

# MIC Series 550 Camera

www.boschsecurity.com



**BOSCH**

Invented for life



- ▶ Choice of 36x or 28x day/night cameras with 550 TVL, 12x digital zoom, Wide Dynamic Range (WDR), advanced privacy masking, and image stabilization
- ▶ Video and control over IP when powered by MIC IP Power Supply (sold separately)
- ▶ Sodium Vapor White Balance mode restores objects to their original color
- ▶ Robust design rated to an industry-leading IP68
- ▶ Complete series of mounting accessories; various mounting positions, including on-site canting

The MIC Series 550 camera combines cutting-edge technology with the latest production techniques to provide a class-leading feature set in an economical package. The MIC Series 550 range takes high quality surveillance to new levels of excellence.

As a best-fit camera for virtually any security application, it can be installed in the harshest of environments. Thanks to its IP68-rated aluminum casing, the MIC Series 550 camera functions perfectly in the most demanding conditions. This tough and vandal-resistant casing provides protection from the elements and physical attack. An integrated long-life silicone wiper and a reversible rain shield ensure high quality images regardless of the installed environment. The brushless-motor technology offers ultra-reliable operation with full 360° continuous rotation pan and 270° tilt control for exceptional viewing capability. Small increment pan speeds from just 0.2° per second to 120° per second gives the user precise control. This speed control is especially important when used with video analytic systems, particularly for tracking subjects when fully zoomed in.

The MIC Series 550 camera incorporates Bosch's standard controller interface supporting familiar AutoDome on-screen menus. This enhancement makes

it simple to integrate and use the MIC Series 550 within systems that already use Bosch AutoDome cameras and systems.

## System Overview

### **Robust design rated to an industry-leading IP68**

Subjected and certified to rigorous IP68 dust and immersion tests, MIC Series cameras are perfectly suited for installation in even the most unforgiving environments, eliminating the need for pressurization. The cameras are machined from solid aluminum and protected from corrosion by two different processes: first, they receive a coating of Alodine 5200, a chromate conversion coating of aluminum that is used in the aerospace and defense industries where a protective layer is required to improve corrosion resistance. Second, they receive a robust, powder paint coating. The cameras are sealed with 'O' rings and can operate submerged in up to one (1) meter (3.3 feet) of water for sustained periods of time [a maximum duration of 24 hours]. (They are not rated to be installed permanently under water.)

**Various mounting options, including on-site canting**

The MIC Series 550 camera features twist-lock on-site canting functionality. This allows the camera to be installed upright, inverted, or canted (at a 45° angle) to achieve the perfect field of view. No matter the installation position, the camera will operate faultlessly.

**Integrated wiper**

Regardless of the weather, the MIC Series 550 camera is able to capture the highest possible quality image all year long, thanks to its integrated, long-life silicone wiper.

**Multi-protocol operation**

Compatible with a multitude of protocols, including Bosch “Biphase (OSRD)” and “Bilinx,” Pelco “P” and “D,” and Forward Vision, the MIC Series 550 camera integrates seamlessly with existing security systems.

**Applications:**

- General CCTV
- Town centers
- ANPR systems
- Vandalism prone areas
- Extreme environments
- Rapid deployment
- High security
- Prestigious developments
- Broadcast
- Marine/coastal
- Architectural

**Functions****High-performance PTZ day/night cameras**

Image control and quality are integral aspects of any PTZ camera, and the MIC Series 550 camera delivers. The camera is available with a choice of 28X or the industry-leading 36X optical zoom lens, and offers a full 12X digital zoom. Both camera options provide 550 TVL of 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 Wide Dynamic Range (WDR), it results in clear image reproduction in extreme high-contrast environments. The AutoScaling (proportional zoom) and AutoPivot (automatically rotates and flips the camera) features ensure optimal control.

Day/night capabilities and outstanding sensitivity make the MIC Series 550 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 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.

In addition to low light applications, the camera is also an exceptional performer when viewing under a sodium vapor lamp (for example, a street lamp or tunnel lamp). Images under these conditions normally

have a yellowish tint, so the MIC Series 550 camera automatically compensates for the light from a sodium vapor lamp to restore objects to their original color. With super-quick, 120°/60° per-second pan/tilt speeds, the MIC Series 550 camera outperforms other cameras in its class. The camera supports 99 pre-positions and two styles of Guard Tours: Preset and Record/Playback. The preset tour has capability for up to 99 pre-positions with a configurable dwell time between pre-positions, and can be customized as to the order and frequency each preset is visited. The camera also provides support for two recorded tours, which have a combined duration of 15 minutes of movements. These are recorded macros of an operator’s movements, including pan, tilt, and zoom activities, and can be played back in a continuous manner.

