

# FD820v2M1IR

## 4MP IP Fixed Dome Camera with IR

- ✓ 1/3" Progressive scan CMOS imager
- ✓ 3.0 - 9.0 mm Motorised varifocal lens
- ✓ 4MP @ 15 fps frame rate
- ✓ Quad-stream H.264 and MJPEG video
- ✓ 120 dB WDR
- ✓ Day/Night with IR-cut filter
- ✓ Built-in IR illuminator (effective distance: 40 m)
- ✓ IP66 Ingress protection rating
- ✓ IK10
- ✓ 24 Vac / 24 Vdc / 12 Vdc / 802.3af PoE
- ✓ ONVIF Profile S conformant



### Description

The FD820v2M1IR is a 4MP HD fixed dome camera with built-in IR illumination providing clear images under any lighting condition. With its IP66 construction, IK10 vandal resistant housing and motorised lens, installation is fast and easy, and remote adjustment is simple.

### Multistream high definition

The camera has quad-stream capability for simultaneous streaming of H.264/H.264 or H.264/MJPEG. Multiple combinations of resolution and frame rate can be configured to satisfy different live viewing and recording scenarios. 4 Mpixel resolution is available at 15 fps, a full-HD 1080p stream at 30fps can be combined with a SXGA stream at 30 fps. Each selected resolution-frame rate combination can be freely set to a stream number.

### Open standards

Multiple options are available to easily integrate the FD820v2M1IR to a video management system. In support of open standards, the camera is compliant with the ONVIF Profile S specification.

### Image optimisation

The FD820v2M1IR provides automatic day/night functionality with configurable thresholds and built-in IR illuminator, for use in low-light situations. Backlight compensation enhances image visibility in difficult lighting situations. The FD820v2M1IR provides two modes for wide dynamic range. The first mode uses different gain ratios for different illuminated areas to bring details in the darker areas of an image without saturation in the brighter parts. The second mode uses a 2 shutter mechanism which applies two different exposure settings to capture both darker and lighter areas with excellent details. The resulting image is the optimal aggregation of both exposures. The available image optimisation methods ensure quality pictures at all times.

### Power source choices

The FD820v2M1IR can be powered by 12 Vdc, 24 Vdc, 24 Vac, or over the network with 802.3af-compliant PoE sources.

### Privacy masks

Privacy masks cover sections of the image. This feature is often requested for such situations as city centre surveillance and point of sale keypads.

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## Technical specifications

Camera	
Image sensor	1/3" Progressive scan CMOS
Effective pixels	2688(H) x 1520(V)
Minimum scene illumination	0.1 lux colour, 0.01 lux (b/w), 0 lux with IR
Shutter speed	1 - 1/10000 s
Lens	3.0 to 9.0 mm, F1.7
Lens type	DC Auto iris, motorised zoom, push-to-focus
Horizontal field of view	109° (W) - 33° (T)
Functions	
Privacy masks	5
Text and picture overlay	Date, time, date & time, 5x subtitle (16 characters each), text string (25 characters), image, image transparency
Video motion detection	On / off / by schedule
Video motion detection alarm	Alarm output, record video clip, send alarm message, upload image
Network failure detection	On / off / by schedule
Network failure detection alarm	Alarm output, record video clip, send alarm message, upload image
Tamper detection	On / off / by schedule
Tamper detection alarm	Alarm output, record video clip, send alarm message, upload image
Periodical event	On/Off
Periodical event action	Upload image
Recording	On / off / by schedule
Recording destination	SD card/ Network share
Image control	
Wide dynamic range	
- gamma WDR	On/Off
- dual shutter WDR	On/Off (>120 dB)
Exposure	Auto (P-iris priority, iris size, max gain and min shutter speed configurable) / Manual
White balance	Auto, ATW, Manual, One push
Contrast	Manual
Brightness	Manual
Saturation	Manual
Hue	Manual
Sharpness	Manual
Day/Night function	Auto / night / day / light sensor / LED on / LED off Configurable day/night threshold levels/ IR light compensation
Noise reduction	Off, 3DNR (low, medium, high), 2DNR (On/Off), ColorNR (low, medium, high)
Backlight compensation	On/Off
Digital zoom	Up to 10x
Image rotation	Normal / Flip / Mirror / 90° (clockwise, counterclockwise) and 180° Rotate

