

Security-Vision-Systems



Guidelines for Spec Sheets

**MOBOTIX Cameras
M12/D12/V12/T24M/M24M/D24M/Q24M
and Accessories**

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To find the most recent version of these guidelines, please open www.mobotix.com in the **Support > MX Media Library > Sales Support** section.

This document is subject to changes without notice.



Requirements for Surveillance Systems

The requirements listed in the following represent the minimum requirements for surveillance systems, if they are to be considered state-of-the-art technology:

- Video surveillance has to deliver images with a minimum resolution of 960 lines per image per camera in order to guarantee that persons and objects can be identified properly in the live images.
- The camera images need to be recorded with at least 960 image lines in order to guarantee that persons and objects can be identified properly in the stored images.
- The system has to allow for simultaneous display and storage of the live images as well as the display of the stored images and video sequences without the risk of losing data.
- The system needs to be able to record at least 20 smooth video streams simultaneously on one standard computer. The recorded video streams need to contain at least 10 images per second.
- To reduce costs, the system should not require additional power lines for the camera's power supply. Instead, power should be supplied via the network cabling (e.g. Power-over-Ethernet).
- The system needs to be able to operate in outdoor applications at temperatures between -30° to $+60^{\circ}\text{C}$ (-22°F to 140°F) without any additional heating in the surveillance cameras. This will reduce power consumption to a minimum, thus providing for cost-efficient protection of the whole system using uninterruptible power supplies.
- The cameras should not have to rely on any moving parts such as auto iris, mechanical filters, motors, fans or similar. This ensures that the complete system is highly reliable and maintenance-free.
- The surveillance cameras need to be able to bridge at least a one-minute failure of the data connection or the storage device without losing any storage data, images or video sequences.
- The surveillance cameras need to be able to output voice messages and to react to sounds in the camera perimeter and to trigger alarms accordingly. The system needs to **play back and store** the audio signals in a lip-synchronous manner.
- The cameras need to employ wide-angle lenses with an image angle of 90 degrees or more so that the monitored areas are covered as efficiently as possible.
- The system needs to be able to integrate analog cameras (e.g. PTZ cameras) seamlessly. This requirement is valid for displaying and operating the cameras as well as for storing the corresponding images or video sequences.
- The housing and the materials have to be chosen in such a way that the cameras have a life expectancy of at least five years.



MOBOTIX T24M-Sec

Network Camera

Ultra-compact, maintenance-free outdoor mono color CMOS network camera "Hemispheric" without moving parts for security applications

Image sensor

3.1 megapixels, CMOS 2048x1536, color

Resolutions

Live image:

2048x1536 (3 Mega), 1280x960 (Mega), 1024x768 (XGA), 800x600 (SVGA), 768x576 (D1-PAL), 640x480 (VGA), 384x288 (D1-CIF), 320x240 (CIF), 160x120 (PDA), custom formats (e.g. 1000x400 pixels), with digital Zoom and pan/tilt

When Recording:

2048x1536 (3 Mega), 1280x960 (Mega), 1024x768 (XGA), 800x600 (SVGA), 768x576 (D1-PAL), 640x480 (VGA), 384x288 (D1-CIF), 320x240 (CIF), 160x120 (PDA), custom formats (e.g. 1000x400 pixels), either full image recording or recording of corrected image (VGA or smaller)

Display Modes

Full image, Corrected, Surround, Panorama, Double Panorama, Panorama/Focus

Max. Image Rates

VGA: 30 fps, TV-PAL: 30 fps, MEGA: 30 fps, 3 Mega: 20 fps (Fastmode, uncorrected image)

Light Sensitivity

1 Lux (t= 1/60 sec)/0.05 Lux (t= 1/1 sec)

Lens Options

Part Name	Angle (horizontal/vertical)	Image Size approx. in 10 m distance	Focal Length	In 35mm camera corresponds to
L11 Hemispheric	180°x160°	--	f = 1.8 mm	about 11 mm

Zoom Levels

Digital zoom, continuous up to 8.0x

Measurements

- Installation depth: Frame: 12 mm, until back end of USB plug: 18 mm, with network cable: 35 mm
- Thickness above the surface: 38 mm
- Overall size: 99x99x56 mm/3.9x3.9x2.2 in (WxHxD)

Weight

Approx. 236 g (0.52 lb) excluding mounting options

Interfaces

10/100Base T Ethernet (RJ45), USB master (MiniUSB type A), MxBus

Delivered Parts

Weatherproof housing (IP65) from fiber-reinforced plastic (PBT-GF30), metallic white (PW), silver (SV), dark gray (DG) or amber (am), manual, patch cable 10 cm/3.93 in, mounting materials, 4 GB MicroSD card, installed camera software with integrated video management system

Sensors

Video motion detector (VM1, VM2), temperature (TP), microphone (MI), illumination (IL), 2 keys (preset: lights, bell)

Video ring buffer

64 MB internal stream/image/event storage (e.g. approx. 4,000 images 320x240, good quality)

Internal DVR

MicroSD slot (up to 32 GB, about 1.2 million VGA images or 400,000 MEGA images, good quality)

External DVR

Via FTP on web server or on network computer (Windows/Linux/UNIX/Mac); direct image access, thus no FTP required (but possible)

Power Supply

Via the network cabling (e.g. Power-over-Ethernet)

Variable PoE: PoE class selection depending on the operating mode (typical power consumption: 4.5 Watt)

Mounting

- Compatible to the mounting frames of Siedle Vario or MOBOTIX systems

Other Notes

- No moving parts (such as motors, auto iris or similar)
- No heating required for outdoor applications
- No fans required for outdoor applications
- Illumination LEDs, white

Certificates

VDE IP65, CE, EMV (EN55022, EN61000-2, FCC part15B, AS/NZ3548)

Image Formats

JPEG, Motion JPEG, MxPEG, BMP, H.263+*, H.264*

*only when using SIP protocol

Operating Modes

IP Video Telephony

- Video over IP via SIP protocol
- H.263+
- H.264 with G711 audio codec, full duplex with echo cancellation and noise reduction

Simultaneous Browser Operating Modes

- HTML/JavaScript with M-JPEG
- Streaming (Server Push or Java)
- ActiveX (MxPEG)
- HTML pages optimized for PDA and pocket PCs

Operation and configuration using SIP IP video phone, MxControlCenter or MxEasy, advanced camera configuration via web browser, API for video management system of third-party vendors included

Functions

Web server, DHCP server, SIP server, Bonjour/Zeroconfig, SNMP, FTP client, e-mail client, live image, recorder/player, Multiview (simultaneous live image), storage and video search, also possible on external video ring buffer), softbuttons, network message (send, receive) for ext. management systems, integrated VoIP from/to browsers, SIP video telephony, video message box (T24 only), on-screen menu in the VoIP channel, alarm management (e-mail, phone call, network message), IP announcement, PDA web pages, logo generator, time- and event-controlled triggering of functions such as single image recording (max. 50 pre- and post-alarm images), video audio recording (30 fps VGA), video audio recording (event/scheduled), alarm triggering, audio announcements or switching operations, scheduled privacy zones, combining event logic, Master/Slave arming, user management with user groups and password protection, Supervisor mode (four-eyes principle), management of up to 1,000,000 alerts on each camera, no software installation required.

Camera Functions

Software-based, scalable backlight compensation, predefined and freely definable exposure windows, automatic white balance

Image Programs

Predefined camera settings for typical application scenarios:

- **Fast:** generates the highest image rates
- **Security Application:** for detecting movement in security applications
- **Quality:** default setting
- **High Quality:** generates images with the highest quality
- **Webcam:** delivers high image quality using the longest exposure times

Exposure Programs

Exposure programs -2, -1, 0, +1, +2 for adapting the exposure times to the current application scenario (clear images of moving objects or reduced image noise)

Image Amplification

Automatic control of minimum average image amplification at night and in situations with reduced illumination

Temperature Range

-30°C to +60°C (-22°F to 140°F)

Other Notes

- No moving parts (such as motors, auto iris or similar)
- No heating required for outdoor applications
- No fans required for outdoor applications
- Freely configurable status LEDs

Manufacturer

MOBOTIX

Type

MX-T24M-Sec-PW (white, RAL 9016), -SV (metallic silver, RAL 9006), -DG (dark gray/glimmer), -AM (amber/glimmer)

Further Information

http://www.mobotix.com/eng_GB/Products/T24-IP-Video-Door-Station

MOBOTIX T24M-Sec-Night

Network Camera

Ultra-compact, maintenance-free outdoor mono Black&White CMOS network camera "Hemispheric" without moving parts for security applications

Image sensor

1.3 Megapixels, CMOS 1280x960, Black&White

Resolutions

Live image:

1280x960 (Mega), 1024x768 (XGA), 800x600 (SVGA), 768x576 (D1-PAL), 640x480 (VGA), 384x288 (D1-CIF), 320x240 (CIF), 160x120 (PDA), custom formats (e.g. 1000x400 pixels), with digital Zoom and pan/tilt

When Recording:

1280x960 (Mega), 1024x768 (XGA), 800x600 (SVGA), 768x576 (D1-PAL), 640x480 (VGA), 384x288 (D1-CIF), 320x240 (CIF), 160x120 (PDA), custom formats (e.g. 1000x400 pixels), either full image recording or recording of corrected image (VGA or smaller)

Display Modes

Full image, Corrected, Surround, Panorama, Double Panorama, Panorama/Focus

Max. Image Rates

VGA: 30 fps, TV-PAL: 30 fps, MEGA: 30 fps (Fastmode)

Light Sensitivity

0.1 Lux (t= 1/60 sec)/0.005 Lux (t= 1/1 sec)

Lens Options

Part Name	Angle (horizontal/vertical)	Image Size approx. in 10 m distance	Focal Length	In 35mm camera corresponds to
L11 Hemispheric	180°x160°	--	f = 1.8 mm	about 11 mm

Zoom Levels

Digital zoom, continuous up to 8.0x

Measurements

- Installation depth: Frame: 12 mm, until back end of USB plug: 18 mm, with network cable: 35 mm
- Thickness above the surface: 38 mm
- Overall size: 99x99x56 mm/3.9x3.9x2.2 in (WxHxD)

Weight

Approx. 236 g (0.52 lb) excluding mounting options

Interfaces

10/100Base T Ethernet (RJ45), USB master (MiniUSB type A), MxBus

Delivered Parts

Weatherproof housing (IP65) from fiber-reinforced plastic (PBT-GF30), metallic white (PW), silver (SV), dark gray (DG) or amber (am), manual, patch cable 10 cm/3.93 in, mounting materials, 4 GB MicroSD card, installed camera software with integrated video management system

Sensors

Video motion detector (VM1, VM2), temperature (TP), microphone (MI), illumination (IL), 2 keys (preset: lights, bell)

Video ring buffer

64 MB internal stream/image/event storage (e.g. approx. 4,000 images 320x240, good quality)

Internal DVR

MicroSD slot (up to 32 GB, about 1.2 million VGA images or 400,000 MEGA images, good quality)

External DVR

Via FTP on web server or on network computer (Windows/Linux/UNIX/Mac); direct image access, thus no FTP required (but possible)

Power Supply

Via the network cabling (e.g. Power-over-Ethernet)

Variable PoE: PoE class selection depending on the operating mode (typical power consumption: 4.5 Watt)

Mounting

- Compatible to the mounting frames of Siedle Vario or MOBOTIX systems

Other Notes

- No moving parts (such as motors, auto iris or similar)
- No heating required for outdoor applications
- No fans required for outdoor applications
- Illumination LEDs, white

Certificates

VDE IP65, CE, EMV (EN55022, EN61000-2, FCC part15B, AS/NZ3548)

Image Formats

JPEG, Motion JPEG, MxPEG, BMP, H.263+*, H.264*

*only when using SIP protocol

Operating Modes

IP Video Telephony

- Video over IP via SIP protocol
- H.263+
- H.264 with G711 audio codec, full duplex with echo cancellation and noise reduction

Simultaneous Browser Operating Modes

- HTML/JavaScript with M-JPEG
- Streaming (Server Push or Java)
- ActiveX (MxPEG)
- HTML pages optimized for PDA and pocket PCs

Operation and configuration using SIP IP video phone, MxControlCenter or MxEasy, advanced camera configuration via web browser, API for video management system of third-party vendors included

Functions

Web server, DHCP server, SIP server, Bonjour/Zeroconfig, SNMP, FTP client, e-mail client, live image, recorder/player, Multiview (simultaneous live image), storage and video search, also possible on external video ring buffer), softbuttons, network message (send, receive) for ext. management systems, integrated VoIP from/to browsers, SIP video telephony, video message box (T24 only), on-screen menu in the VoIP channel, alarm management (e-mail, phone call, network message), IP announcement, PDA web pages, logo generator, time- and event-controlled triggering of functions such as single image recording (max. 50 pre- and post-alarm images), video audio recording (30 fps VGA), video audio recording (event/scheduled), alarm triggering, audio announcements or switching operations, scheduled privacy zones, combining event logic, Master/Slave arming, user management with user groups and password protection, Supervisor mode (four-eyes principle), management of up to 1,000,000 alerts on each camera, no software installation required.