**Superior privacy masking**

The MIC Series 550 camera allows for a total of 24 individual privacy masks, with up to eight displayed in the same scene. Unlike conventional privacy masks, these can be programmed with three, four, or even five corners each to cover more complex shapes. Each mask changes size and shape smoothly and quickly, ensuring that the covered object cannot be seen. Each mask can appear in black, white, or blurred. Blurred is useful when privacy is an issue, but determining the presence of motion is still required.

**Image Stabilization**

As PTZ cameras continue to increase their optical zoom capabilities, image stabilization becomes critical to eliminate movement caused by unstable camera mounts. A mere quarter-inch of movement of the camera mount can shift the field of view by more than 6 m (20 feet) when the camera is zoomed to a high value. This can render images unusable. Image stabilization algorithms included with the MIC Series 550 camera reduces camera shake in both the vertical and horizontal axis, resulting in exceptional image clarity (pixel displacement up to +/- 10% for frequencies up to 10 Hz). Bosch’s unique image stabilization solution does not reduce camera sensitivity, unlike competitive systems.

**Ease of installation and servicing**

Bosch’s innovative software, the Configuration Tool for Imaging Devices (CTFID), allows technicians or operators to control the PTZ, change camera settings, and even update firmware from remote locations without need for additional wiring.

The MIC Series 550 camera has advanced built-in diagnostics to simplify service and minimize downtime. Using the On Screen Display (OSD), a technician can quickly and easily check critical parameters (such as internal temperature) to verify that the camera is functioning within acceptable operating limits.

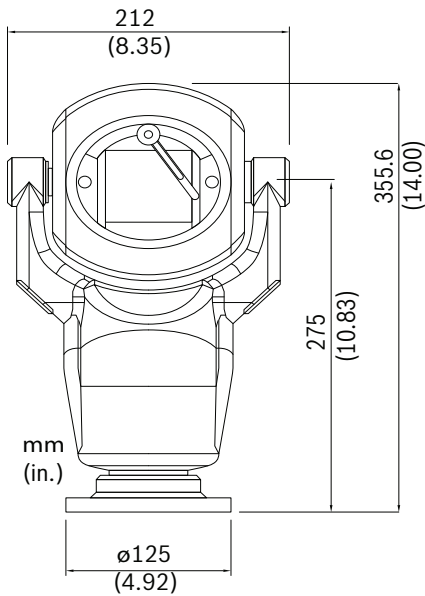
**Certifications and Approvals**

Electromagnetic Compatibility (EMC)	Complies with FCC Part 15, ICES-003, and CE regulations, including EN50130-4 and EN61000-3-2 & 3-3 and EN55022
Product Safety	Complies with CE regulations, UL, EN, and IEC Standards 60950-1 & 22
Ingress Protection Rating	IP68 (1m submersion for 24 hrs)

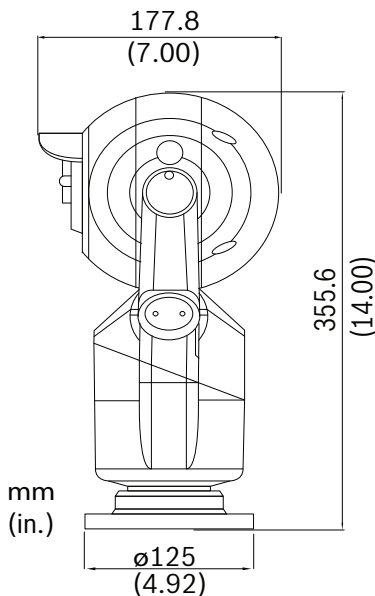
**Region Certification**

USA	UL
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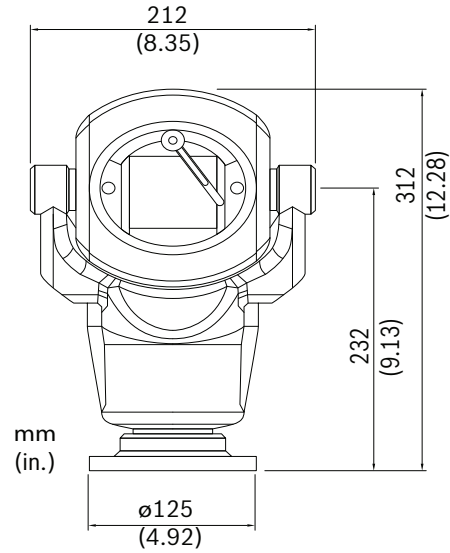
**Installation/Configuration Notes**



