UML Family 46-inch High Performance HD LED monitor

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BOSCH
Invented for life

- ▶ Full HD 1920 x 1080 resolution
- ▶ Precise color reproduction
- ▶ HDMI, DVI, VGA, S-Video inputs
- ▶ Super-slim bezel for seamless tiled wall mounting
- ▶ High contrast ratio of 3500:1

The Bosch UML-463-90 High Performance LED monitor is a 1080p Full HD resolution color monitor ideal for use with digital video recorders (DVRs), and with PC applications. The monitor features a color LCD flat-screen panel with a 46-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, ceiling or on a desktop.

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 monitors' analog VGA input easily accommodates the widespread use of PCs in today's security surveillance systems. Their high contrast ratio (3500:1) and a high brightness setting offers excellent color accuracy and imaging for easier viewing and interpretation of images. The panel can refresh in as little as 6.5 milliseconds, so you get crisp, clear images with less smearing - and less image "ghosting" in fast-motion video.

Tiled wall mounting

The super-thin bezel screen surround means the wall mounted monitors can be precisely arranged in a tiled configuration. Especially suited for control room environment with multiple camera connections.

Certifications and approvals

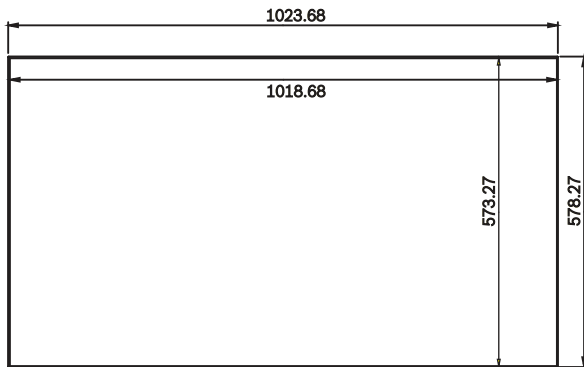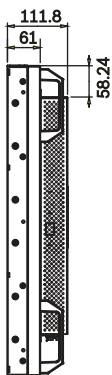| Region	Safety Certification
Canada	cUL
Europe	EN60950, CE Declaration of Conformity, CB scheme
USA	UL60950
Electromagnetic Compatibility (EMC)	
Emission	EN55022:2010 class B, FCC part 15 class B
Immunity	EN55024:2010, EN50130-4:2011
Environmental	
Vibration Energy Star 6.0	

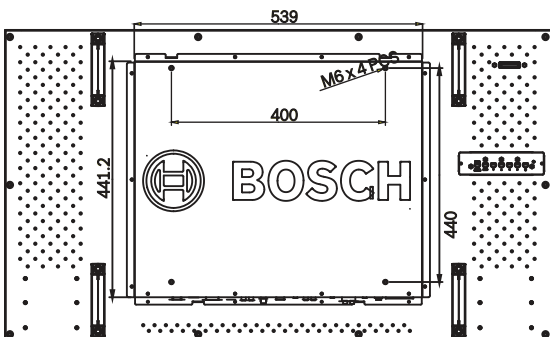| Region	Certification
Europe	CE

Installation/configuration notes

UML-463-90: Front View

UML-463-90: Side View

UML-463-90: Back 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	1 DVI-D to DVI-D cable, 1.8 m (6 ft)
1	1 VGA to VGA (D-Sub), cable, 1.8 m (6 ft)
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 = 149 W Active Off = 0.5 W

Video

Sync Format	PAL/NTSC automatic detection
LCD Panel	LED backlight
Viewable Picture Area	46 in.
Active Display Area (H x V)	1018.08 x 572.67 mm (40.08 x 22.55 in.)
Pixel Pitch (H x V):	0.53025 x 0.53025 mm (0.02088 x 0.02088 in.)
Resolution[1]	1920 x 1080
Aspect Ratio	16:9
Display Colors	1073.7 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	450 cd/m^2 (typical)
Contrast Ratio	3500:1 (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
Component	Y, Pb, Pr
Digital Inputs	DVI D (1 x) and HDMI (2 x)
VGA (RGB PC)	0.7 Vp-p (0.5–1 Vrms)
Audio Input	2.0 V line level, mono

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)
1400 x 1050 (60 Hz)	1400 x 1050 (60 Hz)
1600 x 1200 (60 Hz)	1600 x 1200 (60 Hz)
1680 x 1050 (60 Hz)	1680 x 1050 (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 (25/3050/60 Hz)
	1080i (50/60 Hz)
	1080p (24/25/30/50/60 Hz)
	1080p (24/25 Psf)

Controls

Input

Rear Control Panel	Push-buttons
Remote control	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 (on rear)

LED	Power On (green) Power Off, Standby (red)

Connectors

Video 1 (AV1)	Composite video: two (2) BNC (1 in, 1 out)
Digital	Two (2) (1 DVI-D in, 1 DVI-D out)
IR	Two (2) (1 in, 1 out)
Display port	One (1) in
HDMI	Two (2) in
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	1 Audio In: RCA (right/left) 1 Audio In: phono jack 1 Audio Out: RCA (right/left) 1 Speaker Out (right/left)
RS-232	Two (2) (1 in for firmware update, 1 out for firmware update)
Power Input	100 – 240 VAC
Power Output	100 – 240 VAC

Mechanical

Cabinet Material	SECC
Finish	Black
Mount	Wall mounting compatible with standard bracket (optional) Desk mount (optional)
VESA Mounting Compliance	400 x 400 mm (15.7 x 15.7 in.)

Dimensions (W x H x D)

Monitor	1023.68 x 578.27 x 111.8 mm (40.30 x 22.77 x 4.4 in.)
With Packaging	1190 x 754 x 290 mm (46.85 x 30.08 x 11.42 in.)

Weight

Monitor Weight	25 kg (55.12 lb)
Shipping Weight	30 kg (66.14 lb)

Environmental

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-463-90 46-inch High Performance HD LED Monitor
Order number **UML-463-90**

Accessories

UMM-LED46-SD Desktop Stand
Order number **UMM-LED46-SD**