Camera Functions

Software-based, scalable backlight compensation, predefined and freely definable exposure windows, automatic white balance

Image Programs

Predefined camera settings for typical application scenarios:

- **Fast:** generates the highest image rates
- **Security Application:** for detecting movement in security applications
- **Quality:** default setting
- **High Quality:** generates images with the highest quality
- **Webcam:** delivers high image quality using the longest exposure times

Exposure Programs

Exposure programs -2, -1, 0, +1, +2 for adapting the exposure times to the current application scenario (clear images of moving objects or reduced image noise)

Image Amplification

Automatic control of minimum average image amplification at night and in situations with reduced illumination

Temperature Range

-30°C to +60°C (-22°F to 140°F)

Other Notes

- No moving parts (such as motors, auto iris or similar)
- No heating required for outdoor applications
- No fans required for outdoor applications
- Freely configurable status LEDs

Manufacturer

MOBOTIX

Type

MX-T24M-Sec-Night-PW (white, RAL 9016), -SV (metallic silver, RAL 9006), -DG (dark gray/glimmer), -AM (amber/glimmer)

Further Information

http://www.mobotix.com/eng_GB/Products/T24-IP-Video-Door-Station

MOBOTIX M24M-Sec

Network Camera

Maintenance-free outdoor mono color CMOS network camera without moving parts for security applications

Image sensor

3.1 megapixels, CMOS 2048x1536, color

Resolutions

Live image:

2048x1536 (3 Mega), 1280x960 (Mega), 1024x768 (XGA), 800x600 (SVGA), 768x576 (D1-PAL), 640x480 (VGA), 384x288 (D1-CIF), 320x240 (CIF), 160x120 (PDA), custom formats (e.g. 1000x400 pixels), with digital Zoom and pan/tilt

When Recording:

2048x1536 (3 Mega), 1280x960 (Mega), 1024x768 (XGA), 800x600 (SVGA), 768x576 (D1-PAL), 640x480 (VGA), 384x288 (D1-CIF), 320x240 (CIF), 160x120 (PDA), custom formats (e.g. 1000x400 pixels), either full image recording or recording of corrected image (VGA or smaller)

Display Modes

Full image, Corrected, Surround, Panorama, Double Panorama, Panorama/Focus

Max. Image Rates

VGA: 30 fps, TV-PAL: 30 fps, MEGA: 30 fps, 3 Mega: 20 fps (Fastmode, uncorrected image)

Light Sensitivity

1 Lux (t= 1/60 sec)/0.05 Lux (t= 1/1 sec)

Lens Options

Part Name	Angle (horizontal/vertical)	Image Size approx. in 10 m distance	Focal Length	In 35mm camera corresponds to
L22 Super Wide-Angle	90° x 67°	20.0 m x 13.3 m	f = 4 mm	about 22 mm
L32 Wide-Angle	60° x 45°	11.5 m x 8.2 m	f = 6 mm	about 32 mm
L43 Wide-Angle	45° x 34°	8.2 m x 6.1 m	f = 8 mm	about 43 mm
L65 Tele	31° x 23°	5.5 m x 4.0 m	f = 12 mm	about 65 mm
L135 Tele	15° x 11°	2.6 m x 1.9 m	f = 25 mm	about 135 mm

Zoom Levels

Digital zoom, continuous up to 8.0x

Measurements

- VarioFlex mount in wall position: 140x189x222 mm (WxHxD)
- VarioFlex mount in ceiling position: 140x156x190 mm (WxHxD)

Weight

Approx. 738 g (incl. VarioFlex wall mount)

Model CSVario: Approx. 780 g (incl. VarioFlex wall mount)

Model Hemispheric: Approx. 748 g (incl. VarioFlex wall mount)

Interfaces

10/100Base T Ethernet (RJ45), USB master (for MX expansion modules), MxBus

Delivered Parts

Weatherproof housing (IP65) from fiber-reinforced plastic (PBT-GF30), metallic white, additional polycarbonate lens cover, manual, Allen wrench, VarioFlex wall/ceiling mount with concealed cabling for covering RJ45 wall outlets, patch cable 50 cm/20 in (with EMC sheath), stainless steel mounting supplies, 4 GB MicroSD card, installed camera software with integrated video management system

Sensors

Video motion detection, illumination, temperature, microphone

Video ring buffer

64 MB internal stream/image/event storage (e.g. approx. 4,000 images 320x240, good quality)

Internal DVR

MicroSD slot (up to 32 GB, about 1.2 million VGA images or 400,000 MEGA images, good quality)

External DVR

Via FTP on web server or on network computer (Windows/Linux/UNIX/Mac); direct image access, thus no FTP required (but possible)

Power Supply

Via network cabling (e.g. using Power-over-Ethernet standard 802.3af) or Netpower Set (with external power supply and Power Adapter) for one camera, Netpower Box for 4 or Netpower Rack for 8 or 20 cameras), Voltage: 24-48 V, power consumption approx. 3 to 4 Watts

Mounting

VarioFlex wall/ceiling mount with concealed cabling for covering RJ45 wall outlets

Certificates

VDE IP66, CE, EMV (EN55022, EN61000-2, FCC part15B, AS/NZ3548, BGVC9

Image Formats

JPEG, Motion JPEG, MxPEG, BMP, H.263+*, H.264*

*only when using SIP protocol

Operating Modes

IP Video Telephony

- Video over IP via SIP protocol
- H.263+
- H.264 with G711 audio codec, full duplex with echo cancellation and noise reduction

Simultaneous Browser Operating Modes

- HTML/JavaScript with M-JPEG
- Streaming (Server Push or Java)
- ActiveX (MxPEG)
- HTML pages optimized for PDA and pocket PCs

Operation and configuration using SIP IP video phone, MxControlCenter or MxEasy, advanced camera configuration via web browser, API for video management system of third-party vendors included

Functions

Web server, DHCP server, SIP server, Bonjour/Zeroconfig, SNMP, FTP client, e-mail client, live image, recorder/player, Multiview (simultaneous live image), storage and video search, also possible on external video ring buffer), softbuttons, network message (send, receive) for ext. management systems, integrated VoIP from/to browsers, SIP video telephony, video message box (T24 only), on-screen menu in the VoIP channel, alarm management (e-mail, phone call, network message), IP announcement, PDA web pages, logo generator, time- and event-controlled triggering of functions such as single image recording (max. 50 pre- and post-alarm images), video audio recording (30 fps VGA), video audio recording (event/scheduled), alarm triggering, audio announcements or switching operations, scheduled privacy zones, combining event logic, Master/Slave arming, user management with user groups and password protection, Supervisor mode (four-eyes principle), management of up to 1,000,000 alerts on each camera, no software installation required.

Camera Functions

Software-based, scalable backlight compensation, predefined and freely definable exposure windows, automatic white balance

Image Programs

Predefined camera settings for typical application scenarios:

- **Fast:** generates the highest image rates
- **Security Application:** for detecting movement in security applications
- **Quality:** default setting
- **High Quality:** generates images with the highest quality
- **Webcam:** delivers high image quality using the longest exposure times

Exposure Programs

Exposure programs -2, -1, 0, +1, +2 for adapting the exposure times to the current application scenario (clear images of moving objects or reduced image noise)

Image Amplification

Automatic control of minimum average image amplification at night and in situations with reduced illumination

Temperature Range

-30°C to +60°C (-22°F to 140°F)

Other Notes

- No moving parts (such as motors, auto iris or similar)
- No heating required for outdoor applications
- No fans required for outdoor applications
- Freely configurable status LEDs

Manufacturer

MOBOTIX

Type

MX-M24M-Sec

Further Information

http://www.mobotix.com/eng_GB/Products/Cameras/Allround-M24

MOBOTIX M24M-Sec-Night

Network Camera

Maintenance-free outdoor mono Black&White CMOS network camera without moving parts for security applications

Image sensor

1.3 Megapixels, CMOS 1280x960, Black&White

Resolutions

Live image:

1280x960 (Mega), 1024x768 (XGA), 800x600 (SVGA), 768x576 (D1-PAL), 640x480 (VGA), 384x288 (D1-CIF), 320x240 (CIF), 160x120 (PDA), custom formats (e.g. 1000x400 pixels), with digital Zoom and pan/tilt

When Recording:

1280x960 (Mega), 1024x768 (XGA), 800x600 (SVGA), 768x576 (D1-PAL), 640x480 (VGA), 384x288 (D1-CIF), 320x240 (CIF), 160x120 (PDA), custom formats (e.g. 1000x400 pixels), either full image recording or recording of corrected image (VGA or smaller)

Max. Image Rates

VGA: 30 fps, TV-PAL: 30 fps, MEGA: 30 fps, (Fastmode, uncorrected image)

Light Sensitivity

0.1 Lux (t= 1/60 sec)/0.005 Lux (t= 1/1 sec)

Lens Options

Part Name	Angle (horizontal/vertical)	Image Size approx. in 10 m distance	Focal Length	In 35mm camera corresponds to
L22 Super Wide-Angle	90° x 67°	20.0 m x 13.3 m	f = 4 mm	about 22 mm
L32 Wide-Angle	60° x 45°	11.5 m x 8.2 m	f = 6 mm	about 32 mm
L43 Wide-Angle	45° x 34°	8.2 m x 6.1 m	f = 8 mm	about 43 mm
L65 Tele	31° x 23°	5.5 m x 4.0 m	f = 12 mm	about 65 mm
L135 Tele	15° x 11°	2.6 m x 1.9 m	f = 25 mm	about 135 mm

Zoom Levels

Digital zoom, continuous up to 8.0x

Measurements

- VarioFlex mount in wall position: 140x189x222 mm (WxHxD)
- VarioFlex mount in ceiling position: 140x156x190 mm (WxHxD)

Weight

Approx. 738 g (incl. VarioFlex wall mount)

Model CSVario: Approx. 780 g (incl. VarioFlex wall mount)

Model Hemispheric: Approx. 748 g (incl. VarioFlex wall mount)

Interfaces

10/100Base T Ethernet (RJ45), USB master (for MX expansion modules), MxBus

Delivered Parts

Weatherproof housing (IP65) from fiber-reinforced plastic (PBT-GF30), metallic white, additional polycarbonate lens cover, manual, Allen wrench, VarioFlex wall/ceiling mount with concealed cabling for covering RJ45 wall outlets, patch cable 50 cm/20 in (with EMC sheath), stainless steel mounting supplies, 4 GB MicroSD card, installed camera software with integrated video management system

Sensors

Video motion detection, illumination, temperature, microphone

Video ring buffer

64 MB internal stream/image/event storage (e.g. approx. 4,000 images 320x240, good quality)

Internal DVR

MicroSD slot (up to 32 GB, about 1.2 million VGA images or 400,000 MEGA images, good quality)

External DVR

Via FTP on web server or on network computer (Windows/Linux/UNIX/Mac); direct image access, thus no FTP required (but possible)

Power Supply

Via network cabling (e.g. using Power-over-Ethernet standard 802.3af) or Netpower Set (with external power supply and Power Adapter) for one camera, Netpower Box for 4 or Netpower Rack for 8 or 20 cameras), Voltage: 24-48 V, power consumption approx. 3 to 4 Watts

Mounting

VarioFlex wall/ceiling mount with concealed cabling for covering RJ45 wall outlets

Certificates

VDE IP66, CE, EMV (EN55022, EN61000-2, FCC part15B, AS/NZ3548, BGVC9

Image Formats

JPEG, Motion JPEG, MxPEG, BMP, H.263+*, H.264*

*only when using SIP protocol

Operating Modes

IP Video Telephony

- Video over IP via SIP protocol
- H.263+
- H.264 with G711 audio codec, full duplex with echo cancellation and noise reduction

Simultaneous Browser Operating Modes

- HTML/JavaScript with M-JPEG
- Streaming (Server Push or Java)
- ActiveX (MxPEG)
- HTML pages optimized for PDA and pocket PCs

Operation and configuration using SIP IP video phone, MxControlCenter or MxEasy, advanced camera configuration via web browser, API for video management system of third-party vendors included

Functions

Web server, DHCP server, SIP server, Bonjour/Zeroconfig, SNMP, FTP client, e-mail client, live image, recorder/player, Multiview (simultaneous live image), storage and video search, also possible on external video ring buffer), softbuttons, network message (send, receive) for ext. management systems, integrated VoIP from/to browsers, SIP video telephony, video message box (T24 only), on-screen menu in the VoIP channel, alarm management (e-mail, phone call, network message), IP announcement, PDA web pages, logo generator, time- and event-controlled triggering of functions such as single image recording (max. 50 pre- and post-alarm images), video audio recording (30 fps VGA), video audio recording (event/scheduled), alarm triggering, audio announcements or switching operations, scheduled privacy zones, combining event logic, Master/Slave arming, user management with user groups and password protection, Supervisor mode (four-eyes principle), management of up to 1,000,000 alerts on each camera, no software installation required.

Camera Functions

Software-based, scalable backlight compensation, predefined and freely definable exposure windows, automatic white balance

Image Programs

Predefined camera settings for typical application scenarios:

- **Fast:** generates the highest image rates
- **Security Application:** for detecting movement in security applications
- **Quality:** default setting
- **High Quality:** generates images with the highest quality
- **Webcam:** delivers high image quality using the longest exposure times

Exposure Programs

Exposure programs -2, -1, 0, +1, +2 for adapting the exposure times to the current application scenario (clear images of moving objects or reduced image noise)

Image Amplification

Automatic control of minimum average image amplification at night and in situations with reduced illumination

Temperature Range

-30°C to +60°C (-22°F to 140°F)

Other Notes

- No moving parts (such as motors, auto iris or similar)
- No heating required for outdoor applications
- No fans required for outdoor applications
- Freely configurable status LEDs

Manufacturer

MOBOTIX

Type

MX-M24M-Sec-Night

Further Information

http://www.mobotix.com/eng_GB/Products/Cameras/Allround-M24

MOBOTIX M24M-Sec-CSVario

Network Camera

Maintenance-free outdoor mono color CMOS network camera with CS Vario lens without moving parts for security applications

Image sensor

3.1 megapixels, CMOS 2048x1536, color

Resolutions

Live image:

2048x1536 (3 Mega), 1280x960 (Mega), 1024x768 (XGA), 800x600 (SVGA), 768x576 (D1-PAL), 640x480 (VGA), 384x288 (D1-CIF), 320x240 (CIF), 160x120 (PDA), custom formats (e.g. 1000x400 pixels), with digital Zoom and pan/tilt

When Recording:

2048x1536 (3 Mega), 1280x960 (Mega), 1024x768 (XGA), 800x600 (SVGA), 768x576 (D1-PAL), 640x480 (VGA), 384x288 (D1-CIF), 320x240 (CIF), 160x120 (PDA), custom formats (e.g. 1000x400 pixels), either full image recording or recording of corrected image (VGA or smaller)

Display Modes

Full image, Corrected, Surround, Panorama, Double Panorama, Panorama/Focus

Max. Image Rates

VGA: 30 fps, TV-PAL: 30 fps, MEGA: 30 fps, 3 Mega: 20 fps (Fastmode, uncorrected image)

Light Sensitivity

1 Lux (t= 1/60 sec)/0.05 Lux (t= 1/1 sec)

Lens Options

Part Name	Angle (horizontal/vertical)	Image Size approx. in 10 m distance	Focal Length	In 35mm camera corresponds to
CS-Mount Vario	h: 73° x 37° v: 58° x 28°	B: 14.8 - 6.7 m H: 11.1 - 5 m	f = 4.5-10 mm	approx. 24-54 mm

Zoom Levels

Digital zoom, continuous up to 8.0x

Measurements

- VarioFlex mount in wall position: 140x189x222 mm (WxHxD)
- VarioFlex mount in ceiling position: 140x156x190 mm (WxHxD)

Weight

Approx. 738 g (incl. VarioFlex wall mount)

Model CSVario: Approx. 780 g (incl. VarioFlex wall mount)

Model Hemispheric: Approx. 748 g (incl. VarioFlex wall mount)

Interfaces

10/100Base T Ethernet (RJ45), USB master (for MX expansion modules), MxBus

Delivered Parts

Weatherproof housing (IP65) from fiber-reinforced plastic (PBT-GF30), metallic white, additional polycarbonate lens cover, manual, Allen wrench, VarioFlex wall/ceiling mount with concealed cabling for covering RJ45 wall outlets, patch cable 50 cm/20 in (with EMC sheath), stainless steel mounting supplies, 4 GB MicroSD card, installed camera software with integrated video management system