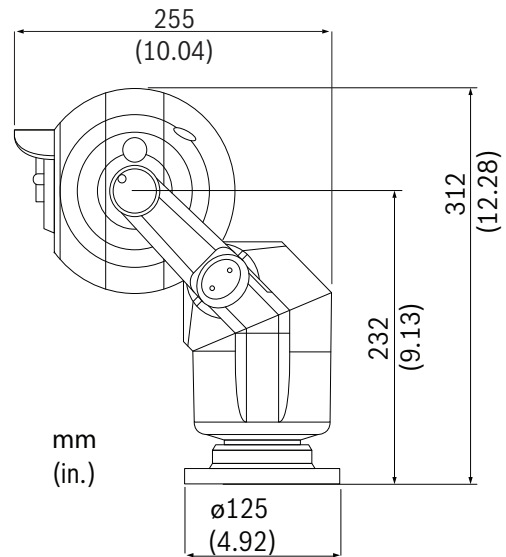
Front Detail, 90° (upright)



Side Detail, 90° (upright)



Front detail, 45° (canted)



Side detail, 45° (canted)

**Technical Specifications**

**Camera - 36x Day/Night**

Imager	1/4 in.-type Exview HAD CCD (progressive scan)
Resolution / Effective Picture Elements	PAL: Approximately 440,000; 752(H) x 582(V) NTSC: Approximately 380,000; 768 (H) x 494 (V)
Lens	36x Zoom (3.4 to 122.4 mm) F1.6 to F4.5
Zoom Movement Speed	4.0 seconds (optical Wide to optical TELE) 6.2 seconds (optical wide to digital TELE)
Focus	Automatic with manual override

Iris	Automatic with manual override	
Field of View (FOV)	1.7° to 57.8°	
Video Output	1.0 Vp-p, 75 Ohm	
Gain Control	Auto/Manual/Max. (-3 dB to 28 dB, 2 dB steps)	
Aperture Correction	Horizontal and vertical	
Digital Zoom	12x	
Horizontal Resolution	550 TVL (NTSC, PAL) typical	
<b>Sensitivity (typical) <sup>1</sup></b>	<b>30 IRE</b>	<b>50 IRE</b>
<b>Day Mode</b>		
SensUp Off	0.66 lux	1.4 lux
SensUp On (NTSC: 1/4s, 15X; PAL 1/3s, 16.7X)	0.04 lux	0.1 lux
<b>Night Mode</b>		
SensUp Off	0.104 lux	0.209 lux
SensUp On (NTSC: 1/4s, 15X; PAL 1/3s, 16.7X)	0.0052 lux	0.0103 lux
Electronic Shutter Speed	1/1 to 1/10,000 sec., 22 steps	
Signal-to-Noise Ratio (SNR)	>50 dB	
White Balance	2000 K to 10,000 K	

<sup>1</sup> Unless otherwise stated, test conditions are: F1.6; shutter = NTSC 1/60s, PAL 1/50s; max AGC

### Camera - 28x Day/Night

Imager	1/4 in.-type Exview HAD CCD (progressive scan)
Resolution / Effective Picture Elements	PAL: Approximately 440,000; 752(H) x 582(V) NTSC: Approximately 380,000; 768 (H) x 494 (V)
Lens	28x Zoom (3.5 to 98.0 mm) F1.35 to F3.7
Zoom Movement Speed	1.7 seconds (optical wide to optical TELE, optical wide to digital TELE)
Focus	Automatic with manual override
Iris	Automatic with manual override
Field of View (FOV)	2.1° to 55.8°
Video Output	1.0 Vp-p, 75 Ohm
Gain Control	Auto/Manual/Max. (-3 dB to 28 dB, 2 dB steps)
Aperture Correction	Horizontal and vertical
Digital Zoom	12x

