

# AN bullet 4000 WDR

[www.boschsecurity.com](http://www.boschsecurity.com)



**BOSCH**

Invented for life



- ▶ Ultra high resolution 960H (1/3") DS sensor
- ▶ True Wide Dynamic Range (WDR)
- ▶ Enhanced digital noise reduction
- ▶ Integrated IR LEDs for 100 m of night vision
- ▶ Vandal and water resistant enclosure

These Wide Dynamic Range (WDR) outdoor IR bullet cameras are compact, stylish surveillance cameras that offer excellent resolution in variable lighting conditions. The high performance 960H 1/3-inch Double Scan (DS) CCD sensor provides a resolution of 720TVL. The WDR function ensures the best image performance under difficult (high contrast) lighting conditions. The water resistant (IP66 rated) and vandal resistant (IK08 rated) housing ensures reliable video surveillance in a variety of indoor and outdoor applications.

## System overview

The camera is supplied ready to operate. For especially challenging situations where fine tuning or special settings are required, the camera parameters can be individually set using the control buttons on the camera and an On-Screen Display (OSD).

## Functions

### Detail in extreme lighting

In harsh lighting, the difference between the brightest and the darkest parts of a scene can be extreme. To produce a clear picture in these conditions, the CCD sensor in the camera generates two images; one long

exposure to resolve details in the scene's darkest areas, and one short exposure to resolve details in the scene's brightest areas. The camera combines these dual shutter images, mixing pixels from each exposure to produce the most detailed image possible.

### Built-in IR illuminator

This integrated IR camera has 10 infrared LEDs providing up to 100 m (330 ft) of night vision. The IR light pattern is optimized using special LED lenses to significantly improve the light performance at the sides and in the corners of the image.

### Day/Night mode

The true day/night feature provides enhanced night viewing. The mechanical IR filter switches from color to monochrome automatically by sensing the illumination level.

### Ideal picture performance

There are many settings available to help fine-tune the picture performance to match your installation environment. These include:

- BLC – automatically and dynamically compensates for strong backlight
- HLC – reduces glare from highlight areas
- True wide dynamic range – extends dynamic range to see bright and dark details simultaneously

- Contrast and sharpness – enhance details in bright or misty scenes
- Dynamic noise reduction – dynamically reduces noise in the picture

### Privacy masking

Fifteen different privacy zones allow specific parts of a scene to be blocked. Pre-program any part of the scene to be masked.

### Video Motion Detection

The built-in video motion detector allows you to select four programmable areas with sensitivity thresholds. When motion is detected, alarms can be displayed in the video signal.

### Typical applications:

- Museums and art galleries
- Shopping centers
- Offices
- Schools, colleges and universities
- Petrol/gas stations

### Certifications and approvals

|     |                                                                                                    |
|-----|----------------------------------------------------------------------------------------------------|
| FCC | ANSI C 63.4:2003<br>FCC Part 15 Subpart B<br>Class A                                               |
| UL  | UL 60065, 7th Edition, 2007-12-11<br>CAN/CSA-C22.2 No. 60065-03, 1st Edition,<br>2006-04 + A1:2006 |
| EU  | EN55022:2010<br>EN50130-4:2011<br>EN61000-3-3:2008                                                 |
| LVD | LVD 2006/95/EC<br>EN 60065:2002+A1+A2+A11+A12                                                      |
| IP  | IP 66<br>KS C IEC 60529:2006                                                                       |

| Region | Certification |
|--------|---------------|
| Europe | CE            |

### Technical specifications

|                          |                                             |
|--------------------------|---------------------------------------------|
| Image Sensor             | 960H, 1/3" DS CCD, sensor resolution 720TVL |
| System                   | PAL or NTSC                                 |
| Total pixels (H x V)     | 1020 x 596 (PAL)<br>1020 x 508 (NTSC)       |
| Effective pixels (H x V) | 976 x 582 (PAL)<br>976 x 494 (NTSC)         |
| Lens type                | Varifocal auto Iris lens built-in           |
| Focal length             | 5 to 50 mm                                  |
| Lens aperture            | F1.4 – 360                                  |
| Lens adjustment          | External                                    |
| Day/Night switching      | True Day/Night mechanical filter            |

