# FLEXIDOME IP indoor 5000

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**BOSCH**
Invented for life

- ▶ Indoor IP dome camera with varifocal lens
- ▶ 1080p and 5MP resolutions
- ▶ Regions of interest and E-PTZ
- ▶ Motion, tamper and audio detection
- ▶ IR version with 15 m (50 ft) viewing distance

The HD 1080p and 5MP indoor dome cameras from Bosch are professional surveillance cameras that provide high quality HD and MP images for demanding security and surveillance network requirements. These domes are true day/night cameras offering excellent performance day or night.
The cameras are available in 1080p and 5MP versions and there is a 1080p version with a built-in active infrared illuminator that provides high performance in extreme low-light environments.

## System overview

**Intelligent Dynamic Noise Reduction reduces bandwidth and storage requirements**
The camera uses Intelligent Dynamic Noise Reduction which actively analyzes the contents of a scene and reduces noise artifacts accordingly.
The low-noise image and the efficient H.264 compression technology provide clear images while reducing bandwidth and storage by up to 50% compared to other H.264 cameras. This results in reduced-bandwidth streams that still retain a high image quality and smooth motion. The camera provides the most usable image possible by cleverly optimizing the detail-to-bandwidth ratio.

The average typical optimized bandwidth in kbits/s for various image rates is shown in the table:

| IPS | 5MP | 1080p | 720p | 480p |
|-----|------|-------|------|------|
| 30 | - | 1600 | 1200 | 600 |
| 15 | - | 1274 | 955 | 478 |
| 12 | 1753 | 1169 | 877 | 438 |
| 5 | 1136 | 757 | 568 | 284 |
| 2 | 489 | 326 | 245 | 122 |

**Area-based encoding**
Area-based encoding is another feature which reduces bandwidth. Compression parameters for up to eight user-definable regions can be set. This allows uninteresting regions to be highly compressed, leaving more bandwidth for important parts of the scene.

**Stylish indoor dome with varifocal lens**
Ideal for indoor use, the stylish design is suitable for installations where appearance and flexible coverage are important. The 3 to 10 mm varifocal lens allows you to choose the coverage area to best suit your application. Mounting options are numerous, including surface, wall, and suspended-ceiling mounting.

**1080p or 5MP resolutions with multiple streams**
The camera is available in a 1080p resolution version at 30 images per second (ips) or a 5MP resolution version at 12 ips. The innovative multi-streaming feature delivers various H.264 streams together with an M-JPEG stream. These streams facilitate bandwidth-efficient viewing and recording as well as integration with third-party video management systems.

**Regions of interest and E-PTZ**
Regions of Interest (ROI) can be user defined. The remote E-PTZ (Electronic Pan, Tilt and Zoom) controls allow you to select specific areas of the parent image. These regions produce separate streams for remote viewing and recording. These streams, together with the main stream, allow the operator to separately monitor the most interesting part of a scene while still retaining situational awareness.

**Two-way audio and audio alarm**
The camera has a built-in microphone to allow operators to listen in on the monitored area. Two-way audio allows the operator to communicate with visitors or intruders via an external audio line input and output. Audio detection can be used to generate an alarm if needed.

**Tamper and motion detection**
A wide range of configuration options is available for alarms signaling camera tampering. A built-in algorithm for detecting movement in the video can also be used for alarm signaling.

**Edge recording**
The internal MicroSD card slot supports up to 2 TB of storage capacity. A microSD card can be used for local alarm recording. Pre-alarm recording in RAM reduces recording bandwidth on the network, or — if microSD card recording is used — extends the effective life of the storage medium.

**Cloud-based facilities**
The camera supports time-based or alarm-based JPEG posting to four different accounts. These accounts can address FTP servers or cloud-based storage facilities (for example, Dropbox). Video clips or JPEG images can also be exported to these accounts.
Alarms can be set up to trigger an e-mail or SMS notification so you are always aware of abnormal events.

**Easy installation**
Power for the camera can be supplied via a Power-over-Ethernet (IEEE 802.3af) compliant network cable connection. With this configuration, only a single cable connection is required to view, power, and control the camera. Using PoE makes installation easier and more cost-effective, as cameras do not require a local power source.
The camera can also be supplied with power from +12 VDC power supplies. To increase system reliability, the camera can be simultaneously connected to both PoE and +12 VDC supplies. Additionally, uninterruptible power supplies (UPS) can be used, which will allow continuous operation, even during a power failure. For trouble free network cabling, the cameras support Auto-MDIX.

