits an illumination range of up to 18 m.

## ANPR presets

The camera is equipped with **special presets** in order to provide optimum recordings for the number plate recognition with **SEDOR® ANPR Server**.<sup>2)</sup> This allows the **quick and easy adjustment of the settings** to different capture ranges. Individual adjustments of the camera settings are usually not required.

## EdgeStorage

The camera is equipped with a **RAM memory** that is used by the **EdgeStorage** function for storing the video stream in case of a network failure. When the network is restored, the **SmartBackfill** function ensures a fast transmission to the **SMAVIA recording system**. This stores the video stream with high speed and then continues the recording of the live stream seamlessly.

## Further features

- Independent of daylight and ambient conditions
- Capture at day and night
- Variants with capture ranges of up to 8 m, 12 m and 18 m
- Optimum presets for SEDOR® ANPR Server
- ONVIF interface for the integration in 3rd party systems
- Privacy zone masking and digital flip function
- 3D Digital Noise Reduction (3D DNR)
- IP66 weather proof enclosure
- Outdoor wall mount bracket (with internal cable routing)
- Power over Ethernet (PoE Class 0, IEEE 802.3af)

## Areas of application

- Capture of number plates in stationary traffic
- Capture of number plates in flowing traffic at speeds of up to 60 km/h

1) Note the list of supported vehicle number plates in different countries.

2) Note the required system components **SEDOR® ANPR Server Software** (005049) and **Server Rack-Mount 1RU** (004847).

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## Variants/Options




### Variants

<b>005546.401</b>	<b>DF5200HD-IR-ANPR</b> HD camera for ANPR systems, 2MP, integrated IR illumination with 3× 40°, one-push autofocus, PoE, outdoor wall mount bracket, capture range 3–8 m
<b>005546.402</b>	<b>DF5200HD-IR-ANPR</b> HD camera for ANPR systems, 2MP, integrated IR illumination with 3× 25°, one-push autofocus, PoE, outdoor wall mount bracket, capture range 6–12 m
<b>005546.403</b>	<b>DF5200HD-IR-ANPR</b> HD camera for ANPR systems, 2MP, integrated IR illumination with 3× 10°, one-push autofocus, PoE, outdoor wall mount bracket, capture range 10–18 m

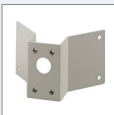
### Power Supply

<b>004316</b>	 <p><b>PoE Midspan 30 W</b> Midspan power supply unit, 1× Ethernet port, 10/100/1000Base-T, 802.3at, 802.3af, 30 W</p>
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### Wall Mount

<b>004386</b>	 <p><b>WCPA – Support Plate Adapter<sup>3)</sup></b> Reinforcing support plate WCPA for adapting the wall brackets WBMA, WBOVA2 and IR housing wall mount bracket</p>
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### Corner Mount

<b>004390</b>	 <p><b>WCWA – Corner Mount Adapter<sup>3)</sup></b> Corner mount adapter WCWA for corner mounting</p>
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### Pole Mount 65–110 mm

<b>004387</b>	 <p><b>WSFPA – Pole Mount Adapter<sup>3)</sup></b> Pole mount adapter WSFPA for pole diameters 65–110 mm (2.6–4.3")</p>
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### Pole Mount 210–225 mm

<b>004386</b>	 <p><b>WCPA – Support Plate Adapter<sup>3)</sup></b> Reinforcing support plate WCPA for adapting the wall brackets WBMA, WBOVA2 and IR housing wall mount bracket</p>
<b>004388</b>	 <p><b>DBHWGC – Pole Mount Adapter<sup>3)</sup></b> Pole mount adapter DBHWGC for pole diameters 210–225 mm (8.3–8.6")</p>

<sup>3)</sup> 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	1/1.9" 2.3 megapixel Full HD CMOS image sensor
Number of sensor pixels	2 MP
Signal processing	Pure Digital Signal Processing
Image capture	Progressive Scan
Sensor sensitivity	IR LED On: 0 lux
Dynamic range	94 dB
Signal to noise ration (SNR <sub>MAX</sub> )	> 50 dB

