

# B8220 | Extreme Bullet 2MP Motorized Outdoor IR Camera

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**ZAVIO**  
Innovating IP since 2006



- |   |   |                                      |
|---|---|--------------------------------------|
| • 1/2.8" 2MP Starlight CMOS sensor      | • Smart Focus                                 | • SD/SDHC/SDXC card slot up to 128GB |
| • Motorized lens 2.8-12mm, F1.6, P-Iris | • 50m IR range with Adaptive IR               | • 2 alarm in / 2 alarm out           |
| • Smart Codec + H.265                   | • Built-in fan & heater                       | • 12V DC & PoE (802.3af/at)          |
| • 1080p @ 60fps                         | • Operating conditions -50~ 60°C              | • IP67                               |
| • 120dB WDR                             | • Anti-Reflective & Anti-Smudge Glass Coating | • ONVIF 2.4 & Profile S              |

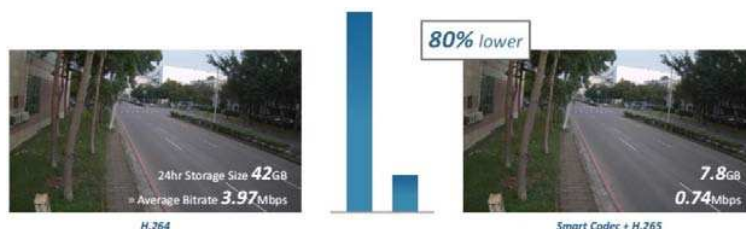
ZAVIO B8220 bullet camera has it all. Latest H.265 compression to cut bandwidth in half, with ZAVIO's Smart Codec feature further lowering bandwidth and storage consumption to 80% less than normal H.264 cameras. Class-leading WDR to handle the most challenging lighting conditions. Superior low-light sensitivity that still sees when you don't. Adaptive IR that not only automatically adjusts the power of the IR LEDs, but also it's angle, to fit the view angle of the motorized lens, which can be easily focused by the Smart Focus function. Built-in fan and heater allow the camera to operate in the most extreme environments (-50°C to 60°C).

The B8220 can be used in all kinds of applications, ranging from traffic, airports to public area surveillance and extreme applications. Compatible with ZAVIO CamGraba 2.0, the most professional free NVR software that can support up to 64 IP cameras.

## Features

### Smart Codec + H.265

ZAVIO Smart Codec + H.265 reduces bandwidth and storage requirements by a stunning 80% compared to standard H.264 camera.



WDR off



WDR on

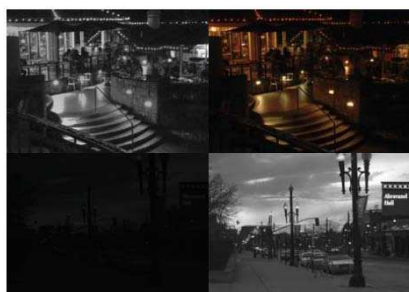
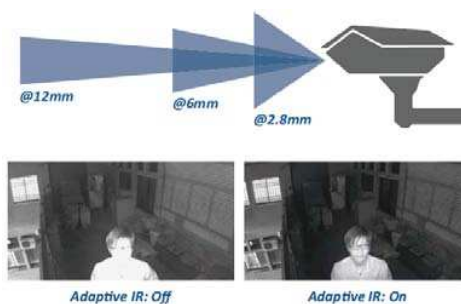
### WDR

Cameras with WDR will take multiple exposures of the full scene and merge them together to provide an image that extends further than the human eye can perceive.

### Adaptive IR

ZAVIO Adaptive IR provides 2 dimensions adaptation:

- 1) The angle of the IR illuminators automatically changes in sync with the camera's zoom position.
- 2) The brightness of the IR illuminators automatically adjusts to the scene content, effectively avoiding overexposure of objects that are too close to the camera.



Other Cameras

ZAVIO Starlight Cameras

### Starlight

Combined with cutting-edge sensor technology, advanced noise reduction and high frame rate, Starlight cameras can capture highly detailed color images of fast moving objects even under challenging lighting conditions.

### P-iris

P-iris allows objects at different distances from the camera to be focused simultaneously - providing images with better contrast, clarity, resolution and depth of field.



## Features

### High Performance IR

With a total of only 6 high performance IR LEDs, the camera is able to achieve IR range of up to 50meters distance without flashlight effect. Two IR LEDs for achieving wide angle illumination and four IR LEDs for achieving longer distance.



### Anti Reflective & Anti Smudge coating

Anti Reflective (AR) coating reduces the reflection and lets more light pass through. Anti Smudge (AS) coating makes a smoother surface preventing contamination to stay on the glass. The combination of AR and AS coating results in low reflection, low loss of light and clean view of the scene.

### Glass Demister

Dramatic changes in temperatures causes water droplets to show on glass, which in turn obstructs your clear view of the scene. ZAVIO Glass Demister solves this issue by turning up the heater and evaporating the water droplets off the glass.



### Smart Focus control button

Smart Focus control buttons make installation much easier by allowing you to adjust the focus on site. Combined with the video output, you have everything you need to finish installation then and there.

