



MOBOTIX

MOBOTIX Glossary

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3

3D laser scanner

A 3D laser scanner scans real objects or their real environment. In 3D scanning, a real object and its environment is analyzed to collect data on its shape and possibly its appearance. Digital 3D models can then be created from the collected data.

8

8K

The 8K resolution corresponds to 7680x4320 pixels (picture elements) in the 16:9 aspect ratio, which when multiplied corresponds to 33 177 600 pixels, or about 33.1 megapixels.

A

AI-BIO

AI-BIO is an app for recognizing the gender and estimating the age of a person by analyzing the face.

AI-CROWD

AI-CROWD is an app in that can be used in crowded areas where persons can stop or move slowly, even determining queuing situations. It allows to estimate the number of persons inside one or more areas of interest.

AI-CROWD-DEEP

AI-CROWD-DEEP is a video analysis app in based on deep neural networks, that allows to analyze the people in an area, even in very crowded situations. The solution, not being based on the analysis of the movement, does not suffer from disturbances due to the movement of the camera that takes the scene.

AI-CROWD-PLUS

AI-CROWD-PLUS is a bundle with two different products, which are installed simultaneously on one camera, consisting of the apps AI-CROWD and AI-OVERCROWD.

AI-FACEDETECT-DEEP

AI-FACEDETECT-DEEP is a video analytics app able to detect the faces of the persons inside the scene. It is also able to distinguish faces with mask from faces without mask. It implies that the plug in can be used for both statistical (in order to know the number of persons inside an area) and security purposes

AI-FIRE

AI-FIRE is an app for the detection of flames in outdoor environments, such as urban forests, parks and so on. It generates events that can be managed by all the notification channels. It uses information about the color, so it cannot be used with thermal cameras; for the same reason, the performance may decrease during the night.

AI-HEAT

AI-HEAT is an app for classifying the areas depending on the time spent by moving people inside the areas of interest, thus allowing to distinguish between the most visited areas (hot spots) and the less crowded ones (dead areas).in indoor and outdoor environments. It generates periodic heat maps that can be managed by AI-Dash and AI-Dash Embedded. It can be used also with thermal and fisheye cameras.

AI-INCIDENT

AI-INCIDENT is a video analytics app for monitoring the road traffic in real-time; thus, the environmental conditions will affect the performance of the application. It is able to detect the presence of pedestrians, stopped vehicles, queuing or vehicles crossing a road in the wrong direction. It generates events that can be managed by all the notification channels.

AI-INTRUSION

AI-INTRUSION is a video analytic app that is able to detect intruders in indoor and outdoor environments; thus, the environmental conditions will affect the performance of the application.

AI-LOITERING

AI-LOITERING is a video analytic app that is able to detect loitering in indoor and outdoor environments; thus, the environmental conditions will affect the performance of the application, FTP servers and third party servers.

AI-OCCUPANCY

AI-OCCUPANCY is a video analytic app that is able to detect abandoned or removed objects in indoor and outdoor environments; thus, the environmental conditions will affect the performance of the application.

AI-OVERCROWD

AI-OVERCROWD is a video analytic app that can be used to detect overcrowding inside one or more areas of interest in typical retail scenarios; of course, the position of the camera and the environmental conditions will affect the performance of the application.

AI-OVEROCCUPANCY

AI-OVEROCCUPANCY is the video analysis app for the detection of overoccupancy in one or more areas inside the scene in indoor and outdoor environments. It generates events that can be managed by all the event notifiers. It can be used also with thermal cameras.

AI-PARKING

AI-PARKING is a video analysis solution for monitoring parking areas, perimeter and non-perimeter. It assesses whether a parking spot is free or occupied. It needs information about the color, so a thermal camera is not suitable for this app. It generates events that can be managed by all the notification channels.

AI-PEOPLE

AI-PEOPLE is a video analytic app optimized to count people crossing a gate in typical retail scenarios. It generates events that can be managed by all the notification channels.

AI-RETAIL3

AI-RETAIL3 is a bundle including three different products, simultaneously installed on board of your camera: AI-PEOPLE: People counting through gate AI-CROWD: Crowd estimation AI-OVERCROWD: Overcrowding detection for queue management

AI-ROAD-3D

AI-ROAD-3D is a video analytic app optimized to monitor the road traffic in real-time; thus, the environmental conditions will affect the performance of the application.