Horizontal Resolution	550 TVL (NTSC, PAL) typical	
<b>Sensitivity (typical) <sup>2</sup></b>	<b>30 IRE</b>	<b>50 IRE</b>
<b>Day Mode</b>		
SensUp Off	0.33 lux	0.66 lux
SensUp On (NTSC: 1/4s, 15X; PAL 1/3s, 16.7X)	0.02 lux	0.04 lux
<b>Night Mode</b>		
SensUp Off	0.066 lux	0.166 lux
SensUp On (NTSC: 1/4s, 15X; PAL 1/3s, 16.7X)	0.0026 lux	0.0082 lux
Electronic Shutter Speed	1/1 to 1/10,000 sec., 22 steps	
Signal-to-Noise Ratio (SNR)	>50 dB	
White Balance	2000 K to 10,000 K	

<sup>2</sup> Unless otherwise stated, test conditions are: F1.35, shutter = NTSC 1/60s, PAL 1/50s; max AGC

### Mechanical

Drive Unit	Brushless, integral pan/tilt motor drive
Pan Range	360° continuous rotation
Tilt Angle	270°
Tilt Range	Upright unit: -58° - +90° Canted unit: -103° - +90°
Variable Speed	Pan: 0.2°/second - 120°/second Tilt: 0.2°/second - 60°/second
Pre-position Speed	120°/second
Preset Accuracy	0.17° (typical)
Proportional Pan / Tilt to Zoom	Yes
Audible Noise	<66dB

### Electrical

Input Voltage	18 VAC nominal
Power Consumption	18 W maximum
Current Consumption	1 A maximum

### Miscellaneous

Sectors / Titling	16 independent sectors with 20 characters per title
Privacy Masking	24 individually-configurable privacy masks
Pre-positions	99, each with 20 characters per title

Camera Setup / Control	RS-485, Bilinx (coax); also Bosch Biphas with converter (sold separately)
Communications Protocols	Bosch (Bilinx, OSRD), Pelco P/D, Forward Vision (Bosch OSRD requires use of converter device (MIC-BP3 or MIC-BP4), sold separately.)
Guard Tours	Two (2) types of tours: <ul style="list-style-type: none"> <li>Recorded tours - two (2), total duration 15 minutes</li> <li>Preset tour - one (1), consisting of up to 99 scenes, consecutively and (1) customized up to 99 scenes</li> </ul>
Washer Drive	Optional washer kit (MIC-WKT Kit used with the appropriate HAC-WAS washer pump)
Supported Languages	English, Czech*, Dutch, French, German, Italian, Polish, Portuguese, Russian*, Spanish

\* Available with separate language upload

### User Connections

Power	Via composite cable (sold separately)
RS-485 Biphas ±	RS-485 (Twisted pair; Simplex, half and full duplex operation via composite cable) Biphas ± (Optional; requires MIC Biphas module with external power supply.)
Video	Coaxial via composite cable (sold separately)
Alarm Inputs	One (1) tamper input (eight [8] additional inputs possible with optional alarm card)
Relay Out	Two (2) relay outputs and washer relay output only with optional alarm card
Alarm Communication	Tamper switch (ground connection)

### Environmental

Ingress Protection Rating	IP68
Operating Temperature	-40 °C to +60 °C (-40 °F to +140 °F)
Cold Start-up Temperature	-40 °C (-40 °F) (Requires 30-minute warm-up prior to PTZ operations)
Storage Temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Humidity	0-100%
Wind Load	209 km/h (130 mph) (sustained) (Gusts up to 290 km/h (180 mph)) Effective Projected Area (EPA): 0.044m <sup>2</sup> (0.47 ft <sup>2</sup> )
Vibration	IEC60068-2-6, Test Fc: Vibration (sinusoidal), 20m/s <sup>2</sup> (2.0g)
Shock	IEC60068-2-7, Test Ea: Shock, 20g