Sensors

Video motion detection, illumination, temperature, microphone

Video ring buffer

64 MB internal stream/image/event storage (e.g. approx. 4,000 images 320x240, good quality)

Internal DVR

MicroSD slot (up to 32 GB, about 1.2 million VGA images or 400,000 MEGA images, good quality)

External DVR

Via FTP on web server or on network computer (Windows/Linux/UNIX/Mac); direct image access, thus no FTP required (but possible)

Power Supply

Via network cabling (e.g. using Power-over-Ethernet standard 802.3af) or Netpower Set (with external power supply and Power Adapter) for one camera, Netpower Box for 4 or Netpower Rack for 8 or 20 cameras), Voltage: 24-48 V, power consumption approx. 3 to 4 Watts

Mounting

VarioFlex wall/ceiling mount with concealed cabling for covering RJ45 wall outlets

Certificates

VDE IP66, CE, EMV (EN55022, EN61000-2, FCC part15B, AS/NZ3548, BGVC9

Image Formats

JPEG, Motion JPEG, MxPEG, BMP, H.263+*, H.264*

*only when using SIP protocol

Operating Modes

IP Video Telephony

- Video over IP via SIP protocol
- H.263+
- H.264 with G711 audio codec, full duplex with echo cancellation and noise reduction

Simultaneous Browser Operating Modes

- HTML/JavaScript with M-JPEG
- Streaming (Server Push or Java)
- ActiveX (MxPEG)
- HTML pages optimized for PDA and pocket PCs

Operation and configuration using SIP IP video phone, MxControlCenter or MxEasy, advanced camera configuration via web browser, API for video management system of third-party vendors included

Functions

Web server, DHCP server, SIP server, Bonjour/Zeroconfig, SNMP, FTP client, e-mail client, live image, recorder/player, Multiview (simultaneous live image), storage and video search, also possible on external video ring buffer), softbuttons, network message (send, receive) for ext. management systems, integrated VoIP from/to browsers, SIP video telephony, video message box (T24 only), on-screen menu in the VoIP channel, alarm management (e-mail, phone call, network message), IP announcement, PDA web pages, logo generator, time- and event-controlled triggering of functions such as single image recording (max. 50 pre- and post-alarm images), video audio recording (30 fps VGA), video audio recording (event/scheduled), alarm triggering, audio announcements or switching operations, scheduled privacy zones, combining event logic, Master/Slave arming, user management with user groups and password protection, Supervisor mode (four-eyes principle), management of up to 1,000,000 alerts on each camera, no software installation required.

Camera Functions

Software-based, scalable backlight compensation, predefined and freely definable exposure windows, automatic white balance

Image Programs

Predefined camera settings for typical application scenarios:

- **Fast:** generates the highest image rates
- **Security Application:** for detecting movement in security applications
- **Quality:** default setting
- **High Quality:** generates images with the highest quality
- **Webcam:** delivers high image quality using the longest exposure times

Exposure Programs

Exposure programs -2, -1, 0, +1, +2 for adapting the exposure times to the current application scenario (clear images of moving objects or reduced image noise)

Image Amplification

Automatic control of minimum average image amplification at night and in situations with reduced illumination

Temperature Range

-30°C to +60°C (-22°F to 140°F)

Other Notes

- No moving parts (such as motors, auto iris or similar)
- No heating required for outdoor applications
- No fans required for outdoor applications
- Freely configurable status LEDs

Manufacturer

MOBOTIX

Type

MX-M24M-Sec-CSVario

Further Information

http://www.mobotix.com/eng_GB/Products/Cameras/Allround-M24

MOBOTIX M24M-Sec-Night-CSVario

Network Camera

Maintenance-free outdoor mono B/W CMOS network camera with CS Vario lens without moving parts for security applications

Image sensor

1.3 Megapixels, CMOS 1280x960, Black&White

Resolutions

Live image:

1280x960 (Mega), 1024x768 (XGA), 800x600 (SVGA), 768x576 (D1-PAL), 640x480 (VGA), 384x288 (D1-CIF), 320x240 (CIF), 160x120 (PDA), custom formats (e.g. 1000x400 pixels), with digital Zoom and pan/tilt

When Recording:

1280x960 (Mega), 1024x768 (XGA), 800x600 (SVGA), 768x576 (D1-PAL), 640x480 (VGA), 384x288 (D1-CIF), 320x240 (CIF), 160x120 (PDA), custom formats (e.g. 1000x400 pixels), either full image recording or recording of corrected image (VGA or smaller)

Max. Image Rates

VGA: 30 fps, TV-PAL: 30 fps, MEGA: 30 fps, (Fastmode, uncorrected image)

Light Sensitivity

0.1 Lux (t= 1/60 sec)/0.005 Lux (t= 1/1 sec)

Lens Options

Part Name	Angle (horizontal/vertical)	Image Size approx. in 10 m distance	Focal Length	In 35mm camera corresponds to
CS-Mount Vario	h: 73° x 37° v: 58° x 28°	B: 14.8 - 6.7 m H: 11.1 - 5 m	f = 4.5-10 mm	approx. 24-54 mm

Zoom Levels

Digital zoom, continuous up to 8.0x

Measurements

- VarioFlex mount in wall position: 140x189x222 mm (WxHxD)
- VarioFlex mount in ceiling position: 140x156x190 mm (WxHxD)

Weight

Approx. 738 g (incl. VarioFlex wall mount)

Model CSVario: Approx. 780 g (incl. VarioFlex wall mount)

Model Hemispheric: Approx. 748 g (incl. VarioFlex wall mount)

Interfaces

10/100Base T Ethernet (RJ45), USB master (for MX expansion modules), MxBus

Delivered Parts

Weatherproof housing (IP65) from fiber-reinforced plastic (PBT-GF30), metallic white, additional polycarbonate lens cover, manual, Allen wrench, VarioFlex wall/ceiling mount with concealed cabling for covering RJ45 wall outlets, patch cable 50 cm/20 in (with EMC sheath), stainless steel mounting supplies, 4 GB MicroSD card, installed camera software with integrated video management system

Sensors

Video motion detection, illumination, temperature, microphone

Video ring buffer

64 MB internal stream/image/event storage (e.g. approx. 4,000 images 320x240, good quality)

Internal DVR

MicroSD slot (up to 32 GB, about 1.2 million VGA images or 400,000 MEGA images, good quality)

External DVR

Via FTP on web server or on network computer (Windows/Linux/UNIX/Mac); direct image access, thus no FTP required (but possible)

Power Supply

Via network cabling (e.g. using Power-over-Ethernet standard 802.3af) or Netpower Set (with external power supply and Power Adapter) for one camera, Netpower Box for 4 or Netpower Rack for 8 or 20 cameras), Voltage: 24-48 V, power consumption approx. 3 to 4 Watts

Mounting

VarioFlex wall/ceiling mount with concealed cabling for covering RJ45 wall outlets

Certificates

VDE IP66, CE, EMV (EN55022, EN61000-2, FCC part15B, AS/NZ3548, BGVC9

Image Formats

JPEG, Motion JPEG, MxPEG, BMP, H.263+*, H.264*

*only when using SIP protocol

Operating Modes

IP Video Telephony

- Video over IP via SIP protocol
- H.263+
- H.264 with G711 audio codec, full duplex with echo cancellation and noise reduction

Simultaneous Browser Operating Modes

- HTML/JavaScript with M-JPEG
- Streaming (Server Push or Java)
- ActiveX (MxPEG)
- HTML pages optimized for PDA and pocket PCs

Operation and configuration using SIP IP video phone, MxControlCenter or MxEasy, advanced camera configuration via web browser, API for video management system of third-party vendors included

Functions

Web server, DHCP server, SIP server, Bonjour/Zeroconfig, SNMP, FTP client, e-mail client, live image, recorder/player, Multiview (simultaneous live image), storage and video search, also possible on external video ring buffer), softbuttons, network message (send, receive) for ext. management systems, integrated VoIP from/to browsers, SIP video telephony, video message box (T24 only), on-screen menu in the VoIP channel, alarm management (e-mail, phone call, network message), IP announcement, PDA web pages, logo generator, time- and event-controlled triggering of functions such as single image recording (max. 50 pre- and post-alarm images), video audio recording (30 fps VGA), video audio recording (event/scheduled), alarm triggering, audio announcements or switching operations, scheduled privacy zones, combining event logic, Master/Slave arming, user management with user groups and password protection, Supervisor mode (four-eyes principle), management of up to 1,000,000 alerts on each camera, no software installation required.

Camera Functions

Software-based, scalable backlight compensation, predefined and freely definable exposure windows, automatic white balance

Image Programs

Predefined camera settings for typical application scenarios:

- **Fast:** generates the highest image rates
- **Security Application:** for detecting movement in security applications



- **Quality:** default setting
- **High Quality:** generates images with the highest quality
- **Webcam:** delivers high image quality using the longest exposure times

Exposure Programs

Exposure programs -2, -1, 0, +1, +2 for adapting the exposure times to the current application scenario (clear images of moving objects or reduced image noise)

Image Amplification

Automatic control of minimum average image amplification at night and in situations with reduced illumination

Temperature Range

-30°C to +60°C (-22°F to 140°F)

Other Notes

- No moving parts (such as motors, auto iris or similar)
- No heating required for outdoor applications
- No fans required for outdoor applications
- Freely configurable status LEDs

Manufacturer

MOBOTIX

Type

MX-M24M-Sec-Night-CSVario

Further Information

http://www.mobotix.com/eng_GB/Products/Cameras/Allround-M24

MOBOTIX M24M-Sec-Hemispheric

Network Camera

Maintenance-free outdoor mono color CMOS network camera without moving parts for security applications

Image sensor

3.1 megapixels, CMOS 2048x1536, color

Resolutions

Live image:

2048x1536 (3 Mega), 1280x960 (Mega), 1024x768 (XGA), 800x600 (SVGA), 768x576 (D1-PAL), 640x480 (VGA), 384x288 (D1-CIF), 320x240 (CIF), 160x120 (PDA), custom formats (e.g. 1000x400 pixels), with digital Zoom and pan/tilt

When Recording:

2048x1536 (3 Mega), 1280x960 (Mega), 1024x768 (XGA), 800x600 (SVGA), 768x576 (D1-PAL), 640x480 (VGA), 384x288 (D1-CIF), 320x240 (CIF), 160x120 (PDA), custom formats (e.g. 1000x400 pixels), either full image recording or recording of corrected image (VGA or smaller)

Display Modes

Full image, Corrected, Surround, Panorama, Double Panorama, Panorama/Focus

Max. Image Rates

VGA: 30 fps, TV-PAL: 30 fps, MEGA: 30 fps, 3 Mega: 20 fps (Fastmode, uncorrected image)

Light Sensitivity

1 Lux (t= 1/60 sec)/0.05 Lux (t= 1/1 sec)

Lens Options

Part Name	Angle (horizontal/vertical)	Image Size approx. in 10 m distance	Focal Length	In 35mm camera corresponds to
L11 Hemispheric	180°x160°	--	f = 1.8 mm	about 11 mm

Zoom Levels

Digital zoom, continuous up to 8.0x

Measurements

- VarioFlex mount in wall position: 140x189x222 mm (WxHxD)
- VarioFlex mount in ceiling position: 140x156x190 mm (WxHxD)

Weight

Approx. 738 g (incl. VarioFlex wall mount)

Model CSVario: Approx. 780 g (incl. VarioFlex wall mount)

Model Hemispheric: Approx. 748 g (incl. VarioFlex wall mount)

Interfaces

10/100Base T Ethernet (RJ45), USB master (for MX expansion modules), MxBus

Delivered Parts

Weatherproof housing (IP65) from fiber-reinforced plastic (PBT-GF30), metallic white, additional polycarbonate lens cover, manual, Allen wrench, VarioFlex wall/ceiling mount with concealed cabling for covering RJ45 wall outlets, patch cable 50 cm/20 in (with EMC sheath), stainless steel mounting supplies, 4 GB MicroSD card, installed camera software with integrated video management system

Sensors

Video motion detection, illumination, temperature, microphone

Video ring buffer

64 MB internal stream/image/event storage (e.g. approx. 4,000 images 320x240, good quality)

Internal DVR

MicroSD slot (up to 32 GB, about 1.2 million VGA images or 400,000 MEGA images, good quality)

External DVR

Via FTP on web server or on network computer (Windows/Linux/UNIX/Mac); direct image access, thus no FTP required (but possible)

Power Supply

Via network cabling (e.g. using Power-over-Ethernet standard 802.3af) or Netpower Set (with external power supply and Power Adapter) for one camera, Netpower Box for 4 or Netpower Rack for 8 or 20 cameras), Voltage: 24-48 V, power consumption approx. 3 to 4 Watts

Mounting

VarioFlex wall/ceiling mount with concealed cabling for covering RJ45 wall outlets

Certificates

VDE IP66, CE, EMV (EN55022, EN61000-2, FCC part15B, AS/NZ3548, BGVC9

Image Formats

JPEG, Motion JPEG, MxPEG, BMP, H.263+*, H.264*

*only when using SIP protocol

Operating Modes

IP Video Telephony

- Video over IP via SIP protocol
- H.263+
- H.264 with G711 audio codec, full duplex with echo cancellation and noise reduction

Simultaneous Browser Operating Modes

- HTML/JavaScript with M-JPEG
- Streaming (Server Push or Java)
- ActiveX (MxPEG)
- HTML pages optimized for PDA and pocket PCs

Operation and configuration using SIP IP video phone, MxControlCenter or MxEasy, advanced camera configuration via web browser, API for video management system of third-party vendors included

Functions

Web server, DHCP server, SIP server, Bonjour/Zeroconfig, SNMP, FTP client, e-mail client, live image, recorder/player, Multiview (simultaneous live image), storage and video search, also possible on external video ring buffer), softbuttons, network message (send, receive) for ext. management systems, integrated VoIP from/to browsers, SIP video telephony, video message box (T24 only), on-screen menu in the VoIP channel, alarm management (e-mail, phone call, network message), IP announcement, PDA web pages, logo generator, time- and event-controlled triggering of functions such as single image recording (max. 50 pre- and post-alarm images), video audio recording (30 fps VGA), video audio recording (event/scheduled), alarm triggering, audio announcements or switching operations, scheduled privacy zones, combining event logic, Master/Slave arming, user management with user groups and password protection, Supervisor mode (four-eyes principle), management of up to 1,000,000 alerts on each camera, no software installation required.

