# **AutoDome 700 Series IP PTZ Camera**

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- ► Choice of 36x or 28x day/night night cameras with 12x digital zoom and wide dynamic range
- ► Progressive scan provides smooth and clear images when viewing details in a moving image
- ► Sodium Vapor White Balance mode restores objects to their original color
- Quad video streaming generates simultaneous H.264 and M-JPEG video streams
- ► ONVIF conformant; provides interoperability with other conformant systems

The AutoDome 700 Series is an easy to install, indoor/outdoor IP PTZ camera with superb video quality. This discrete, high-speed dome camera features day/night functionality for quality images in low light conditions. The AutoDome 700 Series provides direct network connection using H.264 and M-JPEG compression and bandwidth throttling to efficiently manage bandwidth and storage requirements while delivering outstanding image quality. The AutoDome 700 Series provides complete network-based control of all dome functionality including pan/tilt/zoom operation, presets, tours, alarms, as well as web-based configuration of all dome settings.

The AutoDome 700 Series conforms to the ONVIF (Open Network Video Interface Forum) and the NTCIP specifications. ONVIF conformance guarantees interoperability between the AutoDome and network video products regardless of manufacturer. NTCIP conformance ensures that the AutoDome integrates with transportation management devices.

### **AutoDome 700 Series highlights**

The AutoDome 700 Series delivers state-of-the-art technology and features that far exceed other PTZ cameras. The cameras achieve a high horizontal resolution enabling the reproduction of clear and detailed images. The cameras feature progressive scan technol-

ogy, wide dynamic range, and sodium vapor lamp white balance ensuring clear image detail from extreme lighting environments.

# Wide Dynamic Range

The AutoDome features Wide Dynamic Range (WDR) technology that allows for the capture of clear images from both bright and dark areas in the same frame. WDR ensures that bright areas are not saturated and that dark areas are not too dark.

## Progressive scan

The AutoDome camera is ideally suited for IP imaging applications. The progressive scan technology incorporated into the camera provides smooth and clear images when viewing images from a moving camera.

### Sodium vapor lamp white balance

The AutoDome is an exceptional performer when shooting under a sodium vapor lamp (a street lamp or tunnel lamp, for example). Images under these conditions may have a yellowish tint, which may make identification difficult. In the Sodium Vapor White Balance mode, the AutoDome automatically compensates for the light from a sodium vapor lamp to restore objects to their original color.

## Integration and installation

The AutoDome 700 Series maximizes your security investment by integrating with Bosch video storage products, as well as the full range of Bosch video over IP products.

And, the AutoDome 700 Series is simple to install and use. The pendant housing comes with a sunshield for outdoor applications. This sunshield can be easily removed for indoor environments. Bosch offers a full complement of hardware (as a separate purchase) for wall, corner, mast, roof, pipe, and in-ceiling mount applications for indoor and outdoor environments.

## **System Overview**

### High-performance PTZ day/night camera

The AutoDome 700 Series camera has a 1/4-in. CCD sensor, with 4CIF/D1 resolution and sensitivity to below 1.0 lux and is available with a choice of 28x and the industry-leading 36x optical zoom lens, and all 700 Series cameras offer a full 12x digital zoom. Both camera options provide D1 horizontal resolution for outstanding clarity and image detail. The cameras also incorporate technology that dramatically improves the dynamic range by 128 times. Also known as WDR (wide-dynamic range), it results in clear image reproduction in extreme high-contrast environments. Day/night capabilities and outstanding sensitivity make AutoDome 700 Series cameras exceptional performers in all lighting conditions. In low light, these cameras automatically switch from color to monochrome by removing the IR filter to boost the infrared illumination sensitivity, while maintaining superior image quality. For operation in the darkest conditions, the SensUp control feature automatically reduces the shutter speed to as little as one second. This increases sensitivity by more than 50 times.

## Accurate control and positioning

The AutoDome 700 Series supports up to 99 user-defined pre-positions, as well as one (1) preset tour and one (1) AutoPan mode. The preset tour can be programmed with up to 99 prepositions and a configurable dwell time between positions.

Pan and tilt preset repeatability are accurate to within ±0.1 degrees to ensure that the correct scene is captured every time. The AutoDome 700 Series delivers variable pan/tilt speeds from a crawl speed of only 0.1 degrees per second up to an ultra-quick 120 degrees per second. The dome is capable of pan speeds of 360 degrees per second and tilt speeds of 100 degrees per second between prepositions. The AutoDome 700 Series provides a tilt range of 0 to 94 degrees, and a pan range of up to 360 degrees continuous rotation. The AutoScaling (proportional zoom) and AutoPivot (automatically rotates and flips the camera) features ensure optimal control.

### Ultra-efficient H.264 encoding

The AutoDome 700 Series uses an advanced H.264 encoder to create DVD-quality streaming video at ultralow bit rates. Use of H.264 encoding, bandwidth throttling, and multicasting capabilities, minimizes bandwidth and storage usage to significantly reduce costs.

### Multiple video streams

The cameras use H.264 (Main Profile) compression, bandwidth throttling, and multicasting capabilities to manage bandwidth and storage requirements efficiently, while delivering high image quality and resolution. Bosch's innovative quad-streaming feature enables AutoDome 700 Series cameras to generate two independent H.264 streams, an I-frame recording stream, and an M-JPEG stream simultaneously. This flexibility allows streaming of high-quality H.264 images for live viewing and recording while streaming M-JPEG images to another device at the same time. The M-JPEG video stream also provides easy integration with third-party JPEG or M-JPEG-compatible video management systems.

