The 5MP indoor camera is a ready-to-use, complete network video surveillance system inside a compact and stylish housing. This camera brings Bosch’s high-performance technology into the realm of homes, small office and retail businesses by offering a cost-effective solution for a broad range of applications.

**System overview**

The elegant, compact box design is ideal for homes, offices, businesses or shops where camera size and appearance is important. The camera has a 1/3-inch CMOS sensor and is a true day/night camera offering excellent performance day or night.

**Functions**

**Content Based Imaging Technology**

Content Based Imaging Technology (CBIT) is used to radically improve image quality in all lighting conditions and to identify areas for enhanced processing. The camera examines the scene using intelligent video analytics and provides feedback to re-tune the image processing. This provides better detail in the areas that matter and better all-round performance.

**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 bitrate in kbits/s for various frame rates is shown in the table:

<table>
<thead>
<tr>
<th>fps</th>
<th>5MP</th>
<th>480p</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>1753</td>
<td>438</td>
</tr>
<tr>
<td>5</td>
<td>1136</td>
<td>284</td>
</tr>
<tr>
<td>2</td>
<td>489</td>
<td>122</td>
</tr>
</tbody>
</table>

**Multiple streams**

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.
Depending on the resolution and frame rate selected for the first stream, the second stream provides a copy of the first stream or a lower resolution stream. The third stream uses the I-frames of the first stream for recording; the fourth stream shows a JPEG image at a maximum of 10 Mbit/s.

Simultaneous analog and IP video outputs
A surge-protected analog video output ensures that high resolution IP video streaming and an analog video output are available simultaneously. This means, for example, that a confrontation monitor can easily be connected directly to the camera while still maintaining full IP functionality.

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.

Built-in microphone, 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 SD card slot supports up to 2 TB of storage capacity. An SD card can be used for local alarm recording. Pre-alarm recording in RAM reduces recording bandwidth on the network, or — if SD card recording is used — extends the effective life of the storage medium.

Storage management
Recording management can be controlled by the Bosch Video Recording Manager (VRM) or the camera can use iSCSI targets directly without any recording software.

Cloud-based services
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 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.

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**System integration**
The camera conforms to the ONVIF Profile S, ONVIF Profile Q and ONVIF Profile G specifications. Compliance with these standards guarantees interoperability between network video products regardless of manufacturer. Third-party integrators can easily access the internal feature set of the camera for integration into large projects. Visit the Bosch Integration Partner Program (IPP) website (ipp.boschsecurity.com) for more information.

**Certifications and approvals**

<table>
<thead>
<tr>
<th>Standards</th>
</tr>
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<tbody>
<tr>
<td>EN 60950-1</td>
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<tr>
<td>UL 60950-1</td>
</tr>
<tr>
<td>CAN/CSA-C22.2 NO. 60950-1-07</td>
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<td>EN 50130-4</td>
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<td>EN 50130-5 Class II</td>
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<tr>
<td>FCC Part15 Subpart B, Class B</td>
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<tr>
<td>EMC directive 2004/108/EC</td>
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<tr>
<td>EN 55022 class B</td>
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<tr>
<td>EN 55024</td>
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<tr>
<td>C-tick AS/NZS CISPR 22 (equal to CISPR 22)</td>
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<td>ICES-003 Class B</td>
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<td>VCCI J55022 V2/V3</td>
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<td>EN 50121-4</td>
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<tr>
<td>ONVIF conformance</td>
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<tr>
<td>EN 50132-5-2; IEC 62676-2:3</td>
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**Product certifications**

<table>
<thead>
<tr>
<th>Region</th>
<th>Certification</th>
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</thead>
<tbody>
<tr>
<td>Europe</td>
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</tr>
<tr>
<td>USA</td>
<td>UL</td>
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<tr>
<td>Canada</td>
<td>CSA</td>
</tr>
</tbody>
</table>

**Technical specifications**

**Power**

<table>
<thead>
<tr>
<th>Power Supply</th>
<th>12 VDC</th>
</tr>
</thead>
<tbody>
<tr>
<td>PoE</td>
<td>Power-over-Ethernet 48 VDC nominal</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Current Consumption</th>
<th>300 mA (12 VDC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PoE</td>
<td>75 mA (PoE 48 VDC)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Power Consumption</th>
<th>3.6 W</th>
</tr>
</thead>
<tbody>
<tr>
<td>PoE</td>
<td>IEEE 802.3af (802.3at Type 1)</td>
</tr>
<tr>
<td></td>
<td>Power level: Class 1</td>
</tr>
</tbody>
</table>

**Sensor**

<table>
<thead>
<tr>
<th>Type</th>
<th>1/3-inch CMOS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total sensor pixels</td>
<td>2592 x 1944</td>
</tr>
</tbody>
</table>
### Video performance

- **Sensitivity** – (3200K, reflectivity 89%, F1.4, 30IRE)
  - Color: 0.35 lx
  - Mono: 0.05 lx

- **Dynamic range**: 81 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
- **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; Fixed shutter selectable; 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

### Audio streaming

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

### Optical

- **Lens mount**: CS mount (C-mount with adapter ring)
- **Lens connector**: Standard 4-pin DC-iris connector
- **Focus control**: Manual adjustment
- **Iris control**: Automatic iris control
- **Lens type (V3 version)**: Varifocal 3.3 to 12 mm, DC Iris F1.4 – 360, IR corrected
- **Viewing angle (wide 3.3 mm)**: 82° x 60° (H x V)
- **Viewing angle (tele 12 mm)**: 25° x 19° (H x V)

### Input/output

- **Analog Video out**: CVBS, 1 Vpp, 2.5 mm jack, 75 Ohm Selectable standard
- **Audio**: Built-in microphone, 1 x mono line in, 1 x mono line out
  - **connectors**: 3.5 mm mono jack
  - **signal line in**: 0.707 Vrms, 20 kOhm typical
  - **signal line out**: 0.707 Vrms, 10 kOhm typical,
- **Alarm input**: 1 input
  - **activation**: Short to activate
- **Alarm output**: 1 output
  - **voltage**: 24 VAC or +30 VDC max. Load current 1 A max.