**True day/night switching**
The camera incorporates mechanical filter technology for vivid daytime color and exceptional night-time imaging while maintaining sharp focus under all lighting conditions.

**Access Security**
Password protection with three levels and 802.1x authentication is supported. To secure Web browser access, use HTTPS with a SSL certificate stored in the camera. The video and audio communication channels can be independently AES encrypted with 128-bit keys by installing the optional encryption site license.

**Complete viewing software**
There are many ways to access the camera's video features: using a web browser, with the supplied Bosch Video Client, or with the video security mobile App.
The Bosch Video Client PC surveillance software offers a user-friendly interface to support easy installation and configuration, and is supplied completely free-of-charge. It provides easy live viewing of multiple cameras, playback, forensic search and export.

**Video security App**
The Bosch video security mobile App has been developed to enable **Anywhere** access to HD surveillance images allowing you to view live images from any location. The App is designed to give you complete control of all your cameras, from panning and tilting to zoom and focus functions. It's like taking your control room with you.
This App, together with the separately available Bosch transcoder, will allow you to fully utilize our dynamic transcoding features so you can play back images even over low-bandwidth connections.

**System integration**
Bosch IP standard definition and high definition cameras, encoders and analytics work seamlessly with a wide range of security software and recording solutions from Bosch and other industry providers. Through ONVIF conformance, the open availability of Bosch video software development kits and a team dedicated to special integration and support projects, it is easy to manage Bosch video products within your system design (for details on the Bosch Integration Partner Program, visit ipp.boschsecurity.com).

## Functions

## Certifications and approvals

**HD standards**
Complies with the SMPTE 274M-2008 Standard in:
- Resolution: 1920x1080

- Scan: Progressive
- Color representation: complies with ITU-R BT.709
- Aspect ratio: 16:9
- Frame rate: 25 and 30 frames/s

Complies with the 296M-2001 Standard in:
- Resolution: 1280x720
- Scan: Progressive
- Color representation: complies with ITU-R BT.709
- Aspect ratio: 16:9
- Frame rate: 25 and 30 frames/s

| Standards | IEC 62471 (IR version) |
|---|---|
| | EN 60950-1 |
| | UL 60950-1 |
| | CAN/CSA-C22.2 NO. 60950-1-03 |
| | EN 50130-4 |
| | EN 50130-5 |
| | FCC Part15 Subpart B, Class B |
| | EMC directive 2004/108/EC |
| | EN 55022 class B |
| | EN 61000-3-2 |
| | EN 61000-3-3 |
| | EN 55024 |
| | AS/NZS CISPR 22 (equal to CISPR 22) |
| | ICES-003 Class B |
| | VCCI J55022 V2/V3 |
| | EN 50121-4 |
| ONVIF compliance | EN 50132-5-2; IEC 62676-2-3 |
| Product certifications | CE, FCC, UL, cUL, C-tick, CB, VCCI |

| Region | Certification |
|---|---|
| Europe | CE |
| USA | UL |

## Installation/configuration notes

## Parts included

## Technical specifications

| Power | |
|---|---|
| Input voltage | +12 VDC or Power-over-Ethernet (48 VDC nominal) |
| Power consumption | 4.5 W max. 6.0 W max. (IR version) |

| Power | |
|---|---|
| PoE | IEEE 802.3af (802.3at Type 1) Power level: Class 1 (Class 2 for IR version) |
| Power supply | 100–240 VAC to +12 VDC power supply unit included |

**1080p versions**

| Sensor | |
|---|---|
| Sensor type | 1/2.7-inch CMOS |
| Total sensor pixels | 1952 x 1092 (2MP) |

| Video performance | |
|---|---|
| Sensitivity – (3200K, reflectivity 89%, F1.3, 30IRE) | |
| • Color | 0.24 lx |
| • Mono | 0.05 lx |
| • With IR | 0.0 lx |
| Dynamic range | 76 dB Wide Dynamic Range (WDR) |

| Video streaming | |
|---|---|
| Video compression | H.264 (MP); M-JPEG |
| Streaming | Multiple configurable streams in H.264 and M-JPEG, configurable frame rate and bandwidth. Regions of Interest (ROI) |
| Overall IP Delay | Min. 120 ms, Max. 340 ms |
| GOP structure | IP, IBP, IBBP |
| Encoding interval | 1 to 25 [30] ips |