Camera Functions

Software-based, scalable backlight compensation, predefined and freely definable exposure windows, automatic white balance

Image Programs

Predefined camera settings for typical application scenarios:

- **Fast:** generates the highest image rates
- **Security Application:** for detecting movement in security applications
- **Quality:** default setting
- **High Quality:** generates images with the highest quality
- **Webcam:** delivers high image quality using the longest exposure times

Exposure Programs

Exposure programs -2, -1, 0, +1, +2 for adapting the exposure times to the current application scenario (clear images of moving objects or reduced image noise)

Image Amplification

Automatic control of minimum average image amplification at night and in situations with reduced illumination

Temperature Range

-30°C to +60°C (-22°F to 140°F)

Other Notes

- No moving parts (such as motors, auto iris or similar)
- No heating required for outdoor applications
- No fans required for outdoor applications
- Freely configurable status LEDs

Manufacturer

MOBOTIX

Type

MX-M24M-Sec-Hemispheric

Further Information

http://www.mobotix.com/eng_GB/Products/Cameras/Allround-M24

MOBOTIX M12D-Sec

Network Camera

Maintenance-free outdoor dual color CMOS network camera without moving parts for security applications

Image Sensors

2 x 3.1 megapixels, CMOS 2048x1536, color

Resolutions

Live image and recording:

2048x1536 (3 Mega), 2560x960 (Mega dual image), 1280x960 (Mega), 1024x768 (XGA), 800x600 (SVGA), 768x576 (D1-PAL), 640x480 (VGA), 384x288 (D1-CIF), 320x240 (CIF), 160x120 (PDA), custom formats (e.g. 1000x400 pixels), with digital Zoom and pan/tilt

Max. Image Rates

3 Mega: 10 fps, Mega: 14 fps, XGA, SVGA, D1-PAL: 24 fps, VGA, D1-CIF, CIF, PDA: 30 fps

Light Sensitivity

1 Lux (t= 1/60 sec)/0.05 Lux (t= 1/1 sec)

Lens Options

Part Name	Angle (horizontal/vertical)	Image Size approx. in 10 m distance	Focal Length	In 35mm camera corresponds to
L22 Super Wide-Angle	90° x 67°	20.0 m x 13.3 m	f = 4 mm	about 22 mm
L43 Wide-Angle	45° x 34°	8.2 m x 6.1 m	f = 8 mm	about 43 mm
L135 Tele	15° x 11°	2.6 m x 1.9 m	f = 25 mm	about 135 mm

Zoom Levels

Digital zoom, continuous up to 8.0x

Measurements

- SecureFlex mount in wall position: 143x176x230 mm (WxHxD)
- SecureFlex mount in ceiling position: 143x214x220 mm (WxHxD)

Weight

Approx. 850 g (incl. SecureFlex wall mount)

Interfaces

10/100Base T Ethernet (RJ45), ISDN S0 bus and USB master (for MX extensions) on D Sub 15 HD connector

Delivered Parts

Weatherproof housing (IP65) from fiber-reinforced plastic (PBT-GF30), metallic white, manual, Allen wrench, SecureFlex wall/ceiling mount with concealed cabling, patch cable 50 cm/20 in (with EMC sheath), mounting materials, installed camera software with integrated video management system

Sensors

Video motion detector (VM) and microphone

Video ring buffer

64 MB internal stream/image/event storage (e.g. approx. 4,000 images 320x240, good quality)

Internal DVR

SD slot (max. 32 GB, approx. 1.2 million VGA images or 400,000 MEGA images, good quality)

External DVR

Via FTP on web server or on network computer (Windows/Linux/UNIX/Mac); direct image access, thus no FTP required (but possible)

Power Supply

Via network cabling (e.g. using Power-over-Ethernet standard 802.3af) or Netpower Set (with external power supply and Power Adapter) for one camera, Netpower Box for 4 or Netpower Rack for 8 or 20 cameras), Voltage: 24-48 V, backup power supply ≥ 12 V, power consumption approx. 3 to 4 Watts

Mounting

SecureFlex wall/ceiling mount with concealed cabling

Certificates

VDE IP65, CE, FTEG/R&TTE (EMC), BGV C9 with lens combination D43/D135

Image Formats

JPEG, Motion JPEG, MxPEG, BMP, H.263+*, H.264*

*only when using SIP protocol

Operating Modes

IP Video Telephony

- Video over IP via SIP protocol
- H.263+
- H.264 with G711 audio codec, full duplex with echo cancellation and noise reduction

Simultaneous Browser Operating Modes

- HTML/JavaScript with M-JPEG
- Streaming (Server Push or Java)
- ActiveX (MxPEG)
- HTML pages optimized for PDA and pocket PCs

Operation and configuration using SIP IP video phone, MxControlCenter or MxEasy, advanced camera configuration via web browser, API for video management system of third-party vendors included

Functions

Web server, DHCP server, SIP server, Bonjour/Zeroconfig, SNMP, FTP client, e-mail client, live image, recorder/player, Multiview (simultaneous live image), storage and video search, also possible on external video ring buffer), softbuttons, network message (send, receive) for ext. management systems, integrated VoIP from/to browsers, SIP video telephony, video message box (T24 only), on-screen menu in the VoIP channel, alarm management (e-mail, phone call, network message), IP announcement, PDA web pages, logo generator, time- and event-controlled triggering of functions such as single image recording (max. 50 pre- and post-alarm images), video audio recording (30 fps VGA), video audio recording (event/scheduled), alarm triggering, audio announcements or switching operations, scheduled privacy zones, combining event logic, Master/Slave arming, user management with user groups and password protection, Supervisor mode (four-eyes principle), management of up to 1,000,000 alerts on each camera, no software installation required.

Camera Functions

Software-based, scalable backlight compensation, predefined and freely definable exposure windows, automatic white balance

Image Programs

Predefined camera settings for typical application scenarios:

- **Fast:** generates the highest image rates
- **Security Application:** for detecting movement in security applications
- **Quality:** default setting
- **High Quality:** generates images with the highest quality
- **Webcam:** delivers high image quality using the longest exposure times

Exposure Programs

Exposure programs -2, -1, 0, +1, +2 for adapting the exposure times to the current application scenario (clear images of moving objects or reduced image noise)

Image Amplification

Automatic control of minimum average image amplification at night and in situations with reduced illumination

Temperature Range

-30°C to +60°C (-22°F to 140°F)

Other Notes

- No moving parts (such as motors, auto iris or similar)
- No heating required for outdoor applications
- No fans required for outdoor applications
- Freely configurable status LEDs

Manufacturer

MOBOTIX

Type

MX-M12D-Sec

Further Information

http://www.mobotix.com/eng_GB/Products/Cameras/DualNight-M12

MOBOTIX M12D-Sec-DNight

Network Camera

Maintenance-free outdoor dual color/Black&White CMOS network camera without moving parts for security applications

Image Sensors

- 3.1 megapixels, CMOS 2048x1536 color
- 1.3 Megapixels, CMOS 1280x960, Black&White (infrared-sensitive)

Resolutions

Live image and recording:

2048x1536 (3 Mega), 1280x960 (Mega), 1024x768 (XGA), 800x600 (SVGA), 768x576 (D1-PAL), 640x480 (VGA), 384x288 (D1-CIF), 320x240 (CIF), 160x120 (PDA), custom formats (e.g. 1000x400 pixels), with digital Zoom and pan/tilt

Max. Image Rates

3 Mega: 10 fps, Mega: 14 fps, XGA, SVGA, D1-PAL: 24 fps, VGA, D1-CIF, CIF, PDA: 30 fps

Light Sensitivity

- Color sensor: 1 Lux (t= 1/60 sec)/0.05 Lux (t= 1/1 sec),
- Black&White sensor: 0.1 Lux (t= 1/60 sec)/0.005 Lux (t= 1/1 sec)

Lens Options

Part Name	Angle (horizontal/vertical)	Image Size approx. in 10 m distance	Focal Length	In 35mm camera corresponds to
L22 Super Wide-Angle	90° x 67°	20.0 m x 13.3 m	f = 4 mm	about 22 mm
L43 Wide-Angle	45° x 34°	8.2 m x 6.1 m	f = 8 mm	about 43 mm
L135 Tele	15° x 11°	2.6 m x 1.9 m	f = 25 mm	about 135 mm

Zoom Levels

Digital zoom, continuous up to 8.0x

Measurements

- SecureFlex mount in wall position: 143x176x230 mm (WxHxD)
- SecureFlex mount in ceiling position: 143x214x220 mm (WxHxD)

Weight

Approx. 850 g (incl. SecureFlex wall mount)

Interfaces

10/100Base T Ethernet (RJ45), ISDN S0 bus and USB master (for MX extensions) on D Sub 15 HD connector

Delivered Parts

Weatherproof housing (IP65) from fiber-reinforced plastic (PBT-GF30), metallic white, manual, Allen wrench, SecureFlex wall/ceiling mount with concealed cabling, patch cable 50 cm/20 in (with EMC sheath), mounting materials, installed camera software with integrated video management system

Sensors

Video motion detector (VM) and microphone

Video ring buffer

64 MB internal stream/image/event storage (e.g. approx. 4,000 images 320x240, good quality)

Internal DVR

SD slot (max. 32 GB, approx. 1.2 million VGA images or 400,000 MEGA images, good quality)

External DVR

Via FTP on web server or on network computer (Windows/Linux/UNIX/Mac); direct image access, thus no FTP required (but possible)

Power Supply

Via network cabling (e.g. using Power-over-Ethernet standard 802.3af) or Netpower Set (with external power supply and Power Adapter) for one camera, Netpower Box for 4 or Netpower Rack for 8 or 20 cameras), Voltage: 24-48 V, backup power supply \geq 12 V, power consumption approx. 3 to 4 Watts

Mounting

SecureFlex wall/ceiling mount with concealed cabling

Certificates

VDE IP65, CE, FTEG/R&TTE (EMC), BGV C9 with lens combination D43/D135

Image Formats

JPEG, Motion JPEG, MxPEG, BMP, H.263+*, H.264*

*only when using SIP protocol

Operating Modes

IP Video Telephony

- Video over IP via SIP protocol
- H.263+
- H.264 with G711 audio codec, full duplex with echo cancellation and noise reduction

Simultaneous Browser Operating Modes

- HTML/JavaScript with M-JPEG
- Streaming (Server Push or Java)
- ActiveX (MxPEG)
- HTML pages optimized for PDA and pocket PCs

Operation and configuration using SIP IP video phone, MxControlCenter or MxEasy, advanced camera configuration via web browser, API for video management system of third-party vendors included

Functions

Web server, DHCP server, SIP server, Bonjour/Zeroconfig, SNMP, FTP client, e-mail client, live image, recorder/player, Multiview (simultaneous live image), storage and video search, also possible on external video ring buffer), softbuttons, network message (send, receive) for ext. management systems, integrated VoIP from/to browsers, SIP video telephony, video message box (T24 only), on-screen menu in the VoIP channel, alarm management (e-mail, phone call, network message), IP announcement, PDA web pages, logo generator, time- and event-controlled triggering of functions such as single image recording (max. 50 pre- and post-alarm images), video audio recording (30 fps VGA), video audio recording (event/scheduled), alarm triggering, audio announcements or switching operations, scheduled privacy zones, combining event logic, Master/Slave arming, user management with user groups and password protection, Supervisor mode (four-eyes principle), management of up to 1,000,000 alerts on each camera, no software installation required.

Camera Functions

Software-based, scalable backlight compensation, predefined and freely definable exposure windows, automatic white balance

Image Programs

Predefined camera settings for typical application scenarios:

- **Fast:** generates the highest image rates
- **Security Application:** for detecting movement in security applications
- **Quality:** default setting
- **High Quality:** generates images with the highest quality
- **Webcam:** delivers high image quality using the longest exposure times

Exposure Programs

Exposure programs -2, -1, 0, +1, +2 for adapting the exposure times to the current application scenario (clear images of moving objects or reduced image noise)

Image Amplification

Automatic control of minimum average image amplification at night and in situations with reduced illumination

Temperature Range

-30°C to +60°C (-22°F to 140°F)

Other Notes

- No moving parts (such as motors, auto iris or similar)
- No heating required for outdoor applications
- No fans required for outdoor applications
- Freely configurable status LEDs

Manufacturer

MOBOTIX

Type

MX-M12D-Sec-DNight

Further Information

http://www.mobotix.com/eng_GB/Products/Cameras/DualNight-M12

MOBOTIX D24M-Sec

Network Camera

Maintenance-free outdoor mono color CMOS network camera without moving parts for security applications

Image sensor

3.1 megapixels, CMOS 2048x1536, color

Resolutions

Live image and recording:

2048x1536 (3 Mega), 1280x960 (Mega), 1024x768 (XGA), 800x600 (SVGA), 768x576 (D1-PAL), 640x480 (VGA), 384x288 (D1-CIF), 320x240 (CIF), 160x120 (PDA), custom formats (e.g. 1000x400 pixels), with digital Zoom and pan/tilt

Max. Image Rates

VGA: 30 fps, TV-PAL: 30 fps, MEGA: 30 fps, 3 Mega: 20 fps (Fastmode, uncorrected image)

Light Sensitivity

1 Lux (t= 1/60 sec)/0.05 Lux (t= 1/1 sec)

Lens Options

Part Name	Angle (horizontal/vertical)	Image Size approx. in 10 m distance	Focal Length	In 35mm camera corresponds to
L22 Super Wide-Angle	90° x 67°	20.0 m x 13.3 m	f = 4 mm	about 22 mm
L32 Wide-Angle	60° x 45°	11.5 m x 8.2 m	f = 6 mm	about 32 mm
L43 Wide-Angle	45° x 34°	8.2 m x 6.1 m	f = 8 mm	about 43 mm
L65 Tele	31° x 23°	5.5 m x 4.0 m	f = 12 mm	about 65 mm
L135 Tele	15° x 11°	2.6 m x 1.9 m	f = 25 mm	about 135 mm

Zoom Levels

Digital zoom, continuous up to 8.0x

Measurements

- Without mounting options: height 85 mm, 160 mm diameter
- With optional In-Ceiling set: cut-out diameter 150 mm, height 63 mm, outside diameter of decoration ring 170 mm
- With optional On-Wall set: height 124 mm, outside diameter 165 mm
- With optional Outdoor Wall mount: 216x204x202 mm (WxHxD)

Weight

Approx. 350 g excluding mounting options

Interfaces

10/100Base T Ethernet (RJ45), USB master (for MX expansion modules), MxBus

Delivered Parts

Weatherproof housing (IP65) from fiber-reinforced plastic (PBT-GF30), metallic white, manual, Allen wrench, patch cable 50 cm/20 in (with EMC sheath), mounting materials, 4 GB MicroSD card, installed camera software with integrated video management system