AI-SECURITY

AI-SECURITY is a bundle including three different products, simultaneously installed on board of your camera: AI-INTRUSION: Intrusion detection in sterile zone and virtual line

crossing AI-LOST: Abandoned or removed objects detection AI-LOITERING: Loitering detection in forbidden areas

AI-SMOKE

AI-SMOKE is an app for the detection of smoke in outdoor environments, such as urban forests, parks and so on. It generates events that can be managed by all the notification channels. It uses information about the color, so it cannot be used with thermal cameras; for the same reason, the performance may decrease during the night.

AI-SPILL

AI-SPILL is an app for detecting falls in indoor environments like hospitals or apartments. It generates events that can be managed by all the notification channels. Since the app uses information about the color, thermal cameras are not allowed.

AI-TRAFFIC

AI-TRAFFIC is a bundle including three different products, simultaneously installed on board of your camera. AI-ROAD-3D: gathering of traffic statistics AI-INCIDENT: road monitoring for security purposes

artificial intelligence

Artificial intelligence is a branch of computer science that deals with the automation of intelligent behavior and machine learning.

B

backlight compensation

A feature on cameras that prevents underexposure when the subject is backlit by a light bright enough to distort the camera's normal exposure meter.

Bandwidth

Bandwidth is the amount of data that can be transmitted from one point to another on a network in a given time. It is usually referred to as the bit rate and is measured in bits per second (bit/s).

Black Body

A black body or blackbody is an idealized physical body that absorbs all incident electromagnetic radiation, regardless of frequency or angle of incidence. The name "black body"

is given because it absorbs all colors of light. A black body also emits black-body radiation.
[Source: https://en.wikipedia.org/wiki/Black_body]

bolometer

A bolometer, also bolometric detector (Greek bole, "throw", "beam"), is a radiation sensor for measurement over the entire wavelength spectrum of electromagnetic waves. The measurement principle is the absorption of radiation by matter and the measurement of the subsequent heating. Its inventor was the American astronomer Samuel Pierpont Langley in 1878. Working principle: Blackened surfaces are used for absorption in the optical range. For the measurement of power pulses the temperature rise is evaluated. For continuous measurement of radiant power, heat must be dissipated. For this purpose, defined thermal bridges are used, which are made of solid metal for the measurement of large powers and are water-cooled at the other end. The measurand is the heat flow. This results from the temperature difference across the thermal bridge divided by its thermal resistance. Thermistors can be considered as temperature sensors due to their simplicity. In imaging microbolometer arrays, NTCs are used because they have a steeper characteristic curve, but only in a relatively narrow temperature range and in a small design associated with considerable shot noise. The alternative is thermocouples, which measure temperature differences directly. For a higher thermoelectric voltage, several thermocouples are connected electrically in series, but thermally in parallel. Often such a thermopile itself represents the entire thermal bridge. This also applies to the most sensitive detectors consisting of only a single thermocouple made of very thin wires or thin-film structures. If - unlike in the pyrgeometer - the radiation to be measured can be focused on the one contact of the thermocouple, a separate absorber surface, which would have to be very thin and have very good thermal conductivity for short response times, e.g. a gold foil, is not required. Confinement in a vacuum reduces external disturbances due to heat transfer to air or convection. The temperature of surrounding parts of the detector must be closely controlled; gold-plated surfaces emit less thermal radiation. The highest sensitivity is achieved with cryogenically cooled bolometers. Also see: Microbolometer

BPA-Box

Voltage Amplifier For MxBus The Bus Power Adapter Box powers any MxBus module that is connected to the camera. The BPA Box is supplied with an external voltage of 24 to 48 V DC. It delivers a maximum power output of 9 W, allowing it to power up to seven MxBus modules simultaneously.

C

c71

With the hemispherical MOBOTIX c71 for indoor use, you have 360 degrees permanently in view. The c71 provides an all-round view with just a single lens - no detail escapes this camera. Fully integrated audio functions, infrared LED and a lens perfectly matched to it complete this product to one of the most powerful cameras on the market. Powerful apps provide AI-based video analysis functions to actively relieve staff - in healthcare, retail or wherever entire rooms need to be monitored. - 7 Platform with app support - Flexible codec support: H.264, H.265, MxPEG+ and MJPEG - ONVIF Profile S, T, G conformity guarantees utmost interoperability - 4K effective resolution: (original hemispherical image) - Integrated Audio (Mic & Speaker) - Integrated IR LED - Wide Dynamic Range (WDR) with up to 120 dB

CCD sensor

CCD sensors are light-sensitive electronic devices based on the internal photoelectric effect. "CCD" is the abbreviation of charge-coupled device, which is used in the CCD sensor.