| Video resolution (H x V) | |
|---|---|
| • 1080p HD | 1920 X 1080 |
| • 720p HD | 1280 x 720 |
| • D1 4:3 (cropped) | 704 x 480 |
| • SD upright (cropped) | 400 x 720 |
| • 480p SD | Encoding: 704 x 480; Displayed: 854 x 480 |
| • 432p SD | 768 x 432 |
| • 288p SD | 512 x 288 |
| • 240p SD | Encoding: 352 x 240; Displayed: 432 x 240 |
| • 144p SD | 256 x 144 |

| Video functions | |
|---|---|
| Day/Night | Color, Monochrome, Auto |
| Adjustable picture settings | Contrast, Saturation, Brightness |

| Video functions | |
|---|---|
| White Balance | 3 automatic modes, manual mode and measure |
| Shutter | Automatic Electronic Shutter (1/25[30] to 1/150000)<br>Fixed shutter (1/25[30] to 1/15000) selectable |
| Backlight compensation | On/off |
| Noise reduction | Intelligent Dynamic Noise Reduction |
| Contrast enhancement | On/off |
| Sharpness | Sharpness enhancement level selectable |
| Privacy Masking | Four independent areas, fully programmable |
| Video Analysis | MOTION+ |
| Other functions | Image mirror, Image flip, Pixel counter, Video watermarking, Display stamping, Scene modes |

| Night vision (IR version only) | |
|---|---|
| Distance | 15 m (50 ft) |
| LED | 15 LED high efficiency array, 850 nm |

| Optical | |
|---|---|
| Lens type | Varifocal 3 to 10 mm, DC Iris F1.3 – 360, IR corrected |
| Lens mount | Board mounted |
| Horizontal field of view | 36° - 117° |
| Vertical field of view | 20° - 61° |

**5MP version**

| Sensor | |
|---|---|
| Type | 1/3-inch CMOS |
| Total sensor pixels | 2592 x 1944 |

| Video performance | |
|---|---|
| Sensitivity – (3200K, reflectivity 89%, F1.3, 30IRE) | |
| • Color | 0.5 lx |
| • Mono | 0.075 lx |
| Dynamic range | 65 dB Wide Dynamic Range (WDR) |

| Video streaming | |
|---|---|
| Video compression | H.264 (MP); M- JPEG |
| Streaming | Multiple configurable streams in H.264 and M-JPEG, configurable frame rate and bandwidth. |
| Overall IP Delay | Min. 300 ms, Max. 850 ms |

| Video streaming | |
|---|---|
| GOP structure | IP |
| Encoding interval | 1 to 12 fps |

| Video resolution | |
|---|---|
| 5MP (4:3) | 2592 x 1944 |
| 1.5MP (4:3) | 1440 x 1080 |
| 0.8MP (4:3) | 1024 x 768 |
| VGA | 640 x 480 |
| QVGA | 320 x 240 |

| Video functions | |
|---|---|
| Day/Night | Color, Monochrome, Auto |
| Adjustable picture settings | Contrast, Saturation, Brightness |
| White Balance | 3 automatic modes, manual mode and measure |
| Shutter | Automatic Electronic Shutter;<br>Fixed shutter selectable;<br>Default shutter |
| Backlight compensation | On/off |
| Noise reduction | Intelligent Dynamic Noise Reduction with separate temporal and spatial adjustments |
| Contrast enhancement | On/off |
| Sharpness | Sharpness enhancement level selectable |
| Privacy Masking | Four independent areas, fully programmable |
| Video Analysis | MOTION+ |
| Other functions | Image mirror, Image flip, Pixel counter, Video watermarking, Display stamping, Scene modes |

| Optical | |
|---|---|
| Lens type | Varifocal 3 to 10 mm, DC Iris F1.3 – 360, IR corrected |
| Lens mount | Board mounted |
| Horizontal field of view | 28° - 87° |
| Vertical field of view | 21° - 63° |