Sensors

Video motion detector (VM) and microphone

Video ring buffer

64 MB internal stream/image/event storage (e.g. approx. 4,000 images 320x240, good quality)

Internal DVR

MicroSD slot (up to 32 GB, about 1.2 million VGA images or 400,000 MEGA images, good quality)

External DVR

Via FTP on web server or on network computer (Windows/Linux/UNIX/Mac); direct image access, thus no FTP required (but possible)

Power Supply

Via network cabling (e.g. using Power-over-Ethernet standard 802.3af) or Netpower Set (with external power supply and Power Adapter) for one camera, Netpower Box for 4 or Netpower Rack for 8 or 20 cameras), Voltage: 24-48 V, power consumption approx. 3 to 4 Watts

Mounting

- To walls or ceilings without additional mounting options possible
- With optional In-Ceiling set for discreet installations in indoor applications
- With optional On-Wall set (with 0 or 10 degrees inclination) for discreet installations in indoor applications
- In outdoor settings only with optional Outdoor Wall mount (required for IP65)

Certificates

VDE IP66, CE, EMV (EN55022, EN61000-2, FCC part15B, AS/NZ3548, BGVC9

Image Formats

JPEG, Motion JPEG, MxPEG, BMP, H.263+*, H.264*

*only when using SIP protocol

Operating Modes

IP Video Telephony

- Video over IP via SIP protocol
- H.263+
- H.264 with G711 audio codec, full duplex with echo cancellation and noise reduction

Simultaneous Browser Operating Modes

- HTML/JavaScript with M-JPEG
- Streaming (Server Push or Java)
- ActiveX (MxPEG)
- HTML pages optimized for PDA and pocket PCs

Operation and configuration using SIP IP video phone, MxControlCenter or MxEasy, advanced camera configuration via web browser, API for video management system of third-party vendors included

Functions

Web server, DHCP server, SIP server, Bonjour/Zeroconfig, SNMP, FTP client, e-mail client, live image, recorder/player, Multiview (simultaneous live image), storage and video search, also possible on external video ring buffer), softbuttons, network message (send, receive) for ext. management systems, integrated VoIP from/to browsers, SIP video telephony, video message box (T24 only), on-screen menu in the VoIP channel, alarm management (e-mail, phone call, network message), IP announcement, PDA web pages, logo generator, time- and event-controlled triggering of functions such as single image recording (max. 50 pre- and post-alarm images), video audio recording (30 fps VGA), video audio recording (event/scheduled), alarm triggering, audio announcements or switching operations, scheduled privacy zones, combining event logic, Master/Slave arming, user management with user groups and password protection, Supervisor mode (four-eyes principle), management of up to 1,000,000 alerts on each camera, no software installation required.

Camera Functions

Software-based, scalable backlight compensation, predefined and freely definable exposure windows, automatic white balance



Image Programs

Predefined camera settings for typical application scenarios:

- **Fast:** generates the highest image rates
- **Security Application:** for detecting movement in security applications
- **Quality:** default setting
- **High Quality:** generates images with the highest quality
- **Webcam:** delivers high image quality using the longest exposure times

Exposure Programs

Exposure programs -2, -1, 0, +1, +2 for adapting the exposure times to the current application scenario (clear images of moving objects or reduced image noise)

Image Amplification

Automatic control of minimum average image amplification at night and in situations with reduced illumination

Temperature Range

-30°C to +60°C (-22°F to 140°F)

Other Notes

- No moving parts (such as motors, auto iris or similar)
- No heating required for outdoor applications
- No fans required for outdoor applications
- Freely configurable status LEDs

Manufacturer

MOBOTIX

Type

MX-D24M-Sec

Further Information

http://www.mobotix.com/eng_GB/Products/Cameras/MonoDome-D24

MOBOTIX D24M-Sec-Night

Network Camera

Maintenance-free outdoor mono Black&White CMOS network camera without moving parts for security applications

Image sensor

1.3 Megapixels, CMOS 1280x960, Black&White

Resolutions

Live image and recording:

1280x960 (Mega), 1024x768 (XGA), 800x600 (SVGA), 768x576 (D1-PAL), 640x480 (VGA), 384x288 (D1-CIF), 320x240 (CIF), 160x120 (PDA), custom formats (e.g. 1000x400 pixels), with digital Zoom and pan/tilt

Max. Image Rates

Mega: 14 fps, XGA, SVGA, D1-PAL: 24 fps, VGA, D1-CIF, CIF, PDA: 30 fps

Light Sensitivity

0.1 Lux (t= 1/60 sec)/0.005 Lux (t= 1/1 sec)

Lens Options

Part Name	Angle (horizontal/vertical)	Image Size approx. in 10 m distance	Focal Length	In 35mm camera corresponds to
L22 Super Wide-Angle	90° x 67°	20.0 m x 13.3 m	f = 4 mm	about 22 mm
L32 Wide-Angle	60° x 45°	11.5 m x 8.2 m	f = 6 mm	about 32 mm
L43 Wide-Angle	45° x 34°	8.2 m x 6.1 m	f = 8 mm	about 43 mm
L65 Tele	31° x 23°	5.5 m x 4.0 m	f = 12 mm	about 65 mm
L135 Tele	15° x 11°	2.6 m x 1.9 m	f = 25 mm	about 135 mm

Zoom Levels

Digital zoom, continuous up to 8.0x

Measurements

- Without mounting options: height 85 mm, 160 mm diameter
- With optional In-Ceiling set: cut-out diameter 150 mm, height 63 mm, outside diameter of decoration ring 170 mm
- With optional On-Wall set: height 124 mm, outside diameter 165 mm
- With optional Outdoor Wall mount: 216x204x202 mm (WxHxD)

Weight

Approx. 350 g excluding mounting options

Interfaces

10/100Base T Ethernet (RJ45), USB master (for MX expansion modules), MxBus

Delivered Parts

Weatherproof housing (IP65) from fiber-reinforced plastic (PBT-GF30), metallic white, manual, Allen wrench, patch cable 50 cm/20 in (with EMC sheath), mounting materials, 4 GB MicroSD card, installed camera software with integrated video management system

Sensors

Video motion detector (VM) and microphone

Video ring buffer

64 MB internal stream/image/event storage (e.g. approx. 4,000 images 320x240, good quality)

Internal DVR

MicroSD slot (up to 32 GB, about 1.2 million VGA images or 400,000 MEGA images, good quality)

External DVR

Via FTP on web server or on network computer (Windows/Linux/UNIX/Mac); direct image access, thus no FTP required (but possible)

Power Supply

Via network cabling (e.g. using Power-over-Ethernet standard 802.3af) or Netpower Set (with external power supply and Power Adapter) for one camera, Netpower Box for 4 or Netpower Rack for 8 or 20 cameras), Voltage: 24-48 V, power consumption approx. 3 to 4 Watts

Mounting

- To walls or ceilings without additional mounting options possible
- With optional In-Ceiling set for discreet installations in indoor applications
- With optional On-Wall set (with 0 or 10 degrees inclination) for discreet installations in indoor applications
- In outdoor settings only with optional Outdoor Wall mount (required for IP65)

Certificates

VDE IP66, CE, EMV (EN55022, EN61000-2, FCC part15B, AS/NZ3548, BGVC9

Image Formats

JPEG, Motion JPEG, MxPEG, BMP, H.263+*, H.264*

*only when using SIP protocol

Operating Modes

IP Video Telephony

- Video over IP via SIP protocol
- H.263+
- H.264 with G711 audio codec, full duplex with echo cancellation and noise reduction

Simultaneous Browser Operating Modes

- HTML/JavaScript with M-JPEG
- Streaming (Server Push or Java)
- ActiveX (MxPEG)
- HTML pages optimized for PDA and pocket PCs

Operation and configuration using SIP IP video phone, MxControlCenter or MxEasy, advanced camera configuration via web browser, API for video management system of third-party vendors included

Functions

Web server, DHCP server, SIP server, Bonjour/Zeroconfig, SNMP, FTP client, e-mail client, live image, recorder/player, Multiview (simultaneous live image), storage and video search, also possible on external video ring buffer), softbuttons, network message (send, receive) for ext. management systems, integrated VoIP from/to browsers, SIP video telephony, video message box (T24 only), on-screen menu in the VoIP channel, alarm management (e-mail, phone call, network message), IP announcement, PDA web pages, logo generator, time- and event-controlled triggering of functions such as single image recording (max. 50 pre- and post-alarm images), video audio recording (30 fps VGA), video audio recording (event/scheduled), alarm triggering, audio announcements or switching operations, scheduled privacy zones, combining event logic, Master/Slave arming, user management with user groups and password protection, Supervisor mode (four-eyes principle), management of up to 1,000,000 alerts on each camera, no software installation required.

Camera Functions

Software-based, scalable backlight compensation, predefined and freely definable exposure windows, automatic white balance

Image Programs

Predefined camera settings for typical application scenarios:

- **Fast:** generates the highest image rates
- **Security Application:** for detecting movement in security applications
- **Quality:** default setting
- **High Quality:** generates images with the highest quality
- **Webcam:** delivers high image quality using the longest exposure times

Exposure Programs

Exposure programs -2, -1, 0, +1, +2 for adapting the exposure times to the current application scenario (clear images of moving objects or reduced image noise)

Image Amplification

Automatic control of minimum average image amplification at night and in situations with reduced illumination

Temperature Range

-30°C to +60°C (-22°F to 140°F)

Other Notes

- No moving parts (such as motors, auto iris or similar)
- No heating required for outdoor applications
- No fans required for outdoor applications
- Freely configurable status LEDs

Manufacturer

MOBOTIX

Type

MX-D24M-Sec-Night

Further Information

http://www.mobotix.com/eng_GB/Products/Cameras/MonoDome-D24

MOBOTIX D12Di-IT

Network Camera

Maintenance-free indoor dual color CMOS network camera without moving parts for security applications

Image Sensors

2 x 3.1 megapixels, CMOS 2048x1536, color

Resolutions

Live image and recording:

640x480 (VGA), 384x288 (D1-CIF), 320x240 (CIF), 160x120 (PDA), custom formats (e.g. 600x200 pixels), with digital Zoom and pan/tilt

Max. Image Rates

VGA, D1-CIF, CIF, PDA: 30 fps

Light Sensitivity

1 Lux (t= 1/60 sec)/0.05 Lux (t= 1/1 sec)

Lens Options

Part Name	Angle (horizontal/vertical)	Image Size approx. in 10 m distance	Focal Length	In 35mm camera corresponds to
L22 Super Wide-Angle	90° x 67°	20.0 m x 13.3 m	f = 4 mm	about 22 mm
L32 Wide-Angle	60° x 45°	11.5 m x 8.2 m	f = 6 mm	about 32 mm
L43 Wide-Angle	45° x 34°	8.2 m x 6.1 m	f = 8 mm	about 43 mm
L65 Tele	31° x 23°	5.5 m x 4.0 m	f = 12 mm	about 65 mm
L135 Tele	15° x 11°	2.6 m x 1.9 m	f = 25 mm	about 135 mm

Zoom Levels

Digital zoom, continuous up to 8.0x

Measurements

201 mm diameter, height 106 mm

Weight

Approx. 650 g excluding mounting options

Interfaces

10/100Base T Ethernet (RJ45), ISDN S0 bus and USB master (for MX extensions) on D Sub 15 HD connector

Delivered Parts

Weatherproof housing (IP65) from fiber-reinforced plastic (PBT-GF30), metallic white, additional lens cover, manual, Allen wrench, SecureFlex wall/ceiling mount with concealed cabling, patch cable 50 cm/20 in (with EMC sheath), mounting materials, installed camera software with integrated video management system

Sensors

Video motion detector (VM) and microphone

Video ring buffer

64 MB internal stream/image/event storage (e.g. approx. 4,000 images 320x240, good quality)

Internal DVR

SD slot (max. 32 GB, approx. 1.2 million VGA images or 400,000 MEGA images, good quality)

External DVR

Via FTP on web server or on network computer (Windows/Linux/UNIX/Mac); direct image access, thus no FTP required (but possible)

Power Supply

Via network cabling (e.g. using Power-over-Ethernet standard 802.3af) or Netpower Set (with external power supply and Power Adapter) for one camera, Netpower Box for 4 or Netpower Rack for 8 or 20 cameras), Voltage: 24-48 V, backup power supply ≥ 12 V, power consumption approx. 3 to 4 Watts

Mounting

- To walls or ceilings
- Directly on top of wall outlets
- In outdoor settings with optional Outdoor Wall mount

Certificates

VDE IP54(IP65 with Outdoor Wall mount), CE, FTEG/R&TTE (EMV)

Image Formats

JPEG, Motion JPEG, MxPEG, BMP, H.263+*, H.264*

*only when using SIP protocol

Operating Modes

IP Video Telephony

- Video over IP via SIP protocol
- H.263+
- H.264 with G711 audio codec, full duplex with echo cancellation and noise reduction

Simultaneous Browser Operating Modes

- HTML/JavaScript with M-JPEG
- Streaming (Server Push or Java)
- ActiveX (MxPEG)
- HTML pages optimized for PDA and pocket PCs

Operation and configuration using SIP IP video phone, MxControlCenter or MxEasy, advanced camera configuration via web browser, API for video management system of third-party vendors included

Functions

Web server, DHCP server, SIP server, Bonjour/Zeroconfig, SNMP, FTP client, e-mail client, live image, recorder/player, Multiview (simultaneous live image), storage and video search, also possible on external video ring buffer), softbuttons, network message (send, receive) for ext. management systems, integrated VoIP from/to browsers, SIP video telephony, video message box (T24 only), on-screen menu in the VoIP channel, alarm management (e-mail, phone call, network message), IP announcement, PDA web pages, logo generator, time- and event-controlled triggering of functions such as single image recording (max. 50 pre- and post-alarm images), video audio recording (30 fps VGA), video audio recording (event/scheduled), alarm triggering, audio announcements or switching operations, scheduled privacy zones, combining event logic, Master/Slave arming, user management with user groups and password protection, Supervisor mode (four-eyes principle), management of up to 1,000,000 alerts on each camera, no software installation required.