### Construction

#### Dimensions (W x H x D)

Upright and Inverted	212 x 355 x 177 mm (8.35 x 14.0 x 7.0 in.)
Canted	212 x 312 x 255 mm (8.35 x 12.3 x 10.0 in.)
Weight	7 kg (15.43 lb) (including 4 in. pitch circle diameter (PCD) base)
Viewing Window	Tempered flat glass
Construction Material	Cast solid aluminum
Standard Colors	Black (RAL 9005), White (RAL 9010); Grey (RAL 9006, available in specific regions)
Standard Finish	Alodine 5200 surface treatment with powder coat paint, sand finish
Window Wiper	Standard, long-life silicone wiper
Canting	Twist-lock canting secured by two security screws

### Ordering Information

**MIC-550ALB28N 28X NTSC Camera, Black**  
PTZ, day/night, aluminum, Black, 28X, NTSC  
Order number **MIC-550ALB28N**

**MIC-550ALW28N 28X NTSC Camera, White**  
PTZ, day/night, aluminum, White, 28X, NTSC  
Order number **MIC-550ALW28N**

**MIC-550ALB36N 36X NTSC Camera, Black**  
PTZ, day/night, aluminum, Black, 36X, NTSC  
Order number **MIC-550ALB36N**

**MIC-550ALW36N 36X NTSC Camera, White**  
PTZ, day/night, aluminum, White, 36X, NTSC  
Order number **MIC-550ALW36N**

**MIC-550ALB28P 28X PAL Camera, Black**  
PTZ, day/night, aluminum, Black, 28X, PAL  
Order number **MIC-550ALB28P**

**MIC-550ALG28P 28X PAL Camera, Grey**  
PTZ, day/night, aluminum, Grey, 28X, PAL  
Note: Available in specific regions only.  
Order number **MIC-550ALG28P**

**MIC-550ALW28P 28X PAL Camera, White**  
PTZ, day/night, aluminum, White, 28X, PAL  
Order number **MIC-550ALW28P**

**MIC-550ALB36P 36X PAL Camera, Black**  
PTZ, day/night, aluminum, Black, 36X, PAL  
Order number **MIC-550ALB36P**

**MIC-550ALG36P 36X PAL Camera, Grey**

PTZ, day/night, aluminum, Grey, 36X, PAL  
 Note: Available in specific regions only.  
 Order number **MIC-550ALG36P**

**MIC-550ALW36P 36X PAL Camera, White**

PTZ, day/night, aluminum, White, 36X, PAL  
 Order number **MIC-550ALW36P**

**MIC-DCA-GD Deep Conduit Adapter, Grey**

Deep conduit adapter for 4 in. PCD base, grey sand finish (RAL 9006)  
 Order number **MIC-DCA-GD**

**MIC-SCA-GD Shallow Conduit Adapter, Grey**

Shallow conduit adapter for a MIC-WMB, a MIC-PMB, or a MIC-SPR, grey sand finish (RAL 9006)  
 Order number **MIC-SCA-GD**

**MIC-SPR-GD Spreader Plate, Grey**

Aluminum spreader plate suitable for brickwork surface mounting, grey sand finish (RAL 9006)  
 Order number **MIC-SPR-GD**

**MIC-CMB-GD Corner Mount Bracket, Grey**

Corner mount bracket, grey sand finish (RAL 9006)  
 Order number **MIC-CMB-GD**

**MIC-WMB-GD Wall Mount Bracket, Grey**

Wall mount bracket, grey sand finish (RAL9006)  
 Order number **MIC-WMB-GD**

**Accessories****MIC Cable 2M**

2 meter (6.56 ft) composite cable with plug for power, data and video for MIC Series cameras  
 Order number **MIC-CABLE-2M**

**MIC Cable 10M**

10 meter (32.81 ft) composite cable with plug for power, data and video for MIC Series cameras  
 Order number **MIC-CABLE-10M**

**MIC Cable 20M**

20 meter (62.62 ft) composite cable with plug for power, data and video for MIC Series cameras  
 Order number **MIC-CABLE-20M**

**MIC Cable 25M**

25 meter (82.02 ft) composite cable with plug for power, data and video for MIC Series cameras  
 Order number **MIC-CABLE-25M**