**All versions**

| Input/output | |
|---|---|
| Analog video output | CVBS, 1 Vpp, 2.5 mm jack, 75 Ohm Selectable standard |
| Alarm input | Short or DC 5V activation |
| Relay out | Input rating Maximum 1 A, 24 VAC/VDC |

| Input/output | |
|---|---|
| Audio input | Built-in microphone<br>Line in jack connector |
| Audio output | Line out jack connector |

| Audio streaming | |
|---|---|
| Audio Streaming | Full duplex / half duplex |
| Signal-to-noise ratio | > 50 dB |
| Audio compression | AAC-LC, G.711, L16 (live and recording) |

| Local storage | |
|---|---|
| Internal RAM | 10 s pre-alarm recording |
| Memory card slot | Supports up to 32 GB microSDHC / 2 TB microSDXC card. (An SD card of Class 6 or higher is recommended for HD recording) |
| Recording | Continuous recording, ring recording. alarm/events/schedule recording |

| Software | |
|---|---|
| Unit Configuration | Via web browser or Configuration Manager |
| Firmware update | Remotely programmable |
| Software viewer | Web browser, Bosch Video Client, or third party software |

| Network | |
|---|---|
| Protocols | IPv4, IPv6, UDP, TCP, HTTP, HTTPS, RTP/RTCP, IGMP V2/V3, ICMP, ICMPv6, RTSP, FTP, Telnet, ARP, DHCP, NTP (SNTP), SNMP (V1, MIB-II), 802.1x, DNS, DNSv6, DDNS (DynDNS.org, selfHOST.de, no-ip.com), SMTP, iSCSI, UPnP (SSDP), DiffServ (QoS), LLDP, SOAP, Dropbox, CHAP, digest authentication |
| Encryption | TLS 1.0, SSL, DES, 3DES, AES (optional) |
| Ethernet | 10/100 Base-T, auto-sensing, half/full duplex |
| Connectivity | ONVIF Profile S , Auto-MDIX |

| Mechanical | |
|---|---|
| 3-axis adjustment (pan/tilt/rotation) | 355º / 148º / 355º<br>355º / 100º / 355º (IR version) |
| Dimensions | Diameter: 135 mm (5.32 in)<br>Height: 102 mm (4 in) |
| Weight | 554 g (1.22 lb) approx. |
| Color | RAL 9004, RAL 9010 |

| Environmental | |
|---|---|
| Operating temperature | -20 ºC to +50 ºC (-4 ºF to +122 ºF) |
| Storage temperature | -20 ºC to +70 ºC (-4 ºF to +158 ºF) |
| Humidity | 20% to 90% relative humidity (non condensing) |

## Ordering information

**FLEXIDOME IP indoor 5000 HD**
Professional IP dome camera for indoor surveillance. Varifocal 3 to 10 mm lens; PSU included; IDNR; ROI; day/night; H.264 quad-streaming; cloud services; motion/tamper/audio detection; 1080p
Order number **NIN-50022-V3**

**FLEXIDOME IP indoor 5000 MP**
Professional IP dome camera for indoor surveillance. Varifocal 3 to 10 mm lens; PSU included; IDNR; ROI; day/night; H.264 quad-streaming; cloud services; motion/tamper/audio detection; 5MP
Order number **NIN-50051-V3**

**FLEXIDOME IP indoor 5000 HD**
Professional IP dome camera for indoor HD surveillance. Varifocal 3 to 10 mm lens; PSU included; IDNR; ROI; day/night; H.264 quad-streaming; cloud services; motion/tamper/audio detection; 1080p; Infrared
Order number **NII-50022-V3**

**LTC 9213/01 Pole Mount Adapter**
Flexible pole mount adapter for camera mounts. Max. 9 kg (20 lb); 3 to 15 inch diameter pole; stainless steel straps
Order number **LTC 9213/01**

**Accessories**

**VEZ-A2-WW Wall Mount**
White
Order number **VEZ-A2-WW**

**NDA-ADTI-DOME Dome Adapter Bracket**
Order number **NDA-ADTI-DOME**

**VDA-PMT-AODOME Outdoor Pipe Mount**
Outdoor pipe mount
Order number **VDA-PMT-AODOME**

**NDA-FMT200-DOME Flush-mount Bracket**
In-ceiling flush mounting kit.
Order number **NDA-FMT200-DOME**

**NDA-SMB-MINISMB Surface Mount Box**
Surface mount box (Ø149 mm / Ø5.87 in)
Order number **NDA-SMB-MINISMB**

## Software Options

**BVIP AES 128 Bit Encryption**
Site licence for BVIP AES 128-bit encryption. Enables encrypted communication between BVIP devices and management stations
Order number **MVS-FENC-AES**