Camera Functions

Software-based, scalable backlight compensation, predefined and freely definable exposure windows, automatic white balance

Image Programs

Predefined camera settings for typical application scenarios:

- **Fast:** generates the highest image rates
- **Security Application:** for detecting movement in security applications
- **Quality:** default setting
- **High Quality:** generates images with the highest quality
- **Webcam:** delivers high image quality using the longest exposure times

Exposure Programs

Exposure programs -2, -1, 0, +1, +2 for adapting the exposure times to the current application scenario (clear images of moving objects or reduced image noise)

Image Amplification

Automatic control of minimum average image amplification at night and in situations with reduced illumination

Temperature Range

-30°C to +60°C (-22°F to 140°F)

Other Notes

- No moving parts (such as motors, auto iris or similar)
- No heating required for outdoor applications
- No fans required for outdoor applications
- Freely configurable status LEDs

Manufacturer

MOBOTIX

Type

MX-D12D-IT

Further Information

http://www.mobotix.com/eng_GB/Products/Cameras/DualDome-D12

MOBOTIX D12Di-Sec

Network Camera

Maintenance-free indoor dual color CMOS network camera without moving parts for security applications

Image Sensors

2 x 3.1 megapixels, CMOS 2048x1536, color

Resolutions

Live image and recording:

2048x1536 (3 Mega), 2560x960 (Mega dual image), 1280x960 (Mega), 1024x768 (XGA), 800x600 (SVGA), 768x576 (D1-PAL), 640x480 (VGA), 384x288 (D1-CIF), 320x240 (CIF), 160x120 (PDA), custom formats (e.g. 1000x400 pixels), with digital Zoom and pan/tilt

Max. Image Rates

3 Mega: 10 fps, Mega: 14 fps, XGA, SVGA, D1-PAL: 24 fps, VGA, D1-CIF, CIF, PDA: 30 fps

Light Sensitivity

1 Lux (t= 1/60 sec)/0.05 Lux (t= 1/1 sec)

Lens Options

Part Name	Angle (horizontal/vertical)	Image Size approx. in 10 m distance	Focal Length	In 35mm camera corresponds to
L22 Super Wide-Angle	90° x 67°	20.0 m x 13.3 m	f = 4 mm	about 22 mm
L32 Wide-Angle	60° x 45°	11.5 m x 8.2 m	f = 6 mm	about 32 mm
L43 Wide-Angle	45° x 34°	8.2 m x 6.1 m	f = 8 mm	about 43 mm
L65 Tele	31° x 23°	5.5 m x 4.0 m	f = 12 mm	about 65 mm
L135 Tele	15° x 11°	2.6 m x 1.9 m	f = 25 mm	about 135 mm

Zoom Levels

Digital zoom, continuous up to 8.0x

Measurements

201 mm diameter, height 106 mm

Weight

Approx. 650 g excluding mounting options

Interfaces

10/100Base T Ethernet (RJ45), ISDN S0 bus and USB master (for MX extensions) on D Sub 15 HD connector

Delivered Parts

Weatherproof housing (IP65) from fiber-reinforced plastic (PBT-GF30), metallic white, additional lens cover, manual, Allen wrench, SecureFlex wall/ceiling mount with concealed cabling, patch cable 50 cm/20 in (with EMC sheath), mounting materials, installed camera software with integrated video management system

Sensors

Video motion detector (VM) and microphone

Video ring buffer

64 MB internal stream/image/event storage (e.g. approx. 4,000 images 320x240, good quality)

Internal DVR

SD slot (max. 32 GB, approx. 1.2 million VGA images or 400,000 MEGA images, good quality)

External DVR

Via FTP on web server or on network computer (Windows/Linux/UNIX/Mac); direct image access, thus no FTP

required (but possible)

Power Supply

Via network cabling (e.g. using Power-over-Ethernet standard 802.3af) or Netpower Set (with external power supply and Power Adapter) for one camera, Netpower Box for 4 or Netpower Rack for 8 or 20 cameras), Voltage: 24-48 V, backup power supply ≥ 12 V, power consumption approx. 3 to 4 Watts

Mounting

- To walls or ceilings
- Directly on top of wall outlets
- In outdoor settings with optional Outdoor Wall mount

Certificates

VDE IP54(IP65 with Outdoor Wall mount), CE, FTEG/R&TTE (EMV)

Image Formats

JPEG, Motion JPEG, MxPEG, BMP, H.263+*, H.264*

*only when using SIP protocol

Operating Modes

IP Video Telephony

- Video over IP via SIP protocol
- H.263+
- H.264 with G711 audio codec, full duplex with echo cancellation and noise reduction

Simultaneous Browser Operating Modes

- HTML/JavaScript with M-JPEG
- Streaming (Server Push or Java)
- ActiveX (MxPEG)
- HTML pages optimized for PDA and pocket PCs

Operation and configuration using SIP IP video phone, MxControlCenter or MxEasy, advanced camera configuration via web browser, API for video management system of third-party vendors included

Functions

Web server, DHCP server, SIP server, Bonjour/Zeroconfig, SNMP, FTP client, e-mail client, live image, recorder/player, Multiview (simultaneous live image), storage and video search, also possible on external video ring buffer), softbuttons, network message (send, receive) for ext. management systems, integrated VoIP from/to browsers, SIP video telephony, video message box (T24 only), on-screen menu in the VoIP channel, alarm management (e-mail, phone call, network message), IP announcement, PDA web pages, logo generator, time- and event-controlled triggering of functions such as single image recording (max. 50 pre- and post-alarm images), video audio recording (30 fps VGA), video audio recording (event/scheduled), alarm triggering, audio announcements or switching operations, scheduled privacy zones, combining event logic, Master/Slave arming, user management with user groups and password protection, Supervisor mode (four-eyes principle), management of up to 1,000,000 alerts on each camera, no software installation required.

Camera Functions

Software-based, scalable backlight compensation, predefined and freely definable exposure windows, automatic white balance

Image Programs

Predefined camera settings for typical application scenarios:

- **Fast:** generates the highest image rates
- **Security Application:** for detecting movement in security applications
- **Quality:** default setting
- **High Quality:** generates images with the highest quality
- **Webcam:** delivers high image quality using the longest exposure times



Exposure Programs

Exposure programs -2, -1, 0, +1, +2 for adapting the exposure times to the current application scenario (clear images of moving objects or reduced image noise)

Image Amplification

Automatic control of minimum average image amplification at night and in situations with reduced illumination

Temperature Range

-30°C to +60°C (-22°F to 140°F)

Other Notes

- No moving parts (such as motors, auto iris or similar)
- No heating required for outdoor applications
- No fans required for outdoor applications
- Freely configurable status LEDs

Manufacturer

MOBOTIX

Type

MX-D12D-Sec

Further Information

http://www.mobotix.com/eng_GB/Products/Cameras/DualDome-D12

MOBOTIX D12Di-Sec-DNight

Network Camera

Maintenance-free indoor dual color CMOS network camera without moving parts for security applications

Image Sensors

- 3.1 megapixels, CMOS 2048x1536 color
- 1.3 Megapixels, CMOS 1280x960, Black&White (infrared-sensitive)

Resolutions

Live image and recording:

2048x1536 (3 Mega), 1280x960 (Mega), 1024x768 (XGA), 800x600 (SVGA), 768x576 (D1-PAL), 640x480 (VGA), 384x288 (D1-CIF), 320x240 (CIF), 160x120 (PDA), custom formats (e.g. 1000x400 pixels), with digital Zoom and pan/tilt

Max. Image Rates

3 Mega: 10 fps, Mega: 14 fps, XGA, SVGA, D1-PAL: 24 fps, VGA, D1-CIF, CIF, PDA: 30 fps

Light Sensitivity

- Color sensor: 1 Lux (t= 1/60 sec)/0.05 Lux (t= 1/1 sec),
- Black&White sensor: 0.1 Lux (t= 1/60 sec)/0.005 Lux (t= 1/1 sec)

Lens Options

Part Name	Angle (horizontal/vertical)	Image Size approx. in 10 m distance	Focal Length	In 35mm camera corresponds to
L22 Super Wide-Angle	90° x 67°	20.0 m x 13.3 m	f = 4 mm	about 22 mm
L32 Wide-Angle	60° x 45°	11.5 m x 8.2 m	f = 6 mm	about 32 mm
L43 Wide-Angle	45° x 34°	8.2 m x 6.1 m	f = 8 mm	about 43 mm
L65 Tele	31° x 23°	5.5 m x 4.0 m	f = 12 mm	about 65 mm
L135 Tele	15° x 11°	2.6 m x 1.9 m	f = 25 mm	about 135 mm

Zoom Levels

Digital zoom, continuous up to 8.0x

Measurements

201 mm diameter, height 106 mm

Weight

Approx. 650 g excluding mounting options

Interfaces

10/100Base T Ethernet (RJ45), ISDN S0 bus and USB master (for MX extensions) on D Sub 15 HD connector

Delivered Parts

Weatherproof housing (IP65) from fiber-reinforced plastic (PBT-GF30), metallic white, additional lens cover, manual, Allen wrench, SecureFlex wall/ceiling mount with concealed cabling, patch cable 50 cm/20 in (with EMC sheath), mounting materials, installed camera software with integrated video management system

Sensors

Video motion detector (VM) and microphone

Video ring buffer

64 MB internal stream/image/event storage (e.g. approx. 4,000 images 320x240, good quality)

Internal DVR

SD slot (max. 32 GB, approx. 1.2 million VGA images or 400,000 MEGA images, good quality)

External DVR

Via FTP on web server or on network computer (Windows/Linux/UNIX/Mac); direct image access, thus no FTP required (but possible)

Power Supply

Via network cabling (e.g. using Power-over-Ethernet standard 802.3af) or Netpower Set (with external power supply and Power Adapter) for one camera, Netpower Box for 4 or Netpower Rack for 8 or 20 cameras), Voltage: 24-48 V, backup power supply \geq 12 V, power consumption approx. 3 to 4 Watts

Mounting

- To walls or ceilings
- Directly on top of wall outlets
- In outdoor settings with optional Outdoor Wall mount

Certificates

VDE IP54(IP65 with Outdoor Wall mount), CE, FTEG/R&TTE (EMV)

Image Formats

JPEG, Motion JPEG, MxPEG, BMP, H.263+*, H.264*

*only when using SIP protocol

Operating Modes

IP Video Telephony

- Video over IP via SIP protocol
- H.263+
- H.264 with G711 audio codec, full duplex with echo cancellation and noise reduction

Simultaneous Browser Operating Modes

- HTML/JavaScript with M-JPEG
- Streaming (Server Push or Java)
- ActiveX (MxPEG)
- HTML pages optimized for PDA and pocket PCs

Operation and configuration using SIP IP video phone, MxControlCenter or MxEasy, advanced camera configuration via web browser, API for video management system of third-party vendors included

Functions

Web server, DHCP server, SIP server, Bonjour/Zeroconfig, SNMP, FTP client, e-mail client, live image, recorder/player, Multiview (simultaneous live image), storage and video search, also possible on external video ring buffer), softbuttons, network message (send, receive) for ext. management systems, integrated VoIP from/to browsers, SIP video telephony, video message box (T24 only), on-screen menu in the VoIP channel, alarm management (e-mail, phone call, network message), IP announcement, PDA web pages, logo generator, time- and event-controlled triggering of functions such as single image recording (max. 50 pre- and post-alarm images), video audio recording (30 fps VGA), video audio recording (event/scheduled), alarm triggering, audio announcements or switching operations, scheduled privacy zones, combining event logic, Master/Slave arming, user management with user groups and password protection, Supervisor mode (four-eyes principle), management of up to 1,000,000 alerts on each camera, no software installation required.

Camera Functions

Software-based, scalable backlight compensation, predefined and freely definable exposure windows, automatic white balance

Image Programs

Predefined camera settings for typical application scenarios:

- **Fast:** generates the highest image rates
- **Security Application:** for detecting movement in security applications
- **Quality:** default setting

- **High Quality:** generates images with the highest quality
- **Webcam:** delivers high image quality using the longest exposure times

Exposure Programs

Exposure programs -2, -1, 0, +1, +2 for adapting the exposure times to the current application scenario (clear images of moving objects or reduced image noise)

Image Amplification

Automatic control of minimum average image amplification at night and in situations with reduced illumination

Temperature Range

-30°C to +60°C (-22°F to 140°F)

Other Notes

- No moving parts (such as motors, auto iris or similar)
- No heating required for outdoor applications
- No fans required for outdoor applications
- Freely configurable status LEDs

Manufacturer

MOBOTIX

Type

MX-D12D-Sec-DNight

Further Information

http://www.mobotix.com/eng_GB/Products/Cameras/DualDome-D12

MOBOTIX Q24M-Sec

Network Camera

Ultra-compact, maintenance-free outdoor mono color CMOS network camera "Hemispheric" without moving parts for security applications

Image sensor

3.1 megapixels, CMOS 2048x1536, color

Resolutions

Live image:

2048x1536 (3 Mega), 1280x960 (Mega), 1024x768 (XGA), 800x600 (SVGA), 768x576 (D1-PAL), 640x480 (VGA), 384x288 (D1-CIF), 320x240 (CIF), 160x120 (PDA), custom formats (e.g. 1000x400 pixels), with digital Zoom and pan/tilt

When Recording:

2048x1536 (3 Mega), 1280x960 (Mega), 1024x768 (XGA), 800x600 (SVGA), 768x576 (D1-PAL), 640x480 (VGA), 384x288 (D1-CIF), 320x240 (CIF), 160x120 (PDA), custom formats (e.g. 1000x400 pixels), either full image recording or recording of corrected image (VGA or smaller)

Display Modes

Full image, Corrected, Surround, Panorama, Double Panorama, Panorama/Focus

Max. Image Rates

VGA: 30 fps, TV-PAL: 30 fps, MEGA: 30 fps, 3 Mega: 20 fps (Fastmode, uncorrected image)

Light Sensitivity

1 Lux (t= 1/60 sec)/0.05 Lux (t= 1/1 sec)

Lens Options

Part Name	Angle (horizontal/vertical)	Image Size approx. in 10 m distance	Focal Length	In 35mm camera corresponds to
L11 Hemispheric	180°x160°	--	f = 1.8 mm	about 11 mm
L22 Super Wide-Angle	90° x 67°	20.0 m x 13.3 m	f = 4 mm	about 22 mm

Zoom Levels

Digital zoom, continuous up to 8.0x

Measurements

- Without mounting options: height 48 mm, 160 mm diameter
- With optional In-Ceiling set: cut-out diameter 150 mm, height from ceiling 25 mm, outside diameter of decoration ring 170 mm
- With optional On-Wall set: height 87 mm, outside diameter 165 mm
- With optional 10° On-Wall set: height 74 mm, outside diameter 166 mm
- With optional Outdoor Wall mount: 216x167x202 mm (WxHxD)

Weight

Approx. 450 g excluding mounting options

Interfaces

10/100Base T Ethernet (RJ45), USB master (MiniUSB type A), MxBus

Delivered Parts

Weatherproof housing (IP65) from fiber-reinforced plastic (PBT-GF30), metallic white, manual, Allen wrench, patch cable 50 cm/20 in (with EMC sheath), mounting materials, 4 GB MicroSD card, installed camera software with integrated video management system

Sensors

Video motion detector (VM1, VM2), temperature (TP), microphone (MI), illumination (IL)

