More information:



With Vandalism Set

With Outdoor Wall Mount

With Corner and Pole Mount and Outdoor Wall Mount

- Recording on internal MicroSD card (SDXC, SDHC installed)
- Audio integrated (microphone and speaker)
- Sensor for temperature integrated
- PIR detector integrated
- Can be extended flexibly using sets for outdoor applications
- Easy installation at building corners and poles using the Corner and Pole Mount (accessory)
- Use the Vandalism Set for surveillance at extremely critical locations







(individually adjustable)



### **Universal 6MP Dome Camera With** Two Lenses for Ceiling, Wall and Pole Mounting

MOBOTIX 6MP camera for flexible use in indoor and outdoor applications, available as complete D16 DualDome (Day or Night) with lenses 6D/N/L036 to 237 and with different lens bridge options.

www.mobotix.com > Products > Outdoor Cameras > DualDome D16

Mx-D16 **MOBOTIX** 32.803-003\_EN\_04/2017

## Standard Delivery D16



Item	Count	Part Name		
1.1	1	Camera housing		
1.2a	1	Lens units with lenses (freely adjustable, to be ordered separately)		
1.2b	1	Pano lens bridge (for 180° Panorama, <i>to be ordered sepa-rately</i> , pre-installed)		
1.2c	1	Fix lens bridge (for one day and one night lens, to be ordered separately, pre-installed)		
1.3	1	Dome (standard)		
1.4	1	Enlarged dome (XL for Pano and Fix lens bridges)		
1.5	1	Cable cover		
1.6	1	Ethernet cable		
1.7	1	MicroSD card (SDXC, SDHC pre-installed)		
1.8	1	Custom tool with magnet		
1.9	1	Outer shell		
1.10	3	Stainless steel washers 5.3 mm dia.		
1.11	3	Dowels 8 mm		
1.12	3	Stainless steel wood screws 4.5x60 mm with Torx head TX20		
1.13	1	Torx wrench TX20		
1.14	1	Allen wrench 3 mm		

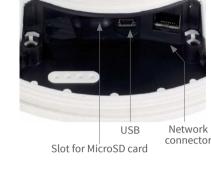
# Connections and Initial Operation of the D16

You can find detailed information on the installation and connections of the D16 in the D15 Camera Manual (PDF, available on www.mobotix.com > Support > Manuals). Please note that the boot options of this camera have changed compared to its predecessor (see «Boot Options of the D16» on

page 2). Regarding the rest of the initial operation of the D16, please see the D15 Camera Manual in Chapter 3, «Initial Operation».







### To facilitate the installation of the camera, you should complete the following tasks before actually installing the camera.

Preparing the D16 for Installation

**Preparatory Steps** 

#### Make sure that the condensed water outlets are pointing downwards when planning the installation 1.

Remove the outer shell by pressing the magnetic custom tool into the three holes of the outer shell one by one 2. Gently lift the shell near each hole

to loosen the shell from its seats. Next, unscrew the dome 3.

### Insert the lens units into the seatings 2

Insert the Individual Lens Units (1.2a)

Insert the center lock screw and the washer and lightly tighten the screw to keep the lens units 1.2a in place 3. Do not overtighten the lock screw so you can adjust the lens units later on.

Remove the center lock screw and the washer 1.

Insert the Lens Bridge (1.2b/c) Remove the center lock screw and the washer 1.

(Pano lens bridge 1.2b shown, similar for Fix lens bridge 1.2c).

Insert the center lock screw and the washer and lightly tighten the screw to keep the brackets in place 4.

Insert the lens bridge between the brackets 5, insert the two Allen screws with the washers and lightly tighten the screws 6. Do not overtighten the two screws so you can adjust the lens bridge later on.