Lens	
Type	Motor-driven varifocal lens
Format	1/1.8"
Mount	Board Lens
Iris range	F1.6 – Closed
Iris control	P-Iris (motor-driven)
Focus control	Motor-driven
MOD (Minimum Object Distance)	0.6 m

Functions	
Day/Night switching	IR pass filter always active
Black-and-white mode	On (color display does not make sense with IR pass filter)
Automatic Electronic Shutter	1/1 – 1/8000 s
Slow Shutter Limit	1/1 – 1/1000 s
Lens control	Focus control (Far – Near, One-Push AF), Iris control (P-Iris) via web browser
Digital flip function	Horizontal, vertical or both axes
Digital Noise Reduction	3D-DNR (adjustable by 10 levels)
Exposure compensation	-2 EV (Exposure Value) to + 2 EV (adjustable by 200 levels)
Exposure metering	Average metering (light information from entire scene), center-weighted average metering, spot metering
Brightness adjustment	Automatic (ALC), manual
Gain control	Automatic (AGC) with adjustable Gain Limit
Privacy Zone Masking	Hiding/masking of any number of protected areas (up to 100% of the entire image)
Configuration and live video	Via web browser (all major platforms)
Languages	German, English

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## Specifications (Continuation)

Format and Encoding	
Video standard	SDTV (PAL/NTSC) HDTV (SMPTE 296M, SMPTE 274M)
Resolution – video over IP	1920 × 1080 (1080p) @ 25/30 fps 1280 × 720 (720p) @ 25/30 fps 640 × 480 (480p) @ 25/30 fps 320 × 240 @ 25/30 fps
Aspect ratio – video over IP	16:9 (720p, 1080p) 4:3 (480p, 320 × 240)
Video compression	H.264, MJPEG
Frame rate	Up to 25/30 fps
Video bit rate	1 – 8 Mbit/s, CBR (constant bit rate), VBR (variable bit rate), each with priority setting for image quality <sup>4)</sup>
Video streaming	Simultaneous Dual-, Tri- or Quad-Streaming
Transfer format	Progressive (full image)
Audio compression	G.711
Audio bit rate	64 kbit/s
Live streaming transmission method	Unicast, Multicast
Number of live streams	Up to 5 different streams with up to 8 Mbit/s simultaneously

Protocols	
Ethernet protocols	IPv4, TCP, UDP, HTTP, RTP, RTCP, IGMP V2/V3, ICMP, ICMP V6, RTSP, ARP, NTP,
SNMP support in preparation	SNMP v1

Connections	
Power&Ethernet	1× RJ45, 10BASE-T/100BASE-TX PoE/1000BASE-T PoE

IR Illumination	
Type	Semi-covert 850 nm high power LEDs
IR intensity	Adjustable

Miscellaneous	
Microphone	Integrated
Local memory	50 MB RAM memory
Memory extension	microSDHC 32 GB, Class 10, UHS-I (optional) <sup>5)</sup>
Programming interface	Open platform for integration into 3rd party systems using API and ActiveX <sup>6)</sup>
ONVIF compliance	Profile S

4) If the total available bit rate is not sufficient, not the image quality but the number of frames is adjusted.

5) The installation of the memory card should be done by a certified Dallmeier service partner.

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

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## Specifications (Continuation)

Electrical Data	
Voltage supply	PoE (Class 0)
PoE standard	IEEE 802.3af
Power consumption	Max. 12 W

Mechanical Data	
Dimensions	See technical drawings
Weight	Approx. 2 kg (4.4 lb)
Color	White
Adjustment	2-axes
IP rating	IP66

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

Approvals/Certifications	
Type	CE, FCC, ACA, UL, DIN EN 50130-4 compliant, IEC/EN 62471 compliant