Video ring buffer

64 MB internal stream/image/event storage (e.g. approx. 4,000 images 320x240, good quality)

Internal DVR

MicroSD slot (up to 32 GB, about 1.2 million VGA images or 400,000 MEGA images, good quality)

External DVR

Via FTP on web server or on network computer (Windows/Linux/UNIX/Mac); direct image access, thus no FTP required (but possible)

Power Supply

Via the network cabling (e.g. Power-over-Ethernet)

Variable PoE: PoE class selection depending on the operating mode (typical power consumption: 4.5 Watt)

Mounting

- To walls or ceilings without additional mounting options possible
- With optional In-Ceiling set for discreet installations in indoor applications
- With optional On-Wall set (with 0 or 10 degrees inclination) for discreet installations in indoor applications
- Mounting in outdoor settings also with optional Outdoor Wall mount

Certificates

VDE IP65, CE, EMV (EN55022, EN61000-2, FCC part15B, AS/NZ3548, BGVC9 with L22 lens)

Image Formats

JPEG, Motion JPEG, MxPEG, BMP, H.263+*, H.264*

*only when using SIP protocol

Operating Modes

IP Video Telephony

- Video over IP via SIP protocol
- H.263+
- H.264 with G711 audio codec, full duplex with echo cancellation and noise reduction

Simultaneous Browser Operating Modes

- HTML/JavaScript with M-JPEG
- Streaming (Server Push or Java)
- ActiveX (MxPEG)
- HTML pages optimized for PDA and pocket PCs

Operation and configuration using SIP IP video phone, MxControlCenter or MxEasy, advanced camera configuration via web browser, API for video management system of third-party vendors included

Functions

Web server, DHCP server, SIP server, Bonjour/Zeroconfig, SNMP, FTP client, e-mail client, live image, recorder/player, Multiview (simultaneous live image), storage and video search, also possible on external video ring buffer), softbuttons, network message (send, receive) for ext. management systems, integrated VoIP from/to browsers, SIP video telephony, video message box (T24 only), on-screen menu in the VoIP channel, alarm management (e-mail, phone call, network message), IP announcement, PDA web pages, logo generator, time- and event-controlled triggering of functions such as single image recording (max. 50 pre- and post-alarm images), video audio recording (30 fps VGA), video audio recording (event/scheduled), alarm triggering, audio announcements or switching operations, scheduled privacy zones, combining event logic, Master/Slave arming, user management with user groups and password protection, Supervisor mode (four-eyes principle), management of up to 1,000,000 alerts on each camera, no software installation required.

Camera Functions

Software-based, scalable backlight compensation, predefined and freely definable exposure windows, automatic white balance

Image Programs

Predefined camera settings for typical application scenarios:

- **Fast:** generates the highest image rates
- **Security Application:** for detecting movement in security applications
- **Quality:** default setting
- **High Quality:** generates images with the highest quality
- **Webcam:** delivers high image quality using the longest exposure times

Exposure Programs

Exposure programs -2, -1, 0, +1, +2 for adapting the exposure times to the current application scenario (clear images of moving objects or reduced image noise)

Image Amplification

Automatic control of minimum average image amplification at night and in situations with reduced illumination

Temperature Range

-30°C to +60°C (-22°F to 140°F)

Other Notes

- No moving parts (such as motors, auto iris or similar)
- No heating required for outdoor applications
- No fans required for outdoor applications
- Freely configurable status LEDs

Manufacturer

MOBOTIX

Type

MX-Q24M-Sec

Further Information

http://www.mobotix.com/eng_GB/Products/Cameras/Hemispheric-Q24

MOBOTIX Q24M-Sec-Night

Network Camera

Ultra-compact, maintenance-free outdoor mono Black&White CMOS network camera "Hemispheric" without moving parts for security applications

Image sensor

1.3 Megapixels, CMOS 1280x960, Black&White

Resolutions

Live image:

1280x960 (Mega), 1024x768 (XGA), 800x600 (SVGA), 768x576 (D1-PAL), 640x480 (VGA), 384x288 (D1-CIF), 320x240 (CIF), 160x120 (PDA), custom formats (e.g. 1000x400 pixels), with digital Zoom and pan/tilt

When Recording:

1280x960 (Mega), 1024x768 (XGA), 800x600 (SVGA), 768x576 (D1-PAL), 640x480 (VGA), 384x288 (D1-CIF), 320x240 (CIF), 160x120 (PDA), custom formats (e.g. 1000x400 pixels), either full image recording or recording of corrected image (VGA or smaller)

Display Modes

Full image, Corrected, Surround, Panorama, Double Panorama, Panorama/Focus

Max. Image Rates

VGA: 30 fps, TV-PAL: 30 fps, MEGA: 30 fps (Fastmode)

Light Sensitivity

0.1 Lux (t= 1/60 sec)/0.005 Lux (t= 1/1 sec)

Lens Options

Part Name	Angle (horizontal/vertical)	Image Size approx. in 10 m distance	Focal Length	In 35mm camera corresponds to
L11 Hemispheric	180°x160°	--	f = 1.8 mm	about 11 mm
L22 Super Wide-Angle	90° x 67°	20.0 m x 13.3 m	f = 4 mm	about 22 mm

Zoom Levels

Digital zoom, continuous up to 8.0x

Measurements

- Without mounting options: height 48 mm, 160 mm diameter
- With optional In-Ceiling set: cut-out diameter 150 mm, height from ceiling 25 mm, outside diameter of decoration ring 170 mm
- With optional On-Wall set: height 87 mm, outside diameter 165 mm
- With optional 10° On-Wall set: height 74 mm, outside diameter 166 mm
- With optional Outdoor Wall mount: 216x167x202 mm (WxHxD)

Weight

Approx. 450 g excluding mounting options

Interfaces

10/100Base T Ethernet (RJ45), USB master (MiniUSB type A), MxBus

Delivered Parts

Weatherproof housing (IP65) from fiber-reinforced plastic (PBT-GF30), metallic white, manual, Allen wrench, patch cable 50 cm/20 in (with EMC sheath), mounting materials, 4 GB MicroSD card, installed camera software with integrated video management system

Sensors

Video motion detector (VM1, VM2), temperature (TP), microphone (MI), illumination (IL)

Video ring buffer

64 MB internal stream/image/event storage (e.g. approx. 4,000 images 320x240, good quality)

Internal DVR

MicroSD slot (up to 32 GB, about 1.2 million VGA images or 400,000 MEGA images, good quality)

External DVR

Via FTP on web server or on network computer (Windows/Linux/UNIX/Mac); direct image access, thus no FTP required (but possible)

Power Supply

Via the network cabling (e.g. Power-over-Ethernet)

Variable PoE: PoE class selection depending on the operating mode (typical power consumption: 4.5 Watt)

Mounting

- To walls or ceilings without additional mounting options possible
- With optional In-Ceiling set for discreet installations in indoor applications
- With optional On-Wall set (with 0 or 10 degrees inclination) for discreet installations in indoor applications
- Mounting in outdoor settings also with optional Outdoor Wall mount

Certificates

VDE IP65, CE, EMV (EN55022, EN61000-2, FCC part15B, AS/NZ3548, BGVC9 with L22 lens)

Image Formats

JPEG, Motion JPEG, MxPEG, BMP, H.263+*, H.264*

*only when using SIP protocol

Operating Modes

IP Video Telephony

- Video over IP via SIP protocol
- H.263+
- H.264 with G711 audio codec, full duplex with echo cancellation and noise reduction

Simultaneous Browser Operating Modes

- HTML/JavaScript with M-JPEG
- Streaming (Server Push or Java)
- ActiveX (MxPEG)
- HTML pages optimized for PDA and pocket PCs

Operation and configuration using SIP IP video phone, MxControlCenter or MxEasy, advanced camera configuration via web browser, API for video management system of third-party vendors included

Functions

Web server, DHCP server, SIP server, Bonjour/Zeroconfig, SNMP, FTP client, e-mail client, live image, recorder/player, Multiview (simultaneous live image), storage and video search, also possible on external video ring buffer), softbuttons, network message (send, receive) for ext. management systems, integrated VoIP from/to browsers, SIP video telephony, video message box (T24 only), on-screen menu in the VoIP channel, alarm management (e-mail, phone call, network message), IP announcement, PDA web pages, logo generator, time- and event-controlled triggering of functions such as single image recording (max. 50 pre- and post-alarm images), video audio recording (30 fps VGA), video audio recording (event/scheduled), alarm triggering, audio announcements or switching operations, scheduled privacy zones, combining event logic, Master/Slave arming, user management with user groups and password protection, Supervisor mode (four-eyes principle), management of up to 1,000,000 alerts on each camera, no software installation required.

Camera Functions

Software-based, scalable backlight compensation, predefined and freely definable exposure windows, automatic white balance

Image Programs

Predefined camera settings for typical application scenarios:

- **Fast:** generates the highest image rates
- **Security Application:** for detecting movement in security applications
- **Quality:** default setting
- **High Quality:** generates images with the highest quality
- **Webcam:** delivers high image quality using the longest exposure times

Exposure Programs

Exposure programs -2, -1, 0, +1, +2 for adapting the exposure times to the current application scenario (clear images of moving objects or reduced image noise)

Image Amplification

Automatic control of minimum average image amplification at night and in situations with reduced illumination

Temperature Range

-30°C to +60°C (-22°F to 140°F)

Other Notes

- No moving parts (such as motors, auto iris or similar)
- No heating required for outdoor applications
- No fans required for outdoor applications
- Freely configurable status LEDs

Manufacturer

MOBOTIX

Type

MX-Q24M-Sec

Further Information

http://www.mobotix.com/eng_GB/Products/Cameras/Hemispheric-Q24

MOBOTIX V12D-Sec

Network Camera

Maintenance-free outdoor dual color CMOS network camera with integrated IR illumination and 3mm stainless steel housing, without moving parts for security applications

Image Sensors

2 x 3.1 megapixels, CMOS 2048x1536, color

Resolutions

Live image and recording:

2048x1536 (3 Mega), 2560x960 (Mega dual image), 1280x960 (Mega), 1024x768 (XGA), 800x600 (SVGA), 768x576 (D1-PAL), 640x480 (VGA), 384x288 (D1-CIF), 320x240 (CIF), 160x120 (PDA), custom formats (e.g. 1000x400 pixels), with digital Zoom and pan/tilt

Max. Image Rates

3 Mega: 10 fps, Mega: 14 fps, XGA, SVGA, D1-PAL: 24 fps, VGA, D1-CIF, CIF, PDA: 30 fps

Light Sensitivity

1 Lux (t= 1/60 sec)/0.05 Lux (t= 1/1 sec)

Lens Options

Part Name	Angle (horizontal/vertical)	Image Size approx. in 10 m distance	Focal Length	In 35mm camera corresponds to
L22 Super Wide-Angle	90° x 67°	20.0 m x 13.3 m	f = 4 mm	about 22 mm
L43 Wide-Angle	45° x 34°	8.2 m x 6.1 m	f = 8 mm	about 43 mm

Zoom Levels

Digital zoom, continuous up to 8.0x

Measurements

Mounting only possible in corners: 253x190x170 mm (WxHxD)

Weight

Approx. 3.000 g

Interfaces

10/100Base T Ethernet (RJ45) and USB master (for MX expansion modules)

Delivered Parts

Housing from 3 mm stainless steel with synthetic enclosure of the camera electronics, manual, Allen wrench, patch cable 50 cm/20 in (with EMC sheath), mounting materials, 4 GB SD card, installed camera software with integrated video management system

Sensors

Video motion detector (VM) and microphone

Video ring buffer

64 MB internal stream/image/event storage (e.g. approx. 4,000 images 320x240, good quality)

Internal DVR

MicroSD slot (up to 32 GB, about 1.2 million VGA images or 400,000 MEGA images, good quality)

External DVR

Via FTP on web server or on network computer (Windows/Linux/UNIX/Mac); direct image access, thus no FTP required (but possible)

Power Supply

Via network cabling (using a Netpower Box for two cameras) Voltage: 24-48 V, power consumption approx. 3 to 4 Watts

Mounting

Corner mounting with heavy-duty fixtures directly above the cable outlet

Certificates

VDE IP54, CE, FTEG/R&TTE (EMC)

Image Formats

JPEG, Motion JPEG, MxPEG, BMP, H.263+*, H.264*

*only when using SIP protocol

Operating Modes

IP Video Telephony

- Video over IP via SIP protocol
- H.263+
- H.264 with G711 audio codec, full duplex with echo cancellation and noise reduction

Simultaneous Browser Operating Modes

- HTML/JavaScript with M-JPEG
- Streaming (Server Push or Java)
- ActiveX (MxPEG)
- HTML pages optimized for PDA and pocket PCs

Operation and configuration using SIP IP video phone, MxControlCenter or MxEasy, advanced camera configuration via web browser, API for video management system of third-party vendors included

Functions

Web server, DHCP server, SIP server, Bonjour/Zeroconfig, SNMP, FTP client, e-mail client, live image, recorder/player, Multiview (simultaneous live image), storage and video search, also possible on external video ring buffer), softbuttons, network message (send, receive) for ext. management systems, integrated VoIP from/to browsers, SIP video telephony, video message box (T24 only), on-screen menu in the VoIP channel, alarm management (e-mail, phone call, network message), IP announcement, PDA web pages, logo generator, time- and event-controlled triggering of functions such as single image recording (max. 50 pre- and post-alarm images), video audio recording (30 fps VGA), video audio recording (event/scheduled), alarm triggering, audio announcements or switching operations, scheduled privacy zones, combining event logic, Master/Slave arming, user management with user groups and password protection, Supervisor mode (four-eyes principle), management of up to 1,000,000 alerts on each camera, no software installation required.