Centre National de Prévention et de Protection

CNPP Cert. certification body Certification of skills and competences for people, industrial products, services and management systems. CNPP Cert. is recognized by the security and insurance professionals. The certifications issued by CNPP Cert. are acknowledgments and trust passports certified by third parties as part of a collective approach in which all of the stakeholders are represented in the certification committee: safety professionals, users, key influencers, insurers, and public authorities. CNPP Cert. stands out in particular for its "business line" expertise, backed by CNPP laboratories and auditors. [Source: <https://www.cnpp.com/Certification>]

Certified Apps

Certified Apps are professional, deep learning based MOBOTIX apps and solutions from renowned partners, which are explicitly verified and certified by MOBOTIX.

Closed-circuit television

Closed-circuit television (CCTV), also known as video surveillance, is the use of video cameras to transmit a signal to a specific place, on a limited set of monitors. It differs from broadcast television in that the signal is not openly transmitted, though it may employ point-to-point (P2P), point-to-multipoint (P2MP), or mesh wired or wireless links. Even though almost

all video cameras fit this definition, the term is most often applied to those used for surveillance in areas that require additional security or ongoing monitoring

Common Intermediate Format

CIF resolution is equivalent to 352x288 pixels (image elements) in 4:3 aspect ratio, which when multiplied is equivalent to 101,376 pixels, or about 0.1 megapixels.

connection protocol

A connection protocol (also called network protocol) is a communication protocol for the exchange of data between computers or processes (e.g. camera and pan-tilt heads with Pelco-D support) that are connected to each other in a computer network. It consists of a set of rules and formats (syntax) that determine the communication behavior of the communicating instances in the computers (semantics).

Copy & Paste

asd "sdf" & ggadsgsadgagsdgd g & so (on)...//

Custom Apps

Partners, customers and users of MOBOTIX AG can develop and program their own app solutions for the MOBOTIX 7 platform based on the MOBOTIX software and the Development Kit (SDK).

cyber security

Cyber security, also known as information security, refers to the properties of information processing and storage (technical or non-technical) systems that ensure the protection goals of confidentiality, availability and integrity. Information security serves to protect against dangers or threats, to avoid economic damage and to minimize risks.

D

D71

Discreet in its appearance and opulent in its possibilities: That's the MOBOTIX D71 Dome. The compact single-lens camera is protected by a weatherproof, impact-resistant polycarbonate dome. Three manually movable axes allow precise alignment of the configurable optics in a convenient way. The D71 becomes infinitely flexible with the intelligent video analysis apps of the MOBOTIX 7 platform. - 4K UHD or 4MP Ultra LowLight image sensor - Microphone and speaker integrated - Shockproof polycarbonate dome - Platform with the most

flexible codec support: H.264, H.265, MxPEG+ and MJPEG - ONVIF Profile S and T conformity guarantees utmost interoperability - Wide Dynamic Range (WDR) with up to 120 dB - Easy Plug quick-mounting system - Robust in any environment: -40 to 65 °C/-40 to 149 °F, IP66, and IK10

deep learning

Deep learning is a method of machine learning that uses artificial neural networks (ANN) with numerous hidden layers between the input layer and the output layer, thereby creating an extensive

depth of field

Depth of field plays a central role in photography or video technology and describes the size of the distance range within which an object is sufficiently sharp.

Dewarping

Dewarping (fisheye dewarping) refers to a correction of distortions of images taken by a camera with a FishEye lens. For this purpose, various methods of mathematical correction of distorted images are used. The result of dewarping is an image with straightened lines and with proportionally natural-looking objects.

DIN EN 50132-7

DIN Standard EN 50132-7: Alarm systems - CCTV surveillance systems for security applications This standard is withdrawn and replaced by the following: DIN EN 62676-4 VDE 0830-71-4:2016-07 Video surveillance systems for security applications.

DIN EN 62676-4

DIN EN 62676-4 VDE 0830-71-4:2016-07 Video surveillance systems for security applications. This standard supersedes the following standard: DIN EN 50132-7: Alarm systems - CCTV surveillance systems for security applications.