|                                     |                                                                                     |
|-------------------------------------|-------------------------------------------------------------------------------------|
| Video Output                        | Composite: 1 Vpp, 75 Ohm                                                            |
| Supply Voltage                      | 12 VDC or<br>24 VAC                                                                 |
| Power Consumption                   | 730 mA (12 VDC)<br>9.1 W max. (24 VAC)                                              |
| Sync. System                        | Internal sync., Line-lock                                                           |
| S/N Ratio (AGC off)                 | 50 dB min.                                                                          |
| Sensitivity (F1.4, 50IRE, AGC max.) | Color: 0.15 lx (DSS 0.0005 lx)<br>B/W (with IR) 0.0 lx                              |
| Electronic shutter                  | 1/50 – 1/10,000 (PAL)<br>1/60 – 1/10,000 (NTSC)                                     |
| AGC                                 | 0 to 20                                                                             |
| Digital Slow Shutter (DSS)          | Off, 2x to 512x                                                                     |
| Digital Noise Reduction (DNR)       | Off, 2DNR, 3DNR                                                                     |
| White Balance                       | ATW, Push, User1, User2, Anti CR, Manual, Push lock                                 |
| Light compensation                  | OFF, BLC, HLC, WDR                                                                  |
| WDR                                 | 54 dB                                                                               |
| Day/Night                           | IREL, Auto, Color, B/W                                                              |
| Burst                               | On, Off                                                                             |
| IR illumination                     | 10 on-board IR LEDs, 850 nm                                                         |
| IR range                            | Up to 100 m (330 ft)                                                                |
| IR angle                            | 39° / 24° (H/V)                                                                     |
| Digital zoom                        | Off, 2x, 3x, 4x, 6x, 8x, 16x                                                        |
| Digital Image Stabilizer (DIS)      | On, Off                                                                             |
| Motion detection                    | On, Off (4 programmable zones)                                                      |
| Privacy                             | On, Off (15 programmable zones)                                                     |
| Mirror                              | Off, H-flip, V-flip, HV-flip                                                        |
| Sharpness                           | 0 - 15                                                                              |
| Gamma                               | 0.38, 0.42, 0.45, 0.5, 0.55, 0.63, 0.71, 0.83                                       |
| OSD language                        | English, Japanese, German, French, Russian, Portuguese, Spanish, Simplified Chinese |
| Mounting                            | Cable-managed mounting bracket included                                             |
| Dimensions (Ø x L)                  | 95 x 150 mm (3.74 x 5.9 in)                                                         |
| Weight (including bracket)          | 1.9 kg (4.19 lb)                                                                    |
| Housing                             | Casted / machined aluminum                                                          |
| Color                               | Camera / bracket: Black RAL9017<br>Sunshield: Silver grey RAL9006                   |

|                       |                                        |
|-----------------------|----------------------------------------|
| Water/dust protection | IP66                                   |
| Impact resistance     | IK08                                   |
| Operating Temperature | -30 °C to +50 °C (-22 °F to +122 °F)   |
| Storage Temperature   | -20 °C to +60 °C<br>(-4 °F to +140 °F) |
| Storage Humidity      | 20% to 90% RH                          |

### Ordering information

#### AN bullet 4000 IR (PAL) WDR

960H Outdoor IR bullet WDR camera, 5 to 50 mm  
varifocal lens, 12 VDC/24 VAC, PAL  
Order number **VTI-4085-V511**

#### AN bullet 4000 IR (NTSC) WDR

960H Outdoor IR bullet WDR camera, 5 to 50 mm  
varifocal lens, 12 VDC/24 VAC, NTSC  
Order number **VTI-4085-V521**

#### AN bullet 4000 IR (PAL) WDR China

960H Outdoor IR bullet WDR camera, 5 to 50 mm  
varifocal lens, 12 VDC/24 VAC, PAL, China  
Order number **VTI-4085-V511C**

#### Represented by:

##### 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  
5617 BA Eindhoven, The Netherlands  
Phone: + 31 40 2577 284  
Fax: +31 40 2577 330  
emea.securitysystems@bosch.com  
www.boschsecurity.com

##### Asia-Pacific:

Robert Bosch (SEA) Pte Ltd, Security  
Systems  
11 Bishan Street 21  
Singapore 573943  
Phone: +65 6571 2808  
Fax: +65 6571 2699  
apr.securitysystems@bosch.com  
www.boschsecurity.asia

##### China:

Bosch (Shanghai) Security Systems Ltd.  
201 Building, No. 333 Fuquan Road  
North IBP  
Changning District, Shanghai  
200335 China  
Phone +86 21 22181111  
Fax: +86 21 22182398  
www.boschsecurity.com.cn

##### America Latina:

Robert Bosch Ltda Security Systems Division  
Via Anhanguera, Km 98  
CEP 13065-900  
Campinas, Sao Paulo, Brazil  
Phone: +55 19 2103 2860  
Fax: +55 19 2103 2862  
al.securitysystems@bosch.com  
www.boschsecurity.com