Camera Functions

Software-based, scalable backlight compensation, predefined and freely definable exposure windows, automatic white balance

Image Programs

Predefined camera settings for typical application scenarios:

- **Fast:** generates the highest image rates
- **Security Application:** for detecting movement in security applications
- **Quality:** default setting
- **High Quality:** generates images with the highest quality
- **Webcam:** delivers high image quality using the longest exposure times

Exposure Programs

Exposure programs -2, -1, 0, +1, +2 for adapting the exposure times to the current application scenario (clear images of moving objects or reduced image noise)



Image Amplification

Automatic control of minimum average image amplification at night and in situations with reduced illumination

Temperature Range

-30°C to +60°C (-22°F to 140°F)

Other Notes

- No moving parts (such as motors, auto iris or similar)
- No heating required for outdoor applications
- No fans required for outdoor applications
- Freely configurable status LEDs

Manufacturer

MOBOTIX

Type

MX-V12D-Sec-DNIGHT

Further Information

http://www.mobotix.com/eng_GB/Products/Cameras/Vandalism-V12

MOBOTIX V12D-Sec-DNight

Network Camera

Maintenance-free outdoor dual color/Black&White CMOS network camera with integrated IR illumination and 3mm stainless steel housing, without moving parts for security applications

Image Sensors

- 3.1 megapixels, CMOS 2048x1536 color
- 1.3 Megapixels, CMOS 1280x960, Black&White (infrared-sensitive)

Resolutions

Live image and recording:

2048x1536 (3 Mega), 1280x960 (Mega), 1024x768 (XGA), 800x600 (SVGA), 768x576 (D1-PAL), 640x480 (VGA), 384x288 (D1-CIF), 320x240 (CIF), 160x120 (PDA), custom formats (e.g. 1000x400 pixels), with digital Zoom and pan/tilt

Max. Image Rates

3 Mega: 10 fps, Mega: 14 fps, XGA, SVGA, D1-PAL: 24 fps, VGA, D1-CIF, CIF, PDA: 30 fps

Light Sensitivity

- Color sensor: 1 Lux (t= 1/60 sec)/0.05 Lux (t= 1/1 sec),
- Black&White sensor: 0.1 Lux (t= 1/60 sec)/0.005 Lux (t= 1/1 sec)

IR illumination using 20 integrated IR LEDs when using the Black&White image sensor, switchable by the software

Lens Options

Part Name	Angle (horizontal/vertical)	Image Size approx. in 10 m distance	Focal Length	In 35mm camera corresponds to
L22 Super Wide-Angle	90° x 67°	20.0 m x 13.3 m	f = 4 mm	about 22 mm
L43 Wide-Angle	45° x 34°	8.2 m x 6.1 m	f = 8 mm	about 43 mm

Zoom Levels

Digital zoom, continuous up to 8.0x

Measurements

Mounting only possible in corners: 253x190x170 mm (WxHxD)

Weight

Approx. 3.000 g

Interfaces

10/100Base T Ethernet (RJ45) and USB master (for MX expansion modules)

Delivered Parts

Housing from 3 mm stainless steel with synthetic enclosure of the camera electronics, manual, Allen wrench, patch cable 50 cm/20 in (with EMC sheath), mounting materials, 4 GB SD card, installed camera software with integrated video management system

Sensors

Video motion detector (VM) and microphone

Video ring buffer

64 MB internal stream/image/event storage (e.g. approx. 4,000 images 320x240, good quality)

Internal DVR

MicroSD slot (up to 32 GB, about 1.2 million VGA images or 400,000 MEGA images, good quality)

External DVR

Via FTP on web server or on network computer (Windows/Linux/UNIX/Mac); direct image access, thus no FTP required (but possible)

Power Supply

Via network cabling (using a Netpower Box for two cameras) Voltage: 24-48 V, power consumption approx. 3 to 4 Watts

Mounting

Corner mounting with heavy-duty fixtures directly above the cable outlet

Certificates

VDE IP54, CE, FTEG/R&TTE (EMC)

Image Formats

JPEG, Motion JPEG, MxPEG, BMP, H.263+*, H.264*

*only when using SIP protocol

Operating Modes

IP Video Telephony

- Video over IP via SIP protocol
- H.263+
- H.264 with G711 audio codec, full duplex with echo cancellation and noise reduction

Simultaneous Browser Operating Modes

- HTML/JavaScript with M-JPEG
- Streaming (Server Push or Java)
- ActiveX (MxPEG)
- HTML pages optimized for PDA and pocket PCs

Operation and configuration using SIP IP video phone, MxControlCenter or MxEasy, advanced camera configuration via web browser, API for video management system of third-party vendors included

Functions

Web server, DHCP server, SIP server, Bonjour/Zeroconfig, SNMP, FTP client, e-mail client, live image, recorder/player, Multiview (simultaneous live image), storage and video search, also possible on external video ring buffer), softbuttons, network message (send, receive) for ext. management systems, integrated VoIP from/to browsers, SIP video telephony, video message box (T24 only), on-screen menu in the VoIP channel, alarm management (e-mail, phone call, network message), IP announcement, PDA web pages, logo generator, time- and event-controlled triggering of functions such as single image recording (max. 50 pre- and post-alarm images), video audio recording (30 fps VGA), video audio recording (event/scheduled), alarm triggering, audio announcements or switching operations, scheduled privacy zones, combining event logic, Master/Slave arming, user management with user groups and password protection, Supervisor mode (four-eyes principle), management of up to 1,000,000 alerts on each camera, no software installation required.

Camera Functions

Software-based, scalable backlight compensation, predefined and freely definable exposure windows, automatic white balance

Image Programs

Predefined camera settings for typical application scenarios:

- **Fast:** generates the highest image rates
- **Security Application:** for detecting movement in security applications
- **Quality:** default setting
- **High Quality:** generates images with the highest quality
- **Webcam:** delivers high image quality using the longest exposure times

Exposure Programs

Exposure programs -2, -1, 0, +1, +2 for adapting the exposure times to the current application scenario (clear images of moving objects or reduced image noise)

Image Amplification

Automatic control of minimum average image amplification at night and in situations with reduced illumination

Temperature Range

-30°C to +60°C (-22°F to 140°F)

Other Notes

- No moving parts (such as motors, auto iris or similar)
- No heating required for outdoor applications
- No fans required for outdoor applications
- Freely configurable status LEDs

Manufacturer

MOBOTIX

Type

MX-V12D-Sec-DNight

Further Information

http://www.mobotix.com/eng_GB/Products/Cameras/Vandalism-V12

Lens Options

Fisheye L11* 180° (Day/Night)

Focal Length:	1.8 mm, corresponds to 11 mm in 35 mm cameras
Horizontal Image Angle:	180°
Vertical Image Angle:	160°
image area in 10 m distance:	--
F-stop:	1:2.0
Thread:	M14
Manufacturer:	MOBOTIX
Article number:	MX-OPT14-L11

Super Wide-Angle L22* 90° (Day/Night)

Focal Length:	4 mm, corresponds to 22 mm in 35 mm cameras
Horizontal Image Angle:	90°
Vertical Image Angle:	67°
image area in 10 m distance:	20.0 m x 13.3 m
F-stop:	1:2.0
Thread:	M14
Manufacturer:	MOBOTIX
Article number:	MX-OPT14-L22

L32 Wide-Angle* (Day/Night)

Focal Length:	6 mm, corresponds to 32 mm in 35 mm cameras
Horizontal Image Angle:	60°
Vertical Image Angle:	45°
image area in 10 m distance:	11.5 m x 8.2 m
F-stop:	1:2.0
Thread:	M14
Manufacturer:	MOBOTIX
Article number:	MX-OPT14-L32

Wide-angle L43 (Day/Night)

Focal Length:	8 mm, corresponds to 43 mm in 35 mm cameras
Horizontal Image Angle:	45°
Vertical Image Angle:	34°
image area in 10 m distance:	8.2 m x 6.1 m
F-stop:	1:2.0
Thread:	M14
Manufacturer:	MOBOTIX
Article number:	MX-OPT14-L43

L65 Tele* (Day/Night)

Focal Length:	12 mm, corresponds to 65 mm in 35 mm cameras
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*Not available for M12 camera models!

Horizontal Image Angle: 31°
Vertical Image Angle: 23°
image area in 10 m distance: 5.5 m x 4.0 m
F-stop: 1:2.0
Thread: M14
Manufacturer: MOBOTIX
Article number: **MX-OPT14-L65**

Tele L135 (Day/Night)

Focal Length: 25 mm, corresponds to 135 mm in 35 mm cameras
Horizontal Image Angle: 15°
Vertical Image Angle: 11°
image area in 10 m distance: 2.6 m x 1.9 m
F-stop: 1:2.5
Thread: M14
Manufacturer: MOBOTIX
Article number: **MX-OPT14-L135**

Further Information

http://www.mobotix.com/eng_GB/products/Lens-Options

Accessories

Network Power Adapter MX-NPA-3-RJ

Remote power supply via network cabling to the camera

Can only be used with M12, D12, M22, D22, Q22

Crossover function for directly attaching to computer (without router/switch)

Needs corresponding multi-voltage power supply MX-SNT-E01-30RJ

Pin-out: Pin8 +, Pin7 -

Interfaces:

Power supply: RJ45

Camera: RJ45

Network: RJ45

Weight: approx. 100 g

Article number: **MX-NPA-3-RJ**

Multi Voltage Power Supply MX-SNT-E01-30RJ for Europe

For directly supplying power to the camera, or for supplying power using the Network Power Adapter MX-NPA-3-RJ

Output connector: RJ45

Pin-out: Pin8 +, Pin7 -

Input voltage: 100-250 V~

Output voltage: 30 V= / 240 mA

Article number: **MX-SNT-E01-30RJ**

Multi Voltage Power Supply MX-SNT-U01-30RJ for U.S.A.

For directly supplying power to the camera, or for supplying power using the Network Power Adapter MX-NPA-3-RJ

Output connector: RJ45

Pin-out: Pin8 +, Pin7 -

Input voltage: 100-250 V~

Output voltage: 30 V= / 240 mA

Article number: **MX-SNT-U01-30RJ**

Multi Voltage Power Supply MX-SNT-J01-30RJ for Japan

For directly supplying power to the camera, or for supplying power using the Network Power Adapter MX-NPA-3-RJ

Output connector: RJ45

Pin-out: Pin8 +, Pin7 -

Input voltage: 100-250 V~

Output voltage: 30 V= / 240 mA

Article number: **MX-SNT-J01-30R**

PoE Injector Set MX-NPA-PoE-Set-EU

Remote power supply via network cabling to the camera according to PoE standard 802.3af

Can only be used with M24, D24, Q24, Mx2wire and all PoE-powered cameras

Crossover function for directly attaching to computer (without router/switch)

For connecting to mains power via power supply

Also for alternative power supplies from 12 to 24 Volts

Incl. power supply with adapter for EU

Interfaces:

Power supply:	RJ45
Camera:	RJ45
Network:	RJ45
Weight:	approx. 100 g
Article number:	MX-NPA-PoE-Set-EU

PoE Injector Set MX-NPA-PoE-Set-Int

Remote power supply via network cabling to the camera according to PoE standard 802.3af

Can only be used with M24, D24, Q24, Mx2wire and all PoE-powered cameras

Crossover function for directly attaching to computer (without router/switch)

For connecting to mains power via power supply

Also for alternative power supplies from 12 to 24 Volts

Incl. power supply with adapter for EU, UK, US, AUS

Interfaces:

Power supply:	RJ45
Camera:	RJ45
Network:	RJ45
Weight:	approx. 100 g
Article number:	MX-NPA-PoE-Set-EU

Netpower Box MX-NPR-4

Power supply behind a switch for up to 4 cameras with two RJ45 connectors each, for supplying power via the network or ISDN cabling to the camera

Can only be used with M12, D12, M22, D22, Q22

Surge protection, data signals directly connected

Green operating LED, red short-circuit LED

Installed clip for DIN rail mounting, removable

Pin-out: Pin8 +, Pin7 -

Stainless steel front plate

Measurements (width x height x depth): 175x58x106 mm
Weight: 500 g
Voltage: 100-240 V, capacity rating 25 W
Article number: **MX-NPR-4**

Netpower Rack MX-NPR-8

Power supply behind a switch for up to 8 cameras with two RJ45 connectors each, for supplying power via the network or ISDN cabling to the camera

Can only be used with M12, D12, M22, D22, Q22

Surge protection, data signals directly connected

Green operating LED, red short-circuit LED

Pin-out: Pin8 +, Pin7 -

Stainless steel front plate

19 inch rack mount (2 rack units)

Measurements (width x height x depth): 483x88x250 mm

Weight: 4.8 kg

Voltage: 100-240 V, capacity rating 120 W

Article number: **MX-NPR-8**

Netpower Rack MX-NPR-20

Power supply behind a switch for up to 20 cameras with two RJ45 connectors each, for supplying power via the network or ISDN cabling to the camera

Surge protection, data signals directly connected

Can only be used with M12, D12, M22, D22, Q22

Green operating LED, red short-circuit LED

Pin-out: Pin8 +, Pin7 -

Stainless steel front plate

19 inch rack mount (2 rack units)

Measurements (width x height x depth): 483x88x250 mm

Weight: 4.8 kg

Voltage: 100-240 V, capacity rating 120 W

Article number: **MX-NPR-20**

In-Ceiling set for MOBOTIX D24M and Q24M

Set includes mounting materials for MOBOTIX D24M and Q24M cameras and is made from PBT-GF30 for discreet installations, concealed cabling, additional modules (e.g. WiFi, GSM/GRPS/UMTS) can be installed above the ceiling

Article number: **MX-OPT-IC**

On-Wall set for MOBOTIX D24M and Q24M

Weather protection (IP65) includes mounting materials for MOBOTIX cameras and is made from PBT-G-F30 for reliable protection when mounting to the wall, concealed cabling, space for additional modules (e.g. Mx2wire, Powerline converter, WiFi, GSM/GRPS/UMTS/3G)

Article number: **MX-OPT-AP**

10° On-Wall set for MOBOTIX D24M and Q24M

Weather protection (IP65) includes mounting materials for MOBOTIX cameras and is made from PBT-G-F30 for reliable protection when mounting to the wall in tilted fashion, tilted by 10°, concealed cabling, space for additional modules (e.g. Mx2wire, Powerline converter, WiFi, GSM/GRPS/UMTS/3G)

Article number: **MX-OPT-AP-10DEG**

Outdoor Wall mount for MOBOTIX D24M and Q24M

Weather protection (IP65) includes mounting materials for MOBOTIX D24M and Q24M cameras and is made from PBT-GF30, concealed cabling, covers RJ45 wall outlets, space for additional modules (e.g. WiFi, GSM/GRPS/UMTS)

Article number: **MX-OPT-WH**

Outdoor Wall mount for MOBOTIX D12D

Weather protection (IP65) includes mounting materials for MOBOTIX D10D/D12D cameras and is made from PBT-GF30, concealed cabling, covers RJ45 wall outlets, space for additional modules (e.g. WiFi, GSM/GRPS/UMTS)

Article number: **MX-WH-Dome**

Pole Mount for MOBOTIX D24M and Q24M

Mount for poles with diameters from 60 to 180 mm, includes mounting materials for stainless steel Outdoor Wall mount for D24M and Q24M, white powder-coated

Article number: **MX-OPT-MH**

Corner and Pole Mount for MOBOTIX D12D

Mount for poles with diameters from 60 to 180 mm and 90 degree corners, includes mounting materials for stainless steel Outdoor Wall mount for D12D, white powder-coated

Article number: **MX-MH-Dome-ESWS**

Further Information

http://www.mobotix.com/eng_GB/products/Accessories

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