AutoDome 700 Series cameras offer unparalleled recording options. Attached to the network, they can use iSCSI targets directly without needing any recording software. The recording management capabilities of the system can be further enhanced by using the Bosch Video Recording Manager (VRM).

#### **ONVIF** conformant

The AutoDome 700 Series conforms to the ONVIF (Open Network Video Interface Forum) specification guaranteeing interoperability between network video products regardless of manufacturer. ONVIF conformant devices are able to exchange live video, audio, metadata and control information and ensure that they are automatically discovered and connected to network applications such as video management systems.

## Intelligence

With built-in video content analysis, the AutoDome 700 Series reinforces the Intelligence-at-the-Edge concept where edge devices become increasingly intelligent. The AutoDome 700 Series comes with Bosch's Intelligent Video Analysis (IVA) built-in. IVA is state-of-the-art intelligent video analysis that reliably detects, tracks, and analyzes moving objects while suppressing unwanted alarms from spurious sources in the image.

## **Fiber Optic Kit**

Bosch offers the optional VG4-SFPSCKT, a unique media converter module for use with 700 Series Auto-Domes. This media converter module is designed to accept a wide-range of 10/100 Mbps SFP modules for use with Multimode or Singlemode optical fiber with LC or SC connectors.

The media converter module along with the SFP module is user-installed directly into the AutoDome's power supply box to provide an integrated fiber optic solution.

## Ease of installation and servicing

The AutoDome 700 Series has been designed for quick and easy installation; a key feature from Bosch CCTV products. All housings feature recessed screws and latches for increased tamper resistance.

AutoDome in-ceiling housings provide IP54 protection (with an optional gasket kit) and are rated IK 8 (IEC 62262). These housings feature an impact-resistant polycarbonate rugged bubble to protect your camera from vandalism. The rugged bubble can withstand impacts equivalent to a 4.5 kg (10 lb) weight dropped from a height of 3 m (10 ft).

Outdoor Pendant housings are rated to provide IP 66 protection and are offers an operating temperature range down to -40°C (-40°F). The outdoor pendant comes fully assembled with a sunshield and ready for wall or pipe applications with the proper mounting hardware (purchased separately). In addition, the pendant housing comes equipped with a low-impact, high-resolution acrylic bubble for enhanced image clarity. You can easily convert the outdoor pendant for indoor applications by removing the sunshield.

**Note**: Bosch offers a full complement of hardware and accessories (as a separate purchase) for corner, mast, roof, pipe, and in-ceiling applications, which allow the AutoDome to be easily adapted to individual site requirements.

### **Unsurpassed reliability**

As with all Bosch products, the AutoDome 700 Series has been subjected to the industry's most comprehensive and demanding battery of endurance tests such as HALT (highly accelerated life testing) to make sure it will hold up through years of use. And of course, it comes with Bosch's industry-leading 3-year warranty.

## **Functions**

The following are some of the features that make the AutoDome 700 Series the perfect fit for a variety of surveillance applications.

### Inputs and outputs

The AutoDome 700 Series can handle two (2) alarm inputs and one (1) open-collector alarm output, which can drive an external device.

## iSCSI device support

Built-in iSCSI support allows the AutoDome 700 Series to stream video directly to an iSCSI RAID array. This enables efficient video storage and overall system scalability without compromise to recording performance when paired with suitable iSCSI storage arrays.

## **Network-based control and configuration**

The AutoDome 700 Series enables full camera control and configuration capabilities over the network. Operators or technicians can control camera pan/tilt/zoom operation, presets, tours, and alarm management functions virtually anywhere without need for additional wiring.

The embedded web server lets the installer access all the user settings, make camera adjustments, and update firmware via a standard web browser.

#### **Device management**

Simple Network Management Protocol (SNMP) support facilitates the remote monitoring and management. The AutoDome 700 Series provides full support for SNMP v3.

### Superior privacy masking

The AutoDome 700 Series provides 24 individual, easy to configure privacy masks, with up to 24 displayed in the same scene. As the camera is zoomed each mask changes size smoothly and quickly ensuring that the covered object cannot be seen.

## **Unsurpassed flexibility**

There are many ways to access the camera's video: on a PC using a web browser, with the Bosch Video Management System (VMS), or with the Bosch Video Client.

#### Easy upgrade

Remotely upgrade the camera whenever new firmware becomes available. This ensures up-to-date products, thus protecting investment with little effort.

#### Access security

Various security levels are available for accessing the network, the camera, and the data channels. As well as password protection with three levels, 802.1x authentication using a RADIUS (Remote Authentication Dial In User Service) server is supported. To secure Web browser access, use HTTPS with a SSL certificate stored in the camera. For total data protection, the video and audio communication channels can be independently AES encrypted with 128-bit keys by installing the optional encryption site license.

#### **Certifications and Approvals**

| Electromagnetic<br>Compatibility (EMC) | Complies with FCC Part 15, ICES-003, and CE regulations, including EN50130-4 and EN50121-4 |
|--|--|
| Product Safety                         | Complies with CE regulations, UL, CSA, EN, and IEC Standards                               |
| Environmental                          | In-ceiling: IP54 (with optional VGA-IP54K-IC78 kit), Plenum rated<br>Pendant: IP66         |

## **Parts Included**

### In-ceiling

| 1 | Fully-assembled in-ceiling housing |
|---|------------------------------------|
| 1 | Polycarbonate bubble, clear        |
| 1 | Interface box                      |

## **Outdoor Pendant**

Fully-assembled outdoor pendant housing with sunshieldAcrylic bubble, clear

## Notes:

- The pendant can be converted to an indoor pendant by removing the sunshield.
- Mounting hardware and accessories are available separately.