### Local storage

- **Internal RAM**: 10 s pre-alarm recording
- **Memory card slot**: Supports up to 32 GB SDHC / 2 TB SDXC card. (An SD card of Class 6 or higher is recommended for HD recording)
- **Recording**: Continuous recording, ring recording, alarm/ events/schedule recording
Network

Protocols: IPv4, IPv6, UDP, TCP, HTTP, HTTPS, RTP/RTCP, IGMP V2/V3, ICMP, ICMPv6, RTSP, FTP, Telnet, ARP, DHCP, APIPA (Auto-IP, link local address), 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 1.2, SSL, DES, 3DES.

Ethernet: 10/100 Base-T, auto-sensing, half/full duplex.

Connectivity: Auto-MDIX.

Interoperability: ONVIF Profile S; ONVIF Profile G; ONVIF Profile Q; GB/T 28181.

Software

Unit Configuration: Via web browser or Configuration Manager.

Firmware update: Remotely programmable.

Software viewer: Web browser, Bosch Video Client, or third party software.

Mechanical

Dimensions (H x W x D) without lens: 55 x 64 x 113 mm (2.17 x 2.52 x 4.45 in)

Dimensions (H x W x D) with lens: 55 x 64 x 149 mm (2.17 x 2.52 x 5.87 in)

Weight: 550 g (1.21 lb) without lens; 590 g (1.30 lb) with lens.

Color: RAL 9017 Traffic black.

Tripod Mount: Bottom and top 1/4-inch 20 UNC.

Environmental

Operating Temperature: -30 ºC to +50 ºC (-22 ºF to +122 ºF)

Storage Temperature: -40 ºC to +70 ºC (-40 ºF to +158 ºF)

Humidity: 0% to 90% relative humidity (non condensing).

Ordering information

**DINION IP 5000 MP**

Indoor 5MP IP box design camera. IDNR; day/night; H. 264 quad-streaming; cloud services; ROI; motion/tamper/audio detection; 5MP.

Order number **NBN-50051-C**

**DINION IP 5000 MP**

Indoor 5MP IP box design camera. IDNR; day/night; H. 264 quad-streaming; cloud services; ROI; motion/tamper/audio detection; 5MP; varifocal 3.3 to 12 mm, DC Iris, F1.4 lens, IR corrected.

Order number **NBN-50051-V3**

**Accessories**

**Varifocal SR Megapixel Lens**

Varifocal SR megapixel IR corrected lens. 1/2.5" sensor; CS-mount; 4-pin SR-iris; 5 MP; 9 to 40 mm; F1.5 to F8.

Order number **LVF-5005C-S0940**

**Varifocal SR Megapixel Lens**

Varifocal SR megapixel IR corrected lens. 1/2.5" sensor; CS-mount; 4-pin SR-iris; 5 MP; 1.8 to 3 mm; F1.8 to F8.

Order number **LVF-5005C-S1803**

**Varifocal Megapixel Lens**

Varifocal megapixel IR corrected lens. 1/1.8" sensor max; C-mount; 4-pin DC-iris; 5 MP; 12 to 50 mm; F1.6 to T360.

Order number **LVF-5005C-S4109**

**S1460 Service/Monitor Cable**

2.5 mm jack to BNC video connector cable. 1 m.

Order number **S1460**

**EX12LED-3BD-8M Infrared Illuminator**

Mini IR 850 nm illuminator. LED array; 3D Diffuser; black; 17 m HFOV; 30º beam pattern.

Order number **EX12LED-3BD-8M**

**EX12LED-3BD-8W Infrared Illuminator**

Mini IR 850 nm illuminator. LED array; 3D Diffuser; black; 16 m HFOV; 60º beam pattern.

Order number **EX12LED-3BD-8W**

**EX12LED-3BD-9M Infrared Illuminator**

Mini IR 940 nm illuminator. LED array; 3D Diffuser; black; 17 m HFOV; 30º beam pattern.

Order number **EX12LED-3BD-9M**

**EX12LED-3BD-9W Infrared Illuminator**

Mini IR 940 nm illuminator. LED array; 3D Diffuser; black; 16 m HFOV; 60º beam pattern.

Order number **EX12LED-3BD-9W**

**NPD-5001-POE Midspan PoE Injector**

Power-over-Ethernet midspan injector for use with PoE enabled cameras; 15.4 W, 1-port.

Order number **NPD-5001-POE**
NPD-5004-POE Midspan PoE Injector
Power-over-Ethernet midspan injectors for use with PoE enabled cameras; 15.4 W, 4-ports
Order number NPD-5004-POE