**Connect the Sensor Cables** 

Remove the protective covers of the image sensor connectors 1

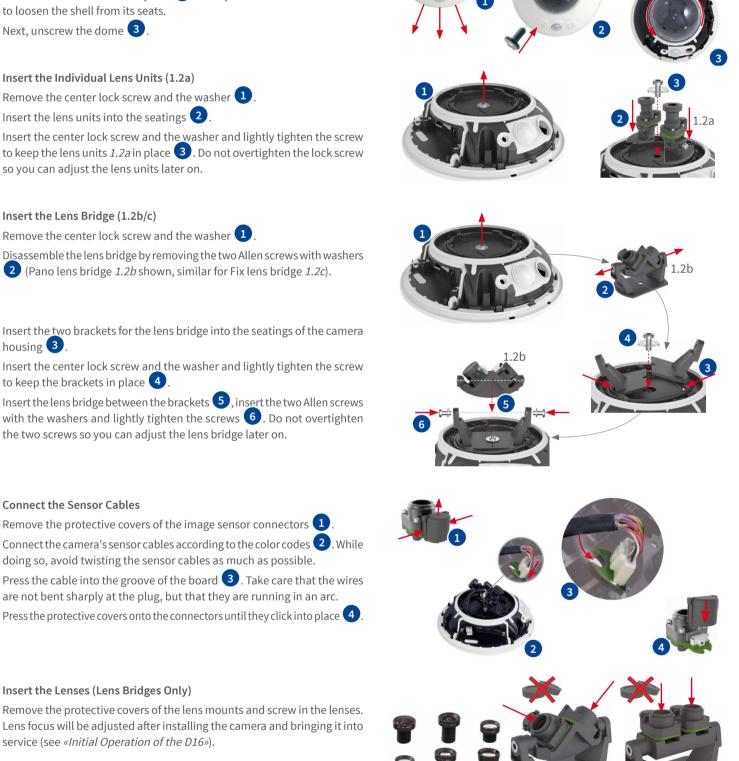
#### doing so, avoid twisting the sensor cables as much as possible. Press the cable into the groove of the board 3. Take care that the wires

housing 3

are not bent sharply at the plug, but that they are running in an arc. Press the protective covers onto the connectors until they click into place 4.

Insert the Lenses (Lens Bridges Only) Remove the protective covers of the lens mounts and screw in the lenses.

service (see «Initial Operation of the D16»).



#### ınstallation on Walls or Ceilings Without Accessories After drilling the holes for fixtures (see *«Drilling Template for Installation* Without Accessories»), attach the housing of the D16 at the designated

Mounting Options of the D16

#### power supply has been established, you will adjust the lens units or bridges (whichever applies) and the lenses' focus (see «Initial Operation of the D16»). Finally, you will install the dome and the outer shell.

Installation With Outdoor Wall Mount (Accessory) Remove the cover plate of the Outdoor Wall Mount. After drilling the holes for fixtures (see *«Drilling Template for Installation Without Accessories»*), attach the Outdoor Wall Mount at the designated position using dowels and screws, then lead the cabling into the mount. Next, connect the cabling and install the camera on the cover plate of the Outdoor Wall Mount using

position using dowels and screws, then connect the cabling. Once the

the supplied screws. Then attach the cover plate with the camera to the Outdoor Wall Mount. For more information, please see the D15 Camera Manual, Section 2.4,

With Outdoor Wall Mount (Accessory)» above.

# «Mounting the Camera with Outdoor Wall Mount».

 $In stallation \, With \, Corner \, and \, Pole \, Mount \, and \, Outdoor \, Wall \, Mount \, (Accessory)$ Lead the cabling from the rear through the Corner and Pole Mount and attach it at the corner of a building or a pole (using steel straps). Then attach the Outdoor Wall Mount to the Corner and Pole Mount. The remaining installation of the D16 follows the steps under «Installation

Installation of the Vandalism Set (Accessory) Remove the outer shell and the dome (see «Preparing the D16 for Installation»). Screw in the reinforced dome and hold the stainless steel ring of the Vandalism Set in position to mark the holes for drilling (the bulge in the steel ring covers the LED/PIR dome – see red circle in figure on the right). Drill the holes for the mounting screws (or the dowels, whichever



# applies), then apply the stainless steel ring and fasten it using the supplied

security screws. Inserting/Exchanging the SD Card

**Planning** in the document *MicroSD Card Whitelist for MOBOTIX Cameras*. When replacing the SD card, make sure that recording has been deactivated in the browser (Admin Menu > Storage on External File Server /

All camera models can use the integrated MicroSD card (SDHC) to record video data. In order to exchange the MicroSD card, please proceed as outlined in the following instruction. For information on reliable SD cards, please see the MOBOTIX website www.mobotix.com>Support>MxMedia Library>

## 1. Remove the SD Card

Remove the outer shell and the cable cover of the camera. If a MicroSD card has been installed, gently press with your finger as indicated by the arrow until you hear a *click*. Then release the SD card. The card is protruding slightly and can be easily removed.