Door station

A door station usually consists of several bell buttons attached to the front door; often also contains a button for switching on the lighting and is possibly prepared for the installation of a door intercom system with video transmission.

E

EN 54

The EN 54 Fire detection and fire alarm systems is a series of European standards that includes product standards and application guidelines for fire detection and fire alarm systems as well as voice alarm systems. The product standards define product characteristics, test methods and performance criteria against which the effectiveness and reliability of every component of fire detection and fire alarm system can be assessed and declared. Many of the product standards of the EN 54 series are harmonised standards under the Construction Products Regulation (CPR) EU 305/2011. Annex ZA of the harmonised standards specifies which sections of the standard apply for the purposes of the CPR. Annex ZA also describes the two-stage certification: - certification of constancy of performance for the product (product certification) and - certification of conformity of factory production control (FPC certification) This standard series is partly used around the world in several countries outside of European Union, for example in Latin American countries, Brasil, African and Asian countries and several islands in the Pacific Ocean. [Source: https://en.wikipedia.org/wiki/EN_54]

end-to-end encryption

End-to-end encryption (E2EE) refers to the encryption of transmitted data across all transmission stations. Only the communication partners (the respective end points of the communication) can decrypt the message.

exposure metering

Exposure metering in photography is the collective name for various methods of determining the appropriate combination of shutter speed and aperture to produce a correctly exposed image

F

face recognition

Face recognition is the analysis of the expression of visible features in the area of the frontal head, given by the geometrical arrangement and texture properties of the surface. In a technical context, face recognition is a biometric procedure. It is used for security, criminal and forensic purposes, for the identification or verification (authentication) of natural persons. Typically, technical, computer-aided facial recognition is used to control access to security-

sensitive areas and to search for duplicates in databases, for example in population registers to prevent identity theft.

FF-Group License Plate Recognition

A MOBOTIX Certified App - the application recognizes license plates (one and two-line) with Latin and Hebrew characters. The app is capable of monitoring up to four lanes. Depending on the number of lanes, the application can be used for vehicles with speeds of up to 200 km/h. The app is also used in parking solutions and access control. There the entry/exit can be controlled e.g. via "Granted" and "Denied lists". If the license plate number is known and released, for example a barrier could open automatically. Dual Sensor: Number plate recognition with the S74 on two image sensors simultaneously, aligned for example on two driving directions or on several lanes next to each other. Advantage: Saving of an additional camera with app license.

FF-Group License Plate Recognition MEA

A MOBOTIX Certified App - the application recognizes one- and two-line number plates with Latin and Arabic characters. You can monitor up to four lanes. The application is suitable for vehicles traveling up to 200 km/h depending on the number of lanes. The app can also be used as a solution for parking lots and access control, as entrances and exits can be controlled automatically using block and safe lists (granted and denied). If the license plate is recognized and approved, a barrier could open (for example). Dual Sensor: License plate recognition with the S74 camera on two image sensors at the same time, e.g. directed toward two directions of travel or several lanes side by side. Advantage: The app license means there is no need for an additional camera.

FF-Group LPR and Make/Model/Color Recognition – Region EUCA

A MOBOTIX Certified App - Vehicle make and model recognition is one of the domain functions for secure traffic monitoring systems. Identifying vehicles only by their license plate can be insufficient for various situations. FF Group has added the MMCR function to its license plate recognition app for MOBOTIX M73/S74 cameras. Automatic detection of vehicle type, make, model and color enable advanced authentication checks at entrances and exits of buildings and protected areas, for police and traffic checks, for advanced traffic monitoring and for collecting statistical data. Typical fields of application: In cities and towns, you can gain information about traffic flows and traffic density in the city. For example, you can prevent trucks from driving into the city center. In this way, MOBOTIX apps contribute to the further development of cities as intelligent smart cities. The police can use the application to search for suspicious and wanted vehicles effectively. The matching of license plates with

enables the identification of suspicious vehicles to fight crime. Access can be effectively controlled thanks to double security matching in the logistics sector, in industry, or secured residential complexes, which contributes significantly to security.