# **Technical Specifications**

# Camera 36x Day/Night

| Imager                     | 1/4 intype Exview HAD CCD (progressive scan)                                      |
|----------------------------|---|
| Effective Picture Elements | PAL: Approx. 440,000; 752(H) x 582(V)<br>NTSC: Approx. 380,000; 768 (H) x 494 (V) |
| Lens                       | 36x Zoom (3.4–122.4 mm)<br>F1.6 to F4.5   |

| Zoom Movement Speed                              | NTSC     | PAL      |
|--|----------|----------|
| Optical WIDE / Optical TELE – Focus Tracking ON  | 4.0 sec. | 4.0 sec. |
| Optical WIDE / Optical TELE – Focus Tracking OFF | 2.7 sec. | 2.7 sec. |
| Optical WIDE / Digital TELE                      | 6.0 sec. | 6.2 sec. |
| Digital WIDE / Digital TELE                      | 2.1 sec. | 2.3 sec. |

| Focus                      | Automatic with manual override                                      |  |
|----------------------------|---|--|
| Iris                       | Automatic with manual override                                      |  |
| Optical Zoom Field of View | 1.7° to 57.8°   |  |
| Gain Control               | Auto/Manual/Max.<br>(-3 dB to 28 dB, 2 dB steps)                    |  |
| Synchronization            | Line-Lock (-120° to 120° vertical phase adjust) or internal crystal |  |
| Aperture Correction        | Horizontal and vertical   |  |
| Digital Zoom               | 12x   |  |

| Sensitivity (typical) 1                            | 30 IRE                   | 50 IRE                   |
|--|--------------------------|--------------------------|
| Day Mode   |                          |                          |
| SensUp Off   | 0.66 lux<br>(0.061 fc)   | 1.4 lux<br>(0.13 fc)     |
| SensUp On<br>(NTSC: 1/4s, 15X; PAL<br>1/3s, 16.7X) | 0.04 lux<br>(0.0037 fc)  | 0.1 lux<br>(0.0092 fc)   |
| Night Mode   |                          |                          |
| SensUp Off   | 0.104 lux<br>(0.0097 fc) | 0.209 lux<br>(0.0194 fc) |

| SensUp On<br>(NTSC: 1/4s, 15X; PAL<br>1/3s, 16.7X) | 0.0052 lux<br>(0.0005 fc) | 0.0103 lux<br>(0.001 fc) |
|--|---------------------------|--------------------------|
| Electronic Shutter Speed                           | 1/1 to 1/10,000 se        | c., 22 steps             |
| Signal-to-Noise Ratio (SNR)                        | >50 dB                    |                          |
| White Balance                                      | 2000 K to 10,000 k        | <                        |

 $1. \ Unless otherwise stated, test conditions are: F1.6; shutter = NTSC 1/60s, PAL 1/50s; max AGC; no bubble. Clear bubble adds 0.09 f-stop loss (90% light transmission). Tinted bubble adds 0.47 f-stop loss (60% light transmission).$ 

## Camera 28x Day/Night

| ouniera zox bay/rugiit   |   |          |          |
|--|---|----------|----------|
| Imager   | 1/4 intype Exview HAD CCD (progressive scan)                                      |          |          |
| Effective Picture Elements   | PAL: Approx. 440,000; 752(H) x 582(V)<br>NTSC: Approx. 380,000; 768 (H) x 494 (V) |          | , , ,    |
| Lens   | 28x Zoom (3.5–98.0 mm)<br>F1.35 to F3.7   |          |          |
| Zoom Movement Speed  | d NTSC PAL  |          | PAL      |
|  | Optical WIDE / Optical TELE –<br>Focus Tracking ON                                |          | 2.5 sec  |
| Optical WIDE / Optical TELE – Focus Tracking OFF                         |   | 1.7 sec. | 1.7 sec. |
| <ul> <li>Optical WIDE / Digital TELE –<br/>Focus Tracking ON</li> </ul>  |   | 4.5 sec. | 4.9 sec. |
| <ul> <li>Optical WIDE / Digital TELE –<br/>Focus Tracking OFF</li> </ul> |   | 1.7 sec. | 1.7 sec. |
| • Digital WIDE / D   | igital TELE   | 2.0 sec. | 2.5 sec. |
|  |   |          |          |

| Focus                      | Automatic with manual over-<br>ride   |
|----------------------------|---|
| Iris                       | Automatic with manual over-<br>ride   |
| Optical Zoom Field of View | 2.1° to 55.8°   |
| Gain Control               | Auto/Manual/Max.<br>(-3 dB to 28 dB, 2 dB steps)                            |
| Synchronization            | Line-Lock (–120° to 120°<br>vertical phase adjust) or in-<br>ternal crystal |
| Aperture Correction        | Horizontal and vertical   |
| Digital Zoom               | 12x   |