## 2. Insert the SD Card

Insert the MicroSD card and gently press with your finger as indicated by the arrow until you hear another *click*. Make sure that the SD card is fully inserted. Re-attach the cable cover and the outer shell of the camera.



**MOBOTIX** 



Audio

The initial operation starts with connecting the power supply (see section «Network and Power Connection, Additional Cables» in the D15 Camera Manual). The first access follows the procedure described in the same manual in the «Initial Operation of the Camera» section. All other tasks require access to the camera's user interface in the browser. Enter the camera's IP address into the address bar of the browser.

#### 1. Enter Type of Lens Bridge and Lenses

Open the Admin Menu > Hardware Configuration > Image Sensor Con**figuration** dialog and select the type of lens bridge you installed. Next, select the lenses you installed for the image sensors in Hardware Configuration > Lens Configuration. This step is required so the camera can apply the proper distortion correction methods for the installed lenses.

#### 2. Adjust the Lens Focus

Remove the dome before proceeding.

Check the live image from the camera in the browser. Activate the focusing aid in the browser (Focusing Aid quick control, Activated value).



Carefully turn the lens by hand in clockwise or counter-clockwise direction until the red area of the focusing aid is as small as possible. **Except** D16-Panorama/180°: Switch to the other image sensor (Camera Selection quick control) and repeat the process, if required.

Once the focus is adjusted properly, deactivate the focusing aid again (Focusing Aid quick control, Disabled value).

Note: Due to the lens effect of the dome, the focus of the **B237 tele lens** is shifting slightly once the dome has been mounted. Before

mounting the dome, the tele lens should be turned about 90° in counter-clockwise direction (as seen from the lens' front). Make sure that you check the focus of the live image in your browser with the dome installed and re-adjust the lens, if required.

### 3. Reboot the Camera and Reset the Image Settings

Reboot the camera (Admin Menu > General Tasks > Reboot) and then reset the image settings and all views to the factory defaults (Manage Settings > Load Image Factory Defaults quick control). If required, adjust the image settings. Only Pano/Fix: Adjust the dual image using the on-screen con-

trol (fig. on the right; see also D15 Camera Manual, «Adjusting the Panorama Image (D16-Pano Only)»).

# 4. Save the configuration

**Entire Configuration** as value. The camera stores the configuration in the permanent camera memory so that the settings will be applied at the next camera reboot.

In the browser, select the Manage Settings quick control and set Store

## Boot Options of the D16

By default, the camera starts as DHCP client and automatically tries to get an IP address from a DHCP server. To start the camera in a mode different from the default mode, you can activate the boot menu of the camera.

## 1. Preparing the Camera

- · Disconnect the camera's power supply. • Make sure that you have the custom tool with magnet (item 1.8) at hand.
- · Reconnect the power supply of the camera.
- 2. Activating the Boot Menu

#### The red LED lights up 5 to 10 seconds after establish-

ing the power supply and will stay on for 10 seconds. Briefly press the magnet of the custom tool onto the spot indicated by the red circle in the figure. The camera enters the boot menu, ready for selecting one of the boot options. The LED now flashes once and repeats the flash signal after pausing for one

second (the number of flashes indicates the current boot option). To go to the next boot option, briefly press the magnet again onto the designated spot (< 1 sec). After the last boot option, the camera returns to the first option (LED flashes once).

flash	ies	Option	Meaning	tion*
1 ×	(	Auto Config- uration	Starts the auto configuration in order to operate this camera as a door station (not supported on all camera models).	Phone ringing
2 x	(	Factory Defaults	Starts the camera with factory defaults (factory default IP address, users and passwords will not be reset).	Boing
3 >	(	Automatic IP Address	Starts the camera as DHCP client and tries to obtain an IP address from a DHCP server. If a DHCP server cannot be found or no IP address can be obtained, the camera starts with its factory default address.	Boing Boing
4 x	(	Recovery System	Starts the camera with the recovery system, e.g., in order to recover from a failed update of the camera software.	Alarm Sound
*Only o	n cai	meras with aud	io option and installed speaker.	