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## Technical specifications

Video				
Compression algorithm(s)	H.264 (baseline / main / high profile); MJPEG			
Number of compression instances	Quad stream. Any combination of H.264 streams with possibly one MJPEG stream.			
Output streams	Any output stream can be freely configured to one of the resolution/frame rate formats.			
Supported resolutions	2688x1512 (4MP); 2560x1440; 2304x1296 (3MP); 1920x1080 (1080p); 1280x1024; 1280x720 (720p); 1024x768; 800x600; 720x576 (D1); 640x480; 352x288 (CIF)			
Compression capabilities	(indication, other combinations possible)			
Resolution format	format 1	format 2	format 3	format 4
H.264 in 15 fps	2688x1512	1280x720		
H.264 instances in 50/60fps (at lower frame rate higher resolution may be possible)	1280x720 1280x720 1280x720	- 640x480 640x480	- - 352x288	- - -
H.264 instances in 25/30fps (at lower frame rate higher resolution may be possible)	2304x1296 2304x1296 1920x1080 1920x1080 1920x1080	- 800x600 1280x1024 1280x1024 1280x720	- - - 352x288 720x576	- - - - 352x288
H.264 instances in 25/30fps WDR 2 shutter mode (one can be MJPEG) (at lower frame rate higher resolution may be possible)	1920x1080 1920x1080 1920x1080	- 720x576 720x576 (15fps)	- - 352x288 (15fps)-	- - -
MJPEG	One of the above resolution formats in each instance can be MJPEG instead of H.264 if the resolution is lower than or equal to 1920x1080			
Compression bit rate control	Constant bit rate (CBR), variable bit rate (VBR)			
Output bit rate (per H.264 stream)	Up to 20480 kbit/s			
Total H.264 output	26624 kbit/s			
Number of video output streams	Up to 20 (RTSP)			
Total output data rate (max)	50000 kbit/s			
Video frame rate	1 to 60 fps / 1 to 50 fps			
Analogue video output	PAL/NTSC			
Connector type	BNC (1.0 Vpp in 75 Ω)			
Audio				
Two-way stereo audio	Microphone in / line in / line out			
Compression	G.711 (μ-law, a-law) / G.726 / AAC / PCM			
Bit rate	G.711: 64 Kbps G.726: 16 Kbps, 24 Kbps, 32 Kbps, 40 Kbps AAC: 128 Kbps PCM: 128 Kbps, 256 Kbps, 384 Kbps, 768 Kbps			
Sample rate	G.711: 8 KHz / G.726: 8 KHz / AAC: 48 KHz / PCM: 8, 16, 24, 48 KHz			
Input level, Output level	Adjustable gain			
Connector type	Multifunction terminal block (Audio In L, Audio In R, GND, Audio Out L, Audio Out R)			
Alarm inputs/output				
Input	1x 0 - 5 V, 10 kΩ pull-up			
Output	1x Photo relay output 300 Vdc/ac			
Operational modes	Normally open; normally closed			
Connector type	Multifunction terminal block (Alarm In+, Alarm In-, Alarm Out+, Alarm Out-)			

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## Technical specifications

<b>Storage</b>	
Storage options	Micro SDXC card, 64 GB
<b>Network</b>	
Interface(s)	10/100 Ethernet
Network protocols	IPv4/v6, TCP/IP, UDP, RTP, RTSP, HTTP, HTTPS, ICMP, FTP, SMTP, DHCP, PPPoE, IGMP, PNAC (IEEE 802.1x), QoS
Connector type	RJ-45
<b>Management</b>	
Supported browsers	Internet Explorer (6.0+), Chrome, Firefox, Safari
Security	HTTPS, IP Filter, PNAC (IEEE 802.1x)
Protocols	UPnP, SNMP, ONVIF Profile S
Password levels	User and Administrator
User accounts	20
<b>Powering</b>	
Power consumption	
- System	Max. 3.7 W
- IR LED	Max. 4 W
- Heater	Max. 4 W (cold start: 8.5 W)
- Motorised lens	Max. 0.55 W
Power	24 Vac / 24 Vdc / 12 Vdc / 802.3af PoE
Connector type	2-pin terminal block
<b>Environmental</b>	
Start-up temperature	-55 °C (-67 °F)
Operating temperature	-50 °C to +50 °C (-58 °F to +122°F)
Relative humidity	10% to 90%, no condensation
<b>Mechanical</b>	
Dimensions (camera body)	Ø 133.8 x 117.4 mm (Ø 5.2 x 4.6 in)
Weight	0.76 kg (1.68 lbs)
Colour	RAL 9003 (Signal white)
Built-in IR illuminator	
- Working distance	Up to 40 m
- Wavelength	850 nm
- Number of LEDs	6
Ingress protection	IP66
Impact rating	Ik10
<b>Ordering information</b>	
FD820v2M1IR	Network Outdoor fixed dome, 3-9mm motorized zoom, 4MP, H.264/MJPEG, IR
TA01/FD	Tube adapter/pendant mount for FD8xx
WM01A	Wall mount bracket
CM02	Ceiling Mount, Straight Tube, 50cm
WM19FD/FD	Wall mount for FD8xx
DC21C-R	Dome cover, rain wash, for FD8xx
CM13/FD	Flush mount kit for FD8xx