| Sensitivity (typical) <sup>2</sup>                 | 30 IRE                 | 50 IRE                |
|--|------------------------|-----------------------|
| Day Mode   |                        |                       |
| SensUp Off   | 0.33 lux<br>(0.031 fc) | 0.66 lux<br>(0.061)   |
| SensUp On<br>(NTSC: 1/4s, 15X; PAL 1/3s,<br>16.7X) | 0.02 lux<br>(.002 fc)  | 0.04 lux<br>(.004 fc) |

| Night Mode   |                         |            |
|--|-------------------------|------------|
| SensUp Off   | 0.066 lux<br>(0.006 fc) | 0.166 lux  |
| SensUp On<br>(NTSC: 1/4s, 15X; PAL 1/3s,<br>16.7X) | 0.0026 lux              | 0.0082 lux |

| Electronic Shutter Speed | 1/1 to 1/10,000 sec., 22 steps |
|--------------------------|--------------------------------|
| Signal-to-Noise Ratio    | >50 dB                         |
| White Balance            | 2000 K to 10,000 K             |

<sup>2.</sup> Unless otherwise stated, test conditions are: F1.6; shutter = NTSC 1/60s, PAL 1/50s; max AGC; no bubble. Clear bubble adds 0.09 f-stop loss (90% light transmission). Tinted bubble adds 0.47 f-stop loss (60% light transmission).

## Mechanical

|                    | In-Ceiling                  | Pendant                     |
|--------------------|-----------------------------|-----------------------------|
| Pan Range          | 360° cont.                  | 360° cont.                  |
| Tilt Angle         | 1° above horizon            | 18° above horizon           |
| Variable Speed     | 0.1°/s-120°/s               | 0.1°/s-120°/s               |
| Pre-position Speed | Pan: 360°/s<br>Tilt: 100°/s | Pan: 360°/s<br>Tilt: 100°/s |
| Preset<br>Accuracy | ± 0.1° typ.                 | ± 0.1° typ.                 |

# **Electrical**

|                               | In-Ceiling            | Pendant   |
|-------------------------------|-----------------------|---|
| Input Voltage                 | 21-30 VAC<br>50/60 Hz | 21-30 VAC<br>50/60 Hz                           |
| Power Consumption,<br>typical | 24 W / 44 VA          | 60 W / 69 VA<br>or<br>24 W / 44 VA <sup>3</sup> |

 $<sup>3. \, \</sup>text{Without heater connected in power supply box for indoor applications.}$ 

# **Surge Suppression**

| Protection on<br>Video         | Peak current 10 kA (Gas Tube Arrester)            |
|--------------------------------|---|
| Protection on<br>Biphase       | Peak current 10 A, peak power 300 W (8/20 μs)     |
| Protection on<br>RS-232/485    | ESD protection ±15 KV human body model            |
| Protection on<br>Alarm Inputs  | Peak current 17 A, peak power 300 W (8/20 μs)     |
| Protection on<br>Alarm Outputs | Peak current 2 A, peak power 300 W (8/20 μs)      |
| Protection on<br>Relay Outputs | Peak current 7.3 A, peak power 600 W (10/1000 µs) |

| Protection on<br>Power Input<br>(Dome)                   | Peak current 7.3 A, peak power 600 W (10/1000 μs)   |
|--|---|
| Protection on<br>Power<br>Output (Arm Pow-<br>er Supply) | Peak current 21.4 A, peak power 1500 W (10/1000 μs) |
| 10/100 Ethernet<br>Data Lines                            | Peak current 14 A, peak power 200 W (8/20 μs)       |

## **Software Control**

| Camera Setup/Control | Via Internet Explorer Web browser version 7.0 or later, Bosch Configuration Manager or BVMS |
|----------------------|---|
| Software Update      | Firmware upload   |

## Network

Layer

| Standards        | H.264 (ISO/IEC 14496-10), M-JPEG, JPEG  |  |
|------------------|---|--|
| Streaming        | A total of four (4) independent streams:  • Two (2) individually configurable H. 264 streams at 4CIF/D1 resolution,  • One (1) H.264, I-frame only stream (suitable for recording)  • One (1) M-JPEG stream at 4CIF/D1 resolution |  |
| GOP Structure    | IP, IBP, IBBP   |  |
| Data Rate        | 9.6 kbps to 6 Mbps  |  |
| Overall IP Delay | 240 ms  |  |
|                  |   |  |

| Overall IP Delay  | 240 ms  |  |
|---|---|--|
| Resolution (Horizontal x                                | Vertical, PAL/NTSC)   |  |
| • 4CIF/D1   | 704 x 576/480 (50/60 ips <sup>4</sup> )   |  |
| • CIF   | 352 x 288/240 (50/60 ips <sup>4</sup> )   |  |
|   | 4. Depending on picture content and movement  |  |
| Ethernet  | 10-Base T/100 Base-TX, auto-sensing, half/full duplex, RJ45   |  |
| Protocols   | RTP, Telnet, UDP, TCP, IP, HTTP, HTTPS,<br>FTP, DHCP, IGMP V2/V3, ICMP, ARP, SMTP,<br>SNTP, SNMP v3, RTSP, 802.1x, iSCSI,<br>DynDNS, UPnP, IP v4/6, QoS, SSH, SSL |  |
| NTCIP Protocols   |   |  |
| CCTV Camera<br>Control                                  | NTCIP 1205  |  |
| <ul> <li>Application<br/>Layer</li> </ul>               | SNMP per NTCIP 1101:1996 & NTCIP 2301   |  |
| <ul> <li>Transport/<br/>Network Lay-<br/>ers</li> </ul> | TCP/IP per NTCIP 2202:2001  |  |
| Sub-network   | PMPP (Point to Multi-Point Protocol) per  |  |