### Press the magnet longer (> 2 sec) onto the indicated position. The camera

after a certain time.

confirms the selection by flashing rapidly three times. You can now remove the magnet. After 20 sec, the camera will confirm the selection by playing a sound according to the table above. If nothing is selected, the camera will resume its normal boot process

Network security: MOBOTIX products include all of the necessary configuration options for operation in Ethernet net-

works in compliance with data protection laws. The operator

is responsible for the data protection concept across the entire

# **Important Notes**

#### Safety Warnings

#### **Notes on Installing:** This product must not be used in locations exposed to

the dangers of explosion. • Make sure that you install this product as outlined in



- lation can damage the camera! When installing this product, make sure that you are only using genuine MOBOTIX parts and MOBOTIX connection cables. Only install this product on suitable, solid materials that provide for
- a sturdy installation of the fixing elements used.
- **Electrical installation:** Electrical systems and equipment may only be installed, modified and maintained by a qualified

electrician in accordance with the applicable electrical guidelines. Make sure to properly set up all electrical connections. Electrical surges: MOBOTIX cameras are protected against

electrician or under the direction and supervision of a qualified



the effects of small electrical surges by numerous measures. These measures, however, cannot prevent the camera from being damaged when stronger electrical surges occur. Special care should be taken when installing the camera outside of buildings to ensure proper protection against lightning, since this also protects the building and the whole network infrastructure.

**Never touch the lenses:** Due to the high performance of the

D16, the area of the image sensor can get quite hot, especially

when the ambient temperature is also high. This does not

affect the proper functioning of the camera in any way. For this reason, the product must not be installed within the reach of persons without the dome. Power off before opening the camera: Make sure the power supply to the camera is disconnected before opening the camera housing (e.g., when inserting or exchanging lenses, lens units and SD cards).

MX-B036 to MX-B237 (20 to 135 mm in 35 mm format).

Color sensor (6MP): 0.1 Lux at 1/60 s, 0.005 Lux at 1 s

103° to 15° horizontal angle of view

Color: 3072x2048 (6MP), 6144x2048 (12MP)

Black&White: 3072x2048 (6MP), 6144x2048 (12MP)

3072x2048 (6MP), 2592x1944 (5MP), 2048x1536 (QXGA), 1920x1080

(Full-HD), 1280x960 (MEGA), 1280x720 (HD), 1024x768, 800x600,

768x576 (D1-PAL), 704x576 (TV-PAL), 640x480, 384x288, 320x240,



Legal Notes Legal aspects of video and sound recording: You must comply with all data protection regulations for video and sound monitoring when using MOBOTIX products. Depending on national

system. The basic settings required to prevent misuse can be configured

in the software and are password-protected. This prevents unauthorized

laws and the installation location of the D16, the recording of video and sound data may be subject to special documentation or it may be prohibited. All users of MOBOTIX products are therefore required to

familiarize themselves with all applicable regulations and to comply with

these laws. MOBOTIX AG is not liable for any illegal use of its products.

### Disposal

Alarm/Events

Microphone and

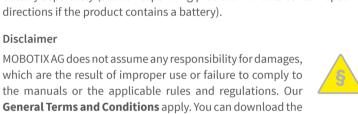
**Audio Functions** 

Speaker

Interfaces

parties from accessing these settings.

Electrical and electronic products contain many valuable materials. For this reason, we recommend that you dispose of MOBOTIX products at the end of their service life in accordance with all legal requirements and regulations (or deposit these products at a municipal collection center). MOBOTIX products must not be disposed of in household waste! If the product contains a battery, please dispose of the battery separately (the corresponding product manuals contain specific directions if the product contains a battery).



current version of the General Terms and Conditions from our website at

www.mobotix.com by clicking on the COS link at the bottom of every page.

post-alarm images

Integrated microphone and speaker

inputs/outputs and RS232 via accessories

Ethernet 100Base-T, MiniUSB;

Video Motion detection, MxActivitySensor, external signals, tem-

perature sensor, PIR, microphone, shock detector, notification via

e-mail, FTP, IP telephony (VoIP, SIP), visual/sound alarms, pre- and

Lip-synchronous audio, two-way communication, audio recording

#### Min. Illumination Black&White sensor (6MP): 0.02 Lux at 1/60 s, 0.001 Lux at 1/1 s **Image Sensor** 1/1.8" CMOS, 6MP, progressive scan