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## Technical specifications

### Accessoires

TA01/FD



Tube adapter/pendant mount for FD8xx

WM01A



Wall Mount Bracket

CM02



Ceiling Mount, Straight Tube, 50cm

WM19/FD



Wall Mount for FD8xx

DC21C-R



Rain-Wash-Vandal Resistant Clear Dome Cover

CM13/FD

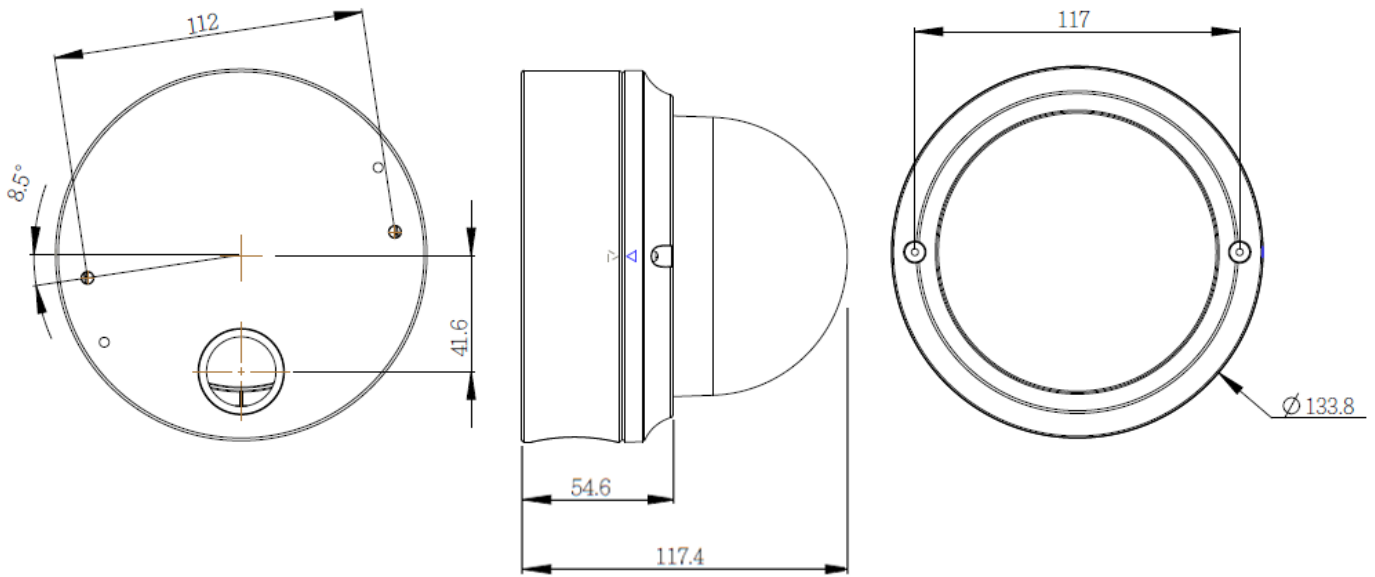


Flush-Mount Adapter

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Technical specifications

## Dimensions



The quality management system used in the development, production, sales, and support of this product is ISO 9001 certified by LRQA.

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