## Technical Specifications

### Camera

Camera Type	2MP Motorized Outdoor IR Bullet
Image sensor	1/2.8" Starlight CMOS sensor
Lens	Motorized 2.8-12mm, F1.6, P-iris
Horizontal view angle	104° - 33°
IR working distance	50m effective range with Adaptive IR
Min illumination	0.001 lux @ F1.6 (color) 0.0001 lux @ F1.6 (B/W)
WDR	120dB
Day/Night function	Mechanical IR cut filter, Light sensor

### Video & Audio

Resolutions	Motion JPEG/H.264/H.265: 2 Profile from 1920 x 1080 to 320 x 240 (total 5 resolutions) 2 Profile from 640 x 480 to 320 x 240 (total 3 resolutions)
Video compression	Motion JPEG H.264 baseline/ main profile/high profile H.265
Frame rate	H.265/H.264: up to 60 fps at 1920 x 1080 Motion JPEG : up to 30 fps at 1920 x 1080
Video streaming	Simultaneous Motion JPEG, H.264, H.265 Controllable frame rate and bandwidth Support unicast (Real Time Streaming Protocol)
Image settings	Rotation: mirror, flip, mirror flip, corridor mode Brightness, contrast, saturation, sharpness Overlay capabilities: time, date, text and privacy Image ROI 3D DNR Defog
Audio support	Two-way (full duplex)
Audio compression	G.711 u law, a law, G.726, AMR

### I/O & Connector

Ethernet	RJ-45 Ethernet 10/100 Base -T
Power Supply	Terminal block, 12V DC, 2A Power consumption: Max 19.2W PoE(Power over Ethernet) built-in IEEE 802.3af/at
Alarm I/O	Terminal block, 2/2
Audio connector	Terminal block, line in & line out
Analog video output	3.5mm Phone Jack
RS-485	Terminal block
Edge storage	SD/SDHC/SDXC up to 128GB
Buttons	Reset push button, Smart Focus control buttons
Other(s)	NTSC / PAL switch

### Alarm & Event

Input	Alarm buffer, alarm input, motion detection, audio detection, periodical, network link down.
Output	Network storage, edge storage, FTP, SMTP, HTTP event, HTTPS, alarm out pre and post event image.

### Network

Users	10 simultaneous users
Security	Multiple user access levels with password protection, HTTPS encryption
Supported protocols	IPv4, IPv6, Bonjour, TCP/ IP, DHCP, DNS, DynDNS, PPPoE, ARP, ICMP, FTP, SMTP, NTP, UPnP, RTSP, RTP, RTCP, HTTP, HTTPS, SSL, TCP, UDP
ONVIF	2.4 & Profile S

### General

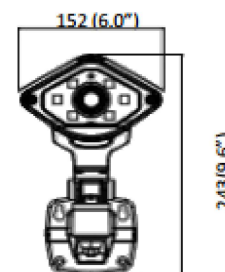
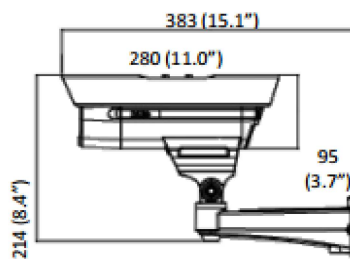
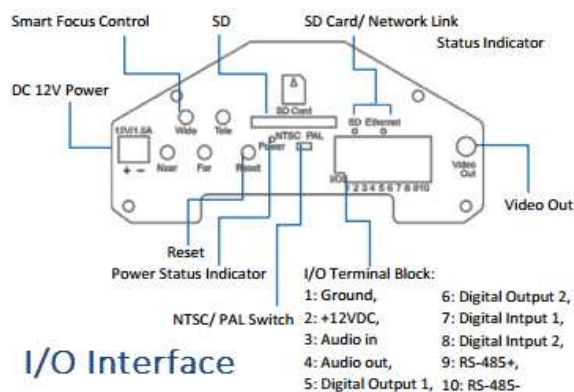
Housing	Aluminum Alloy
Ingress Protection	IP67 rated weatherproof housing
Impact Protection	-
Other(s)	Anti-Reflective glass coating, Anti-Smudge glass coating, Glass Demister, Built-in fan & heater.
Operating conditions	Starting temperature: -40 ~ 60°C Humidity 10-100% RH Working temperature: -50~ 60°C Humidity 10-100% RH
Dimensions(HxWxD)	383 x 152 x 243mm, incl. bracket
Weight	2170g excl. power supply
Included accessories	Quick installation guide, bracket, mounting, connector kit.
Optional accessories	-
Certification	CE, FCC, RoHS
Language	Chinese, Croatian, Czech, Danish, Dutch, English, French, German, Greek, Hungarian, Italian, Japanese, Korean, Polish, Portuguese, Russian, Slovak, Spanish, Swedish, Turkish

### System Requirements

Operating system	Windows XP / 7 / 8 / 8.1, MAC OS, Linux
Browser	Internet Explorer 9 / 10 / 11, Chrome, Firefox, Safari

### Software

Video management software	ZAVIO CamGraba 2.0 IP System software, for viewing, recording and archiving up to 64 cameras.
Installation, management and maintenance	ZAVIO Installation Tool makes camera management easier with camera image preview, firmware upgrade of multiple cameras, reset cameras to default while keeping network settings, etc.



Unit: mm (inches)