**Lens Options** 

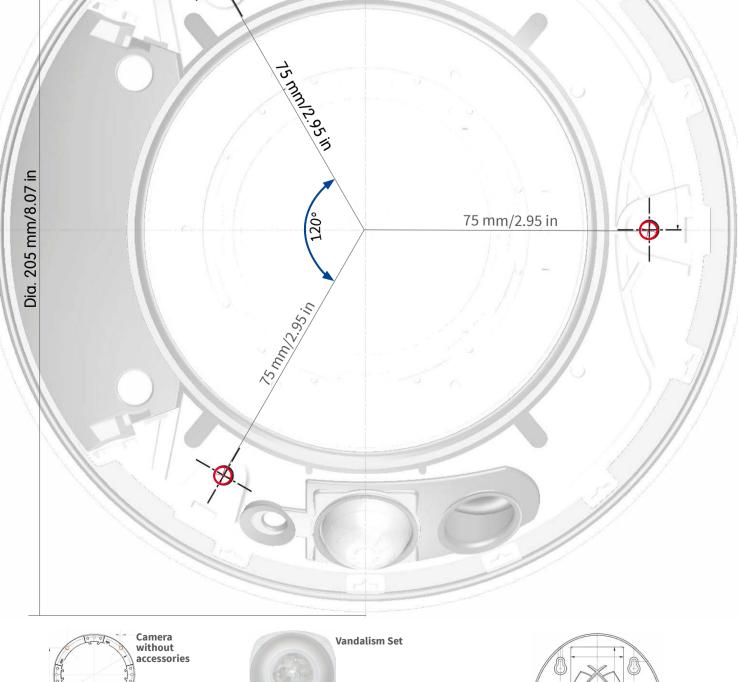
Max. Image Size

Image Formats

Technical Specifications D16

	160x120, custom formats		
Max. Frame Rate	MxPEG (max): 42@HD (1280x720), 34@Full-HD, 24@QXGA, 15@5MP, 12@6MP, 6@2x6MP     M-JPEG (max): 26@HD (1280x720), 13@Full-HD, 9@QXGA, 5@5MP, 4@6MP, 2@2x6MP     H.264 (max): 25@Full-HD, 20@QXGA		
Video Codec	MxPEG, M-JPEG, JPEG, H.264		
Internal DVR	MicroSD card (SDXC, SDHC pre-installed)		
External Video Ring Buffer	Directly on NAS or PC/Server, no additional recording software required		
Software (Included)	MxManagementCenter video management software		
Image Processing	Backlight compensation, automatic white balance, image distortion correction, panorama correction, video motion detection, MxActivitySensor		
Virtual PTZ	Digital pan/tilt/zoom, continuous up to 8X		
Drilling Template for Installation Without Accessories			

Video Telephony	VoIP/SIP, two-way communication, remote controlling using key codes, event notification
Security	User/group management, HTTPS/SSL, IP address filter, IEEE 802.1x, intrusion detection, digital image signature
Certifications	EN55032:2012, EN55022:2010; EN55024:2010, EN61000-6-1:2007, EN61000-6-3:2007+A1:2011, EN61000-6-4:2007+A1:2011, AS/ NZS CISPR22:2009+A1:2010
Power Supply	Year-round Power-over-Ethernet (IEEE 802.3af); POE class variable
<b>Power Consumption</b>	Typ. 5 W
Protection Classes	IP54 and IK10 IP65 and IK10 with Outdoor Wall Mount IP66 and IK10+ with Vandalism Set
<b>Operating Conditions</b>	-30 to 60 °C/-22 to 140 °F
Dimensions/Weight	Diameter x Height: 205 x 108 mm (D16), 205 x 125 mm (D16-Panorama/180°, D16-DNight); weight: approx. 750 g/1.65 lb (including lenses)
Standard Delivery	Housing (high-resistance composite, PBT-PC), white, two shock-resistant domes (transparent), mounting supplies, wrenches, 50 cm/19.69 in patch cable, software, MicroSD card (installed)



**Outdoor Wall Mount** 

Manuals and drilling templates: www.mobotix.com > Support > Manuals > IP Camera Systems > DualDome D16



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Declaration of Conformity: www.mobotix.com > Support > MxMedia Library > Certificates