

# UML Series 32-inch High Performance HD LED Monitor

www.boschsecurity.com



**BOSCH**

Invented for life



- ▶ Full HD 1920 x 1080 resolution
- ▶ Precise color reproduction
- ▶ HDMI, DVI, VGA, S-Video inputs
- ▶ Trigger and Auto Switching features
- ▶ LED backlight panel for higher luminance and lower power consumption

The Bosch UML-323-90 High Performance LED monitor is a 1080p Full HD resolution color monitor ideal for use with analog video, digital video recorders (DVRs), and with PC applications. The monitor features a color LCD flat-screen panel with a 32-inch viewable picture area. The monitor features a wide range of horizontal and vertical viewing angles that provide comfortable, clear viewing – whether you mount it to a wall or to a ceiling.

## Functions

### Excellent image quality

The Bosch High Performance HD LED monitors automatically adapt to the input resolution of the incoming video signal, and support up to 1920 x 1080 resolution (Full HD). The monitor's analog VGA input easily accommodates the widespread use of PCs in today's security surveillance systems. Their high contrast ratio (3000:1) and a high brightness setting offers excellent color accuracy and imaging for easier viewing and interpretation of images. The panel refreshes every 6.5 milliseconds, so you get crisp, clear images with less smearing - and less image "ghosting" in fast-motion video.

### True color enhancement

The monitors provide true color performance. The monitors automatically focus on setting the correct color, temperature, and gamma curve settings to deliver the highest possible picture quality.

## Certifications and approvals

Region	Safety Certification
Canada	cUL
Europe	EN60950, CE Declaration of Conformity, CB scheme
USA	UL60950

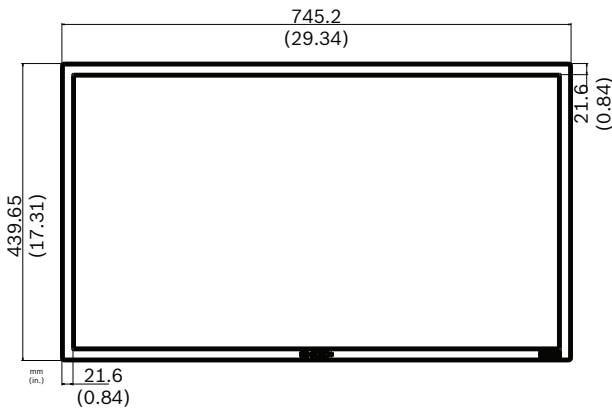
### Electromagnetic Compatibility (EMC)

Emission	EN55022:2010 class B, FCC part 15 class B
Immunity	EN55024:2010, EN50130-4:2011

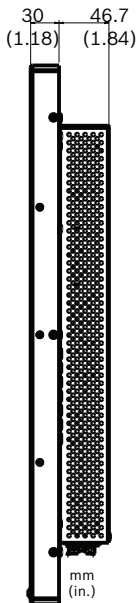
### Environmental

Vibration and Shock  
Level 5 Energy Star Certificate (UML-323-90 only)

**Installation/configuration notes**



UML-323-90: Front View



UML-323-90: Side View

**Parts included**

Quant.	Component
1	Bosch Full HD Color LED Flat Panel Monitor
2	Power Cords, 3-wire with grounded plug 1.8 m (6 ft) long: one with a U.S plug type and one with a European Continental plug type
1	DVI-D to DVI-D cable, 1.8 m (6 ft)
1	VGA to VGA (D-Sub), cable, 1.8 m (6 ft)
1	Trigger cable
1	Remote control
2	AAA batteries for remote control

- 1 Installation Manual (English)
- 1 CD-ROM with multi-language Installation Manual

**Technical specifications**

**Electrical**

Rated Voltage	120/230 VAC, 50/60 Hz
Voltage Range	100–240 VAC, 50/60 Hz
Frequency	Horizontal: 60–73 KHz Vertical: 47–63 Hz
Power at Rated Voltage	
• On	75 W
• Active Off	0.5 W

**Video**

Sync Format	PAL/NTSC
LCD Panel	LED
Viewable Picture Area	32 in.
Active Display Area (H x V)	698.4 x 392.85 mm (27.5 x 15.5 in.)
Pixel Pitch (H x V):	0.3637 x 0.3637 mm
Resolution <sup>1</sup>	1920 x 1080
Aspect Ratio	16:9
Display Colors	1,073 million
Response Time	6.5 ms (typical)
Backlight	50,000 hours

