


BOSCH

Invented for life

EX85 Megapixel-IP Infrared Imager



- ▶ **3.1 megapixel day sensor, 1.3 megapixel night sensor**
- ▶ **Award-winning Black Diamond technology**
- ▶ **Detection-level night vision at 128 m (420 ft)**
- ▶ **Field-proven IP67 all-weather design**
- ▶ **Innovative Bit-Reduce technology minimizes bit rate**

The EX85 is at the pinnacle of today's most advanced imaging technologies, combining dual megapixel sensors, IP Infrared Imaging (I³) design and Black Diamond night vision technology.

The result is the most advanced level of imaging performance for today's critical security applications: the amazing detail of 3.1 million color pixels by day and the award-winning, High-Fidelity performance of Black Diamond night vision to 128 m (420 ft). The EX85 also incorporates Bit-Reduce technology, helping to minimize bandwidth requirements.

The EX85 incorporates a ruggedized outdoor enclosure, field-proven for reliability in the world's worst environments.

The EX85 delivers the imaging performance required by today's critical applications and video analytics software.

Functions

Black Diamond High Fidelity Infrared Technology

- Award-winning Black Diamond technology eliminates hotspot foregrounds and underexposed backgrounds
- Effective 24/7 surveillance for critical applications, providing up to 128 m (420 ft) of high definition detection-level video
- Eliminates bit rate problems caused by poor night time performance

Megapixel Sensors

- 3.1 megapixel day sensor and 1.3 megapixel night-time sensor
- Up to 10x the resolution of high performance CCD sensors
- Matched megapixel lenses for crystal clear images with amazing detail
- Megapixel field of view allows digital zoom, eliminating the necessity for pan-tilt-zoom functionality

IP Infrared Imaging (I³) Design

- Optimizes the combined benefits of IP and Infrared for critical imaging applications

Extreme Environment Housing Certified to IP67

- Extreme weather sealed for performance under harsh environmental conditions
- Field-proven for long-term reliability and toughness
- The security industry's only high performance outdoor night vision IP camera

Bit-Reduce Technology

Innovative Bit-Reduce technology ensures low bit rates and therefore helps to stabilize networks. Bit-Reduce design is a combination of:

- Black Diamond Infrared illumination, which solves the problem of failed compression at night caused by image noise
- Proprietary on-camera image processing, which sends only the required image data down the network, reducing bandwidth

- More than twenty compression levels to help achieve the right balance of file size and image quality for any application

Bit-Reduce design is unique to the EX85, making it the most advanced megapixel camera available today, not only for imaging performance but also for its bandwidth management capabilities.

Megapixel Technology

Megapixel cameras offer numerous advantages over conventional cameras. Below is a partial list.

- Greater resolution for outstanding image detail
- Greater field of view, reducing the number of required cameras
- No need for PTZ, no moving parts, record everything all-the-time
- Lossless forensic zoom for post-event investigations
- Enables optimal performance of video detection and video analytic software
- Greater remote control over image acquisition parameters
- Easily scalable and expandable, with lower installation and long-term ownership costs

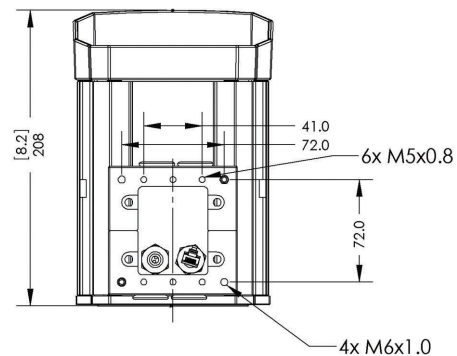
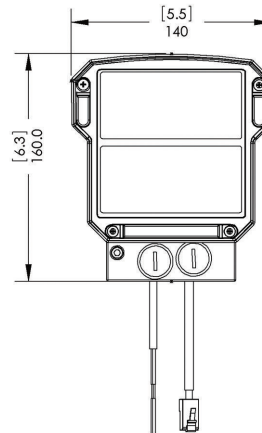
Night Vision, Compression and Bit Rate

	Without Infrared Illumination	With Black Diamond Infrared Illumination
AGC Strength	High	None
Effect on Image	Low SN ratio, snow, graininess	High Fidelity, even-illumination, high SN ratio
Effect on Compression	Poor compression performance	Good compression performance
Effect on Bit Rate	High bit rates	Low bit rates
Effect on Network	Strained bandwidth, system instability	Low bandwidth requirements, uncompromised image quality