NTCIP 2101:2001 & NTCIP 2102:2003

| Audio                     |   |
|---------------------------|---|
| • Standard                | G.711, 8 kHz sampling rate<br>L16, 16 kHz sampling rate |
| Signal-to-<br>Noise Ratio | >50 dB  |
| Audio Stream-<br>ing      | Full Duplex / Half Duplex                               |

# **Fiber Optic Kit**

# VG4-SFPSCKT

| Description  Fiber Optic Ethernet Media Converter kit <sup>5</sup> . Requires a small form-factor pluggable (SFP) module (sold separately).  Data Interface  Ethernet  Data Rate  10/100 Mbps IEEE 802.3 Compliant Full Duplex or Half Duplex Electrical Port Full Duplex Optical Port  Compatible Receiver  CNFE2MC  Installation  Installed inside a VG4-A-PA0, VG4-A-PA1, VG4-A-PA2, VG4-A-PSU1, VG4-A-PSU2, VG4-SBOX-24VAC, VG4-SBOX-120VAC, or a VG4-SBOX-230VAC power supply box with supplied mounting hardware | va i oli ooki       |   |
|--|---------------------|---|
| Data Rate  10/100 Mbps IEEE 802.3 Compliant Full Duplex or Half Duplex Electrical Port Full Duplex Optical Port  Compatible Receiver  CNFE2MC  Installation  Installed inside a VG4-A-PA0, VG4-A-PA1, VG4-A-PA2, VG4-A-PSU1, VG4-A-PSU2, VG4- SBOX-24VAC, VG4-SBOX-120VAC, or a VG4- SBOX-230VAC power supply box with sup-  | Description         | Requires a small form-factor pluggable (SFP)  |
| IEEE 802.3 Compliant Full Duplex or Half Duplex Electrical Port Full Duplex Optical Port  Compatible Receiver  CNFE2MC  Installation  Installed inside a VG4-A-PA0, VG4-A-PA1, VG4-A-PA2, VG4-A-PSU1, VG4-A-PSU2, VG4- SBOX-24VAC, VG4-SBOX-120VAC, or a VG4- SBOX-230VAC power supply box with sup-   | Data Interface      | Ethernet  |
| Installation Installed inside a VG4-A-PA0, VG4-A-PA1, VG4-A-PA2, VG4-A-PSU1, VG4-A-PSU2, VG4-SBOX-24VAC, VG4-SBOX-120VAC, or a VG4-SBOX-230VAC power supply box with sup-  | Data Rate           | IEEE 802.3 Compliant<br>Full Duplex or Half Duplex Electrical Port  |
| VG4-A-PA2, VG4-A-PSU1, VG4-A-PSU2, VG4-SBOX-24VAC, VG4-SBOX-120VAC, or a VG4-SBOX-230VAC power supply box with sup-  | Compatible Receiver | CNFE2MC   |
|  | Installation        | VG4-A-PA2, VG4-A-PSU1, VG4-A-PSU2, VG4-SBOX-24VAC, VG4-SBOX-120VAC, or a VG4-SBOX-230VAC power supply box with sup- |

5. Kit available separately and must be installed inside the AutoDome power supply box.

# SFP Modules

| Description        | Interchangeable modules available for use with MMF or SMF optical fiber. |
|--------------------|--|
| Data Interface     | Ethernet   |
| Data Rate          | 10/100 Mbps<br>IEEE 802.3 Compliant                                      |
| Mechanical         |  |
| Dimensions (LxWxH) |  |
| SFP-2 and SFP-3    | 55.5 x 13.5 x 8.5 mm (2.2 x 0.5 x 0.3 in.)                               |

|                  | (===:::::::::::::::::::::::::::::::::::    |
|------------------|--|
| • SFP-25, SFP-26 | 63.8 x 13.5 x 8.5 mm (2.5 x 0.5 x 0.3 in.) |
|                  |  |

Weight (all SFP modules) 0.23 kg (.05 lb)

|        | Туре | Con-<br>nector | Wavelength (transmit/receive) | Max.<br>Distance      |
|--------|------|----------------|-------------------------------|-----------------------|
| SFP-2  | MMF  | Duplex<br>LC   | 1310 nm /<br>1310 nm          | 2 km<br>(1.2 miles)   |
| SFP-3  | SMF  | Duplex<br>LC   | 1310 nm /<br>1310 nm          | 20 km<br>(12.4 miles) |
| SFP-25 | MMF  | Single<br>SC   | 1310 nm /<br>1550 nm          | 2 km<br>(1.2 miles)   |
| SFP-26 | MMF  | Single<br>SC   | 1550 nm /<br>1310 nm          | 2 km<br>(1.2 miles)   |

| Fiber Compatibility                 |  |
|-------------------------------------|--|
| Optical Fiber Compatibility,<br>MMF | 50/125 µm MMF. For 50/125 µm fiber, subtract 4 dB from the specified optical budget value. Must meet or exceed fiber standard ITU-T G.651.   |
| Optical Fiber Compatibility,<br>SMF | $8{-}10/125~\mu m$ SMF. Must meet or exceed fiber standard ITU-T G.652.  |
| Optical Distance Specifications     | Specified transmission distances are limited to the optical loss of the fiber and any additional loss introduced by connectors, splices, and patch panels. The modules are designed to operate over the entire optical loss budget range, so they do not require a minimum loss in order to operate. |