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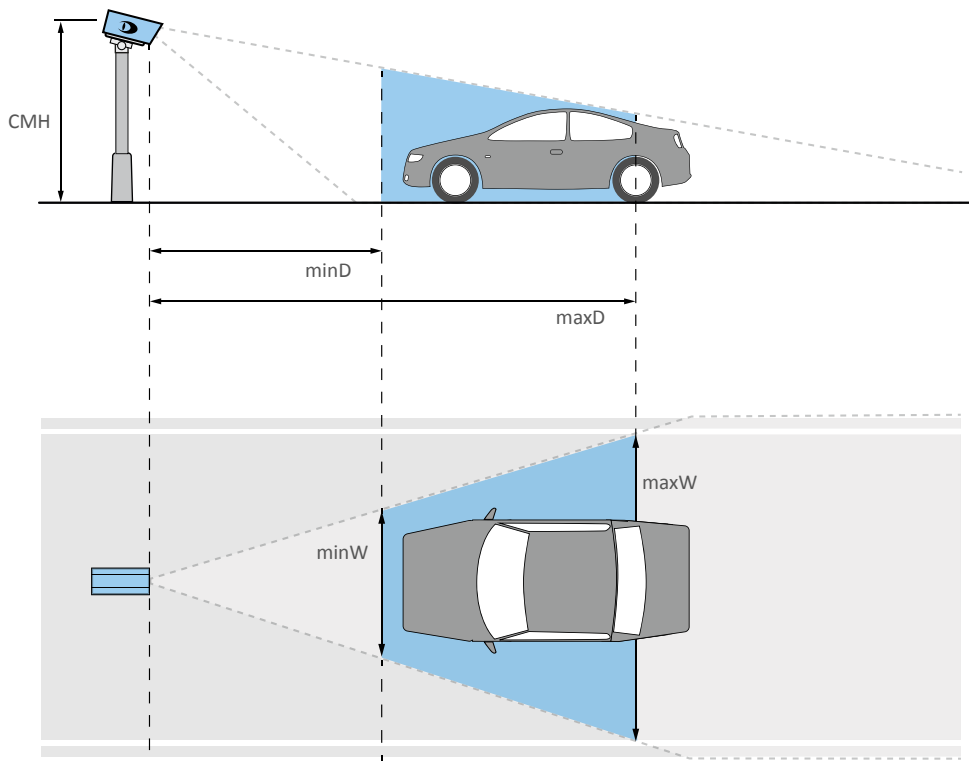
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## Presets for the operation with SEDOR® ANPR Server

Preset for variant 401 (3 - 8 m)	Camera installation height (CMH)	Minimum distance (minD)	Capture width at minD (minW)	Maximum distance (maxD)	Capture width at maxD (maxW)
ANPR.3-6m	0.8 - 1.5 m	2 m	2.2 m	6 m	2.5 m
ANPR.4-7m	1 - 2 m	2.5 m	1.8 m	7 m	4 m
ANPR.5-8m	1 - 2 m	3 m	2.2 m	8 m	5 m

Preset for variant 402 (6 - 12 m)	Camera installation height (CMH)	Minimum distance (minD)	Capture width at minD (minW)	Maximum distance (maxD)	Capture width at maxD (maxW)
ANPR.6-10m	1 - 2.5 m	6 m	2 m	10 m	3.5 m
ANPR.7-11m	1 - 3 m	7 m	3 m	11 m	4 m
ANPR.8-12m	1 - 3 m	8 m	3 m	12 m	4.5 m

Preset for variant 403 (10 - 18 m)	Camera installation height (CMH)	Minimum distance (minD)	Capture width at minD (minW)	Maximum distance (maxD)	Capture width at maxD (maxW)
ANPR.10-14m	1 - 4 m	10 m	3 m	14 m	3 m
ANPR.12-16m	1 - 5 m	12 m	3.5 m	16 m	4 m
ANPR.14-18m	1 - 6 m	14 m	4 m	18 m	4.5 m



## Positioning of the camera relative to the vehicle/number plate<sup>7)</sup>

Position	
Vertical angle	Max. 30°
Horizontal angle	Max. 30°
Lateral tilt	Max. 15°

7) Please observe the detailed explanations in the corresponding document **Commissioning**.

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## Dimensions