**MIC-24PSU-2 MIC Power Supply Unit, 24VAC, 50/60 Hz**

24 VAC, 50/60 Hz power supply with two video outputs for MIC Series cameras.  
 Order number **MIC-24PSU-2**

**MIC-115PSU-2 MIC Power Supply Unit, 120VAC, 50/60 Hz**

115 VAC, 50/60 Hz power supply with two video outputs for MIC Series cameras.  
 Order number **MIC-115PSU-2**

**MIC-240PSU-2 MIC Power Supply Unit, 230 VAC, 50/60 HZ**

230 VAC, 50/60 Hz power supply with two video outputs for MIC Series cameras.  
 Order number **MIC-240PSU-2**

**MIC-DCA-BD Deep Conduit Adapter, Black**

Deep conduit adapter for 4 in. PCD base, black sand finish (RAL9005)  
 Order number **MIC-DCA-BD**

**MIC-DCA-WD Deep Conduit Adapter, White**

Deep conduit adapter for 4 in. PCD base, white sand finish (RAL9010)  
 Order number **MIC-DCA-WD**

**MIC-SCA-BD Shallow Conduit Adapter, Black**

Shallow conduit adapter for a MIC-WMB, a MIC-PMB, or a MIC-SPR, black sand finish (RAL9005)  
 Order number **MIC-SCA-BD**

**MIC-SCA-WD Shallow Conduit Adapter, White**

Shallow conduit adapter for a MIC-WMB, a MIC-PMB, or a MIC-SPR mount, white sand finish (RAL9010)  
 Order number **MIC-SCA-WD**

**MIC-SPR-BD Spreader Plate, Black**

Aluminum spreader plate suitable for brickwork surface mounting, black sand finish (RAL9005)  
 Order number **MIC-SPR-BD**

**MIC-SPR-WD Spreader Plate, White**

Aluminum spreader plate suitable for brickwork surface mounting, white sand finish (RAL9010)  
 Order number **MIC-SPR-WD**

**MIC-CMB-BD Corner Mount Bracket, Black**

Corner mount bracket, black sand finish (RAL9005)  
 Order number **MIC-CMB-BD**

**MIC-CMB-WD Corner Mount Bracket, White**

Corner mount bracket, white sand finish (RAL9010)  
 Order number **MIC-CMB-WD**

**MIC-WMB-BD Wall Mount Bracket, Black**

Wall mount bracket, black sand finish (RAL9005)  
 Order number **MIC-WMB-BD**

**MIC-WMB-WD Wall Mount Bracket, White**

Wall mount bracket, white sand finish (RAL9010)  
 Order number **MIC-WMB-WD**

**MIC-PMB Pole Mount Bracket**

Pole mount bracket (includes 2 x 455 mm stainless steel banding straps for pole diameters 75 to 145 mm)  
 Order number **MIC-PMB**

**MIC-BP3 Biphase Converter**

Biphase converter for IR power supplies or non-IR power supplies without a free expansion slot available  
 Order number **MIC-BP3**



**MIC-BP4 Biphase Converter**

Biphase converter for non-IR versions of MIC series power supply units  
Order number **MIC-BP4**

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**MIC-ALM Alarm and Washer Pump Drive Card**

8 Input alarm and washer pump drive card for PSU (Not for IR PSU)  
Order number **MIC-ALM**

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**MIC-WKT Washer Kit**

Washer kit for non infrared MIC models (includes washer pump drive card, washer nozzle and mounting brackets for wall and 4 in. PCD base)  
Order number **MIC-WKT**

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**HAC-WAS05-20 24 VAC Washer**

24 VAC washer inst. 4M 25L  
Order number **HAC-WAS05-20**

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**HAC-WAS30-50 230 VAC Washer**

230 VAC washer inst. 30M 25L  
Order number **HAC-WAS30-50**

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**MICUSB485CVTR2 USB to RS485 Signal Converter**

USB to RS485 signal converter to allow MIC Series cameras to connect to a PC, supplied with each camera  
Order number **MICUSB485CVTR2**

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**VP-USB Cable**

USB to BNC adaptor  
Order number **VP-USB**

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**VG4-SFPCKT Fiber Optic Ethernet Media Converter Kit**

Ethernet media converter video transmitter/data receiver fiber optic kit  
Order number **VG4-SFPCKT**

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**Software Options**

**VP-CFGSFT Configuration Tool for Imaging Devices**

Camera configuration software for use with Bilinx cameras  
Order number **VP-CFGSFT**

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**MVC-FIVA4-ENC1**

IVA 4.xx/5.xx VCA software license for single channel encoder (e-license)  
Order number **MVC-FIVA4-ENC1**

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