## Miscellaneous

| Sectors/Titling        | 16 independent sectors with a 20-character title/sector  |
|------------------------|--|
| Masking                | 24 individually configurable privacy masks   |
| Pre-positions          | 99, each with a 20-character title   |
| Preset Tours           | One (1), consisting of up to 99 scenes, consecutively  |
| Supported<br>Languages | English, Chinese, Dutch, French, German, Italian,<br>Japanese, Polish, Portuguese, and Spanish |

## **User Connections**

| Power, Camera                          | 21-30 VAC, 50/60 Hz                                      |
|--|--|
| Power, Heater                          | 21-30 VAC, 50/60 Hz                                      |
| Video and Control                      | RJ-45 100 Base-TX Ethernet                               |
| Alarm Inputs (2)                       | Programmable for "normally open" or<br>"normally closed" |
| Open Collector Output (1)              | 32 VDC @ 150 ma max.                                     |
| Audio Input Line Level (one way audio) |  |
| Input Voltage                          | 5.5 Vp-p max   |
| Impedance                              | 9 Kohm typical   |

# **Environmental**

|                 | In-Ceiling                          | Pendant  |
|-----------------|-------------------------------------|--|
| Design Rating   | IP54 <sup>6</sup> ,<br>Plenum rated | IP668  |
| Operating Temp. | -10°C to 40°C<br>(14°F to 104°F)    | -40°C to 50°C<br>(-40°F to 122°F)<br>or<br>-10°C to 40°C<br>(14°F to 104°F) <sup>7</sup> |
| Storage Temp.   | -40°C to 60°C<br>(-40°F to 140°F)   | -40°C to 60°C<br>(-40°F to 140°F)  |

# 7 | AutoDome 700 Series IP PTZ Camera

| Humidity   | 0% to 90% relative, non-condensing        | 0% to 100% relative, condensing         |
|--|---|---|
| 6. With optional VGA-IP54K-IC78 kit.                                     |   |   |
| 7. Without heater connected in power supply box for indoor applications. |   |   |
| 8. Meets requirements for NEMA 4X  | certification with use of a polycarbonate | bubble. Meets requirements for NEMA 4X, |

Construction

except impact test, with use of an acrylic bubble.

| Dimensions                         | See dimensional drawings   |
|------------------------------------|--|
| Weight                             |  |
| • In-ceiling                       | 2.66 kg (5.86 lb)  |
| <ul> <li>Indoor Pendant</li> </ul> | 2.88 kg (6.3 lb)   |
| Outdoor Pendant                    | 3.32 kg (7.3 lb)   |
| Bubble Size                        | 153.1 mm diameter (6.03 in.)   |
| Construction Material              |  |
| <ul> <li>Housing</li> </ul>        | Cast aluminum  |
| • Bubble                           | Pendant: Acrylic (high-resolution)<br>In-ceiling: Polycarbonate (rugged) |
| Standard Color                     | White (RAL 9003)   |
| Standard Finish                    | Powder coated, sand finish   |

# **Mounts/Accessories**

| Bubbles                                  |                          |
|--|--------------------------|
| In-ceiling                               |                          |
| Clear rugged polycarbonate               | VGA-BUBBLE-CCLR          |
| Tinted rugged polycarbonate              | VGA-BUBBLE-CTIR          |
| Pendant                                  |                          |
| Clear rugged polycarbonate               | VGA-BUBBLE-PCLR          |
| Tinted rugged polycarbonate              | VGA-BUBBLE-PTIR          |
| Clear high-resolution acrylic            | VGA-BUBBLE-PCLA          |
| Tinted high-resolution acrylic           | VGA-BUBBLE-PTIA          |
| Pendant Arm Mounts                       |                          |
| Wall Arm (No Transformer)                | VG4-A-PA0                |
| Wall Arm (120/230 VAC Transformer)       | VG4-A-PA1 /<br>VG4-A-PA2 |
| Pendant Arm with Wiring                  | VGA-PEND-ARM             |
| Mounting plate for VGA-PEND-ARM          | VGA-PEND-WPLATE          |
| Trim skirt for VG4 Series Power Supplies | VG4-A-TSKIRT             |
| Optional Mounting Plates for Arm Mounts  |                          |
| Corner Mounting Plate                    | VG4-A-9542               |
| Mast (Pole) Mounting Plate               | VG4-A-9541               |