DCRI Performance Parameters

Detection	128 m (420 ft)
Classification	98 m (320 ft)
Recognition	76 m (250 ft)
Identification	45 m (150 ft)

Installation/Configuration Notes



Technical Specifications

Camera

Daytime Color Sensor	3.1 megapixel (2048H x 1536V), 1/2 in sensor (resolution greater than 1000 TVL)
Night Time Mono Sensor	1.3 megapixel (1280H x 1024V), 1/2 in sensor (resolution greater than 1000 TVL)
Night Time Sensitivity	Zero lux (works in complete darkness)
Frame Rate	Color: 20 fps at 1920x1200 Monochrome: 30 fps at 1280x1024
Day/Night Switching	Automatic, adjustable via API
SNR	45 dB or greater
Dynamic Range	60 dB
Lens type	8, 12, 25 or 50 mm fixed megapixel lenses
Zoom	Always-on digital zoom, available simultaneously with overview image
Range of focus	5 m to infinity
Motion Detection	On-camera motion detection or with NVR/VMS integration
Compression	Motion JPEG with over 20 quality settings

Bit rate	Bit-Reduce image processing with fully dynamic adjustment capability
Viewer	User interface supplied
Network Interface	Ethernet 100 Base-T
Connector	RJ45
Application Protocol	TFTP / HTTP
Network Protocol	IP
Data Link Transmission	Ethernet over UTP or STP
Serial Port Levels	RS-422/RS-485
Serial Port Operating Mode	Transparent port for any asynchronous serial protocol
Firmware Upgradeability	Available via application manager
Programmability (via software interface)	Compression, auto-exposure, white balance, flicker control, picture size, cropping, brightness, sharpness, saturation, Day/Night switching point, frame rate, image rotation, snapshot, dynamic bandwidth allocation, motion detection

I³ - IP Infrared Imaging

Infrared Type	Black Diamond High Fidelity infrared illumination	
Wavelength	850 nm	
Night Vision Ranges	Detection	128 m (420 ft)
	Classification	98 m (320 ft)
	Recognition	76 m (250 ft)
	Identification	45 m (150 ft)

Environmental

Weight	2.3 kg (5 lb)
Operation Temperature Range	-40 °C to +50 °C (-40 °F to +122 °F)
Bracket	Basic cable-managed wall bracket included
Environment	IP67 compliant

Electrical

Camera Power System	Power-over-Ethernet or VRB (optional)
IR Illumination Input Voltage	12 to 24 VAC or VDC
Power Consumption	Day: 4.5 W max, Night: 24 W max

Ordering Information

EX85D8IP08B Megapixel-IP IR Imager Megapixel 1/2 in CMOS Day/Night 3.1/1.3 dual sensor, 8 mm lens, 850 nm Black Diamond, Black	EX85D8IP08B
EX85D8IP12B Megapixel-IP IR Imager Megapixel 1/2 in CMOS Day/Night 3.1/1.3 dual sensor, 12 mm lens, 850 nm Black Diamond, Black	EX85D8IP12B
EX85D8IP25B Megapixel-IP IR Imager Megapixel 1/2 in CMOS Day/Night 3.1/1.3 dual sensor, 25 mm lens, 850 nm Black Diamond, Black	EX85D8IP25B
EX85D8IP50B Megapixel-IP IR Imager Megapixel 1/2 in CMOS Day/Night 3.1/1.3 dual sensor, 50 mm lens, 850 nm Black Diamond, Black	EX85D8IP50B
Accessories	
EXPS.009 VAC Power Supply Power supply 24 VDC, 2500 mA RoHS	EXPS.009
EXMB.015B Pole Mount Adapter Bracket Pole Mount Adapter, black	EXMB.015B

Americas:
Bosch Security Systems, Inc.
130 Perinton Parkway
Fairport, New York, 14450, USA
Phone: +1 800 289 0096
Fax: +1 585 223 9180
security.sales@us.bosch.com
www.boschsecurity.us

Europe, Middle East, Africa:
Bosch Security Systems B.V.
P.O. Box 80002
5600 JB Eindhoven, The Netherlands
Phone: +31 40 2577 284
Fax: +31 40 2577 330
emea.securitysystems@bosch.com
www.boschsecurity.com

Asia-Pacific:
Bosch Security Systems Pte Ltd
38C Jalan Pemimpin
Singapore 577180
Phone: +65 6319 3450
Fax: +65 6319 3499
apr.securitysystems@bosch.com
www.boschsecurity.com

Represented by