1. Pixel Policy: Bosch monitors follow the ISO 13406-2 Class II standard.

**LCD Panel Optical Characteristics**

Luminance	350 cd/m <sup>2</sup> (typical)
Contrast Ratio	3000:1 (typical)
Viewing Angle	Horizontal/Vertical: 178°, typical

**Video Input**

Composite Video (CVBS)	1.0 Vp-p (0.5–1.5 Vp-p), automatic switching from 75 Ohm unbalanced termination to Hi-Z with passive loop-through operation
Y/C (S-video)	0.7 Vp-p (Y-signal), 0.3 Vp-p (C-signal), 75 Ohm termination
VGA (RGB PC)	0.7 Vp-p (0.5–1 Vrms)
Audio Input	2.0 V line level, mono

**Timing Modes**

RGB and DVI	HDMI
640 x 480 (60/72/75 Hz)	640 x 480 (60/72/75 Hz)
720 x 400 (70 Hz)	720 x 400 (70 Hz)
800 x 600 (60/75 Hz)	800 x 600 (60/75 Hz)
1024 x 768 (60/75 Hz)	1024 x 768 (60/75 Hz)
1280 x 768 (60 Hz)	1280 x 768 (60 Hz)
1280 x 960 (60 Hz)	1280 x 960 (60 Hz)
1280 x 1024 (60 Hz)	1280 x 1024 (60 Hz)
1360 x 768 (60 Hz)	1360 x 768 (60 Hz)
1366 x 768 (60 Hz)	1366 x 768 (60 Hz)
1600 x 1200 (60 Hz)	1600 x 1200 (60 Hz)
1920 x 1080 (60 Hz)	1920 x 1080 (60 Hz)
	480i (60 Hz)
	480p (60 Hz)
	576i (50 Hz)
	576p (50 Hz)
	720p (50/60 Hz)
	1080i (50/60 Hz)
	1080p (50/60 Hz)

**Controls**

Input	
Rear Control Panel	Push-buttons
Video Source	Selects: Component Video, S-video, VGA, HDMI, DVI-D
Menu	Selects on-screen display (OSD), up cursor, down cursor/auto adjust, left cursor, right cursor
Power	On/Off
Control Panel Lockout	Multiple push-button combination
On-screen Display	
Video Mode	Input Source, Screen, OSD, Utility
Indicators	
LED	Power On (green) Power Off, Standby (red)
On-screen	VGA: Check input signal Video: Flashes "AV1" or "AV2" when there is a black screen

**Connectors**

Video 1 (AV1)	Composite video: two (2) BNC (1 in, 1 out)
Digital	One (1) DVI-D
HDMI	One (1)
VGA	One (1): 1 RGB 15-pin D-sub in, 1 RGB 15-pin D-sub out
Component	One (1): Y, Pb, Pr
Y/C (S-video)	One (1) mini-DIN, 4-pin (1 in)
Audio	Five (5): 2 Audio In: RCA (right/left) 1 Audio In: phono jack 1 Audio Out: RCA (right/left) 1 Speaker Out
Trigger Input	One (1) 1/8 in. mini phono plug
Power Input	100 – 240 VAC

**Mechanical**

Cabinet Material	SECC
Finish	Black
Mount	Wall mounting compatible with standard bracket
VESA Mounting Compliance	200 x 200 mm (7.87 x 7.8 in.)

**Dimensions (W x H x D)**

Monitor	745.2 x 439.65 x 76.7 mm (29.34 x 17.31 x 3.02 in.)
With Packaging	910 x 608 x 205 mm (35.83 x 23.94 x 8.1 in.)

**Weight**

Monitor Weight	12.5 kg (27.6 lb)
Shipping Weight	15.1 kg (33.3 lb)

**Environmental**

	All Models
Operating Temperature	0°C to +50°C (32°F to 122°F)
Storage Temperature	0°C to +50°C (32°F to 122°F)
Humidity	0% to 90% Relative

**Ordering information****UML-323-90 32-inch High Performance Full HD LED Monitor**

32-in. 1080p LED monitor with RGB, DVI, and HDMI inputs

Order number **UML-323-90**

**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