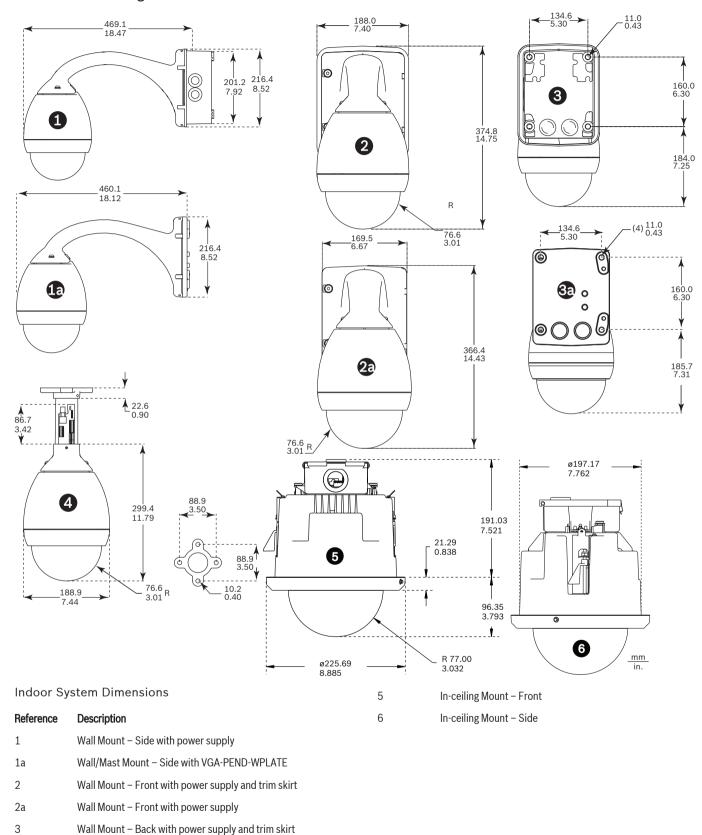
| Pendant Pipe Mounts   |                            |
|---|----------------------------|
| Pipe Mount Cap  | VG4-A-9543                 |
| Pendant Roof Mounts   |                            |
| Roof (Parapet) Mount<br>(VG4-A-9543 Pipe Mount Cap required. Available separately.) | VGA-ROOF-MOUNT             |
| Optional Mounting Plates for Roof Mounts  |                            |
| Flat Roof Adapter for Parapet Mount   | LTC 9230/01                |
| In-ceiling Support Kits   |                            |
| Bracket for suspended or drop ceilings  | VJR-A3-SP                  |
| Gasket kit for IP54 certification   | VGA-IP54K-IC78             |
| Power Supplies  |                            |
| Outdoor Power Supply Box, no transformer  | VG4-A-PSU0                 |
| Outdoor Power Supply Box (120/230 VAC Transformer)                                  | VG4-A-PSU1 /<br>VG4-A-PSU2 |
| Fiber Optic Kit   | VG4-SFPSCKT                |

# **Dimensions: In-ceiling and Pendant without Sunshield**

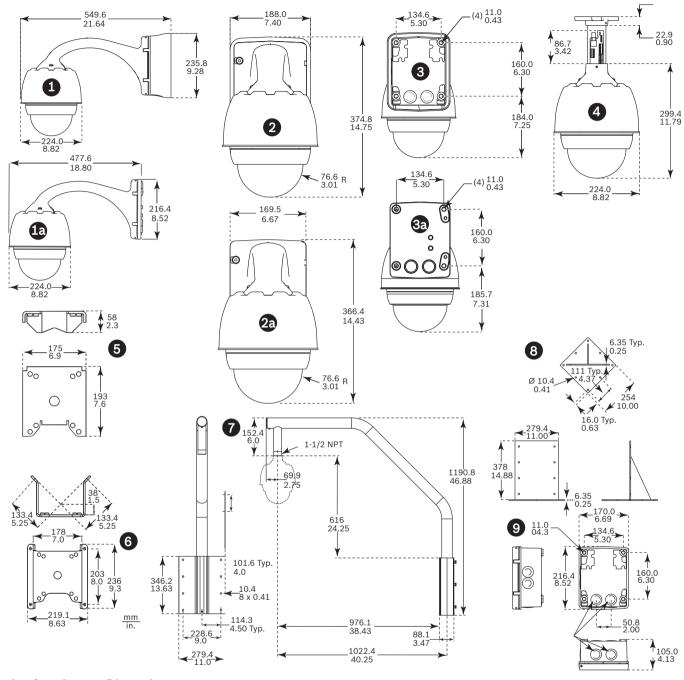
Wall Mount - Back with power supply

Pipe Mount

3a 4



## **Dimensions: Pendant with Sunshield and Outdoor Mounts**



## **Outdoor System Dimensions**

| Reference | Description   |
|-----------|---|
| 1         | Wall Mount – Side with power supply and trim skirt  |
| 1a        | Wall/Mast Mount - Side with VGA-PEND-WPLATE         |
| 2         | Wall Mount – Front with power supply and trim skirt |
| 2a        | Wall Mount – Front with power supply                |
| 3         | Wall Mount – Back with power supply and trim skirt  |
| 3a        | Wall Mount – Back with power supply                 |
| 4         | Pipe Mount  |

| 5 | Mast Mount                            |
|---|---------------------------------------|
| 6 | Corner Mount                          |
| 7 | Roof Mount                            |
| 8 | Roof Mount Adapter                    |
| 9 | Power Supply for Pipe and Roof Mounts |

## **Ordering Information**

# VG5-713-CCE2 AutoDome 700 Series 28x PAL IP In-ceiling Camera

IP 28x PAL camera with IVA, in-ceiling housing with a clear polycarbonate bubble

Order number VG5-713-CCE2

# VG5-723-CCE2 AutoDome 700 Series 28x NTSC IP Inceiling Camera

IP 28x NTSC camera with IVA, in-ceiling housing with a clear polycarbonate bubble

Order number VG5-723-CCE2

# VG5-713-ECE2 AutoDome 700 Series 28x PAL IP Pendant Camera

IP 28x PAL camera with IVA, pendant housing with a clear acrylic bubble

Order number VG5-713-ECE2

# VG5-714-ECE2 AutoDome 700 Series 36x PAL IP Pendant Camera

IP 36x PAL camera with IVA, pendant housing with a clear acrylic bubble

Order number VG5-714-ECE2

# VG5-723-ECE2 AutoDome 700 Series 28x NTSC IP Pendant Camera

IP 28x NTSC camera with IVA, pendant housing with a clear acrylic bubble

Order number VG5-723-ECE2

# VG5-724-ECE2 AutoDome 700 Series 36x NTSC IP Pendant Camera

IP 36x NTSC camera with IVA, pendant housing with a clear acrylic bubble

Order number VG5-724-ECE2

#### Accessories

# VG4-A-PA0 Pendant Arm Mount

Pendant arm mount with power supply box for a Auto-Dome Series cameras, no transformer, white Order number **VG4-A-PA0** 

# VG4-A-PA1 Pendant Arm Mount with 120 VAC Transformer

Pendant arm mount with power supply box for Auto-Dome Series cameras with a 120 VAC transformer, white

Order number VG4-A-PA1

# VG4-A-PA2 Pendant Arm Mount with 230 VAC Transformer

Pendant arm mount with power supply box for Auto-Dome Series cameras with a 230 VAC transformer, white

Order number VG4-A-PA2

### VGA-PEND-ARM Pendant Arm with Wiring

Compatible with an AutoDome Series pendant housing Order number **VGA-PEND-ARM** 

### **VGA-PEND-WPLATE Mounting Plate**

Mounting plate for VGA-PEND-ARM, compatible with an AutoDome Series camera

Order number VGA-PEND-WPLATE

### **VGA-ROOF-MOUNT Roof Mount**

Roof parapet mount, white

(VG4-A-9543 Pipe Mount Cap required. Available separately.)

Order number VGA-ROOF-MOUNT

## LTC 9230/01 Flat Roof Mount Adapter

For mounting a unit in an upright position on a flat surface for roof parapet mount VGA-ROOF-MOUNT Order number LTC 9230/01

### VG4-A-9541 Pole Mount Adapter

Pole mount adapter for a for an AutoDome Series pendant arm or a VEI-30 or NEI-30 Dinion Infrared Imager, designed for poles with a diameter of 100-380 mm (4-15 in.), white Order number VG4-A-9541

### VG4-A-9542 Corner Mount Adapter

Corner mount adapter for an AutoDome Series pendant arm or a VEI-30 or NEI-30 Dinion Infrared Imager Order number **VG4-A-9542** 

### VG4-A-9543 Pipe Mount

Pipe mount, white, for an AutoDome Series pendant housing

Order number VG4-A-9543

# VGA-IP54K-IC78 IP54 In-ceiling Gasket Kit for AutoDome 700/800 Series

Gasket kit for AutoDome 700 and 800 Series In-ceiling mounts required for IP54 environmental rating Order number VGA-IP54K-IC78

# VJR-A3-SP In-ceiling Support Kit for AutoDome 700/800 Series and AutoDome Junior HD

Suspended ceiling support kit for AutoDome 700 and 800 Series and AutoDome Junior HD In-ceiling mounts Order number VJR-A3-SP

## VG4-A-PSU0 24 VAC Power Supply Unit

24 VAC, 100 W, NEMA-rated, white, for an AutoDome Series camera

Order number VG4-A-PSU0

## VG4-A-PSU1 120 VAC Power Supply Unit

120 VAC, 100 W, NEMA-rated, white, for an AutoDome Series camera

Order number VG4-A-PSU1

### VG4-A-PSU2 230 VAC Power Supply Unit

230 VAC, 100 W, NEMA-rated, white, for an AutoDome Series camera

Order number VG4-A-PSU2

# VGA-SBOX-COVER Cover for AutoDome Power Supply Boxes

Order number VGA-SBOX-COVER

### VG4-SFPSCKT Fiber Optic Ethernet Media Converter Kit

Ethernet media converter video transmitter/data receiver fiber optic kit

Order number VG4-SFPSCKT

# VG4-A-TSKIRT Trim Skirt for AutoDome Power Supply Boxes

Trim skirt for the following AutoDome Series power supply boxes:

VG4-A-PSU0F, VG4-A-PSU1, VG4-A-PSU1F, VG4-A-PSU2, VG4-A-PSU2F,

VG4-SBOX-24VAC, VG4-SBOX-120VAC, and VG4-SBOX-230VAC

Order number VG4-A-TSKIRT

# VGA-BUBBLE-CCLR Clear Rugged Bubble for an In-ceiling Housing

Impact resistant polycarbonate bubble Order number VGA-BUBBLE-CCLR

# VGA-BUBBLE-CTIR Tinted Rugged Bubble for an In-ceiling Housing

Impact resistant polycarbonate bubble Order number VGA-BUBBLE-CTIR

# **VGA-BUBBLE-PCLR Clear Rugged Bubble for a Pendant Housing**

Impact resistant polycarbonate bubble Order number VGA-BUBBLE-PCLR

# VGA-BUBBLE-PTIR Tinted Rugged Bubble for a Pendant Housing

Impact resistant polycarbonate bubble Order number VGA-BUBBLE-PTIR

## **Software Options**

## **MVC-FENC-AES BVIP AES 128 Bit Encryption**

BVIP AES 128-bit encryption site license. This license is required only once per installation. It enables encrypted communication between BVIP devices and management stations.

Order number MVC-FENC-AES

#### Represented by:

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