Field of View

Field of view (FOV) is the maximum area that a camera can image. It is related to two things, the focal length of the lens and the sensor size. Assuming that the focal length of the lens is the same, the larger the sensor the larger the field of view. The sensor size is determined by both the number of pixels on the sensor, and the size of the pixels. Different sized pixels are used for different applications, with larger pixels used for higher sensitivity, and smaller pixels used for higher spatial resolution. The focal length of the lens describes the distance between the lens and the focused image on the sensor. As light passes through the lens it will either converge (positive focal length) or diverge (negative focal length) - however within cameras the focal length is predominately positive. Shorter focal lengths converge the light more strongly (i.e. at a sharper angle) to focus the subject being imaged. Longer focal lengths, in comparison, converge the light less strongly (i.e. at a shallower angle) in order to focus the image. This means that the distance of the focal length is determined by how strongly the light is converged by the lens in order to focus the subject being imaged. This, in turn, influences the angle from the horizontal of light that can be captured by the lens. This is known as the angular field of view (AFOV) and is required to determine the overall FOV. The AFOV is the angle between any light captured at the horizontal, and any light captured at the edge (as shown in Figure 2). If you have a fixed sensor size, altering the focal length will alter the AFOV and therefore the overall FOV. A shorter focal length provides a larger AFOV view, and therefore a larger FOV. The same is true but vice versa for longer focal lengths. [Source: <https://www.princetoninstruments.com/learn/camera-fundamentals/field-of-view-and-angular-field-of-view>]

focal length

The focal length is the distance between the main plane of an optical lens or curved mirror and the focus (focal point).

Full High Definition

Full HD resolution corresponds to 1920×1080 pixels (picture elements), which when multiplied equals 207,360 pixels, or about 2.07 megapixels.

G

GDPR

The General Data Protection Regulation (2016/679, "GDPR") is a Regulation in EU law on data protection and privacy in the EU and the European Economic Area (EEA). The GDPR is an important component of EU privacy law and of human rights law, in particular Article 8(1) of the Charter of Fundamental Rights of the European Union. It also addresses the transfer of personal data outside the EU and EEA areas. The GDPR's primary aim is to enhance individuals' control and rights over their personal data and to simplify the regulatory environment for international business. [Source: https://en.wikipedia.org/wiki/General_Data_Protection_Regulation]

GPS-Box

Precision Time Source And More The box includes a temperature and illumination sensor for outdoor use and an NTP time server for system synchronization. Tracking functions and alarms can be configured in the camera software based on position, speed, illumination and temperature. Connection via two-wire cable (MxBus).

H

High Definition

High Definition (HD) resolution is equivalent to 1280×720 pixels (picture elements), which when multiplied is equivalent to 921,600 pixels, or about 0.92 megapixels.

HiRes

Abbreviation of "Hi Resolution"

histogram

Graphical representation of a frequency distribution in the form of columns corresponding to the frequencies of the measured values (For example, the histogram of the MxManagementCenter shows a graphical representation of the distribution of the event frequency of one or more cameras).

hotspot

Hot Spots are public wireless Internet access points. They are located both in public places (some libraries, hospitals, airports, train stations, etc.)

HTTP

HTTPS

Human interface device

Human Interface Device (HID) is a device class of the USB standard for computers, which describes devices that users interact with directly. Most commonly, HID is used with devices such as keyboards, mice, joysticks, and graphics tablets. However, HID can also be used for other purposes such as relay cards, controls (buttons and switches), thermometers, multimeters, telephony, and many other uses. For this purpose, one uses a communication channel intended for application-specific purposes, which passes any data to and from the USB terminal device. The usability is limited among other things by a smaller number of end points and low data transfer rate. Individual devices can be identified by serial, product and manufacturer number. HID device drivers are included in common operating systems. If an HID device is connected (during operation), it is usually recognized directly as a device type Input Devices (Human Interface Devices) and then displayed in the Device Manager of Microsoft Windows, for example.

I

Information technology

Information technology (IT for short) stands for the technology for electronic data processing (EDP) and the hardware and software infrastructure used for this purpose. In industrialized countries, considerable parts of administration, organization, communication and entertainment are realized by means of information technology. Determining bases of the information technology are the digital microelectronics, the software technology and the EDP organization. Their scientific treatment takes place in computer science.

Input-/Output-/232-IO-Box

Additional Inputs/Outputs Video solutions from MOBOTIX can be easily integrated into existing infrastructure thanks to their decentralized architecture, and the options for expansion are practically limitless. This makes it possible to install basic but effective protection on a tight budget and expand it step by step as needed.

Irisity Anonymization App

A MOBOTIX Certified App - Professional anonymization for MOBOTIX 7 Cameras. Patented process for anonymizing people and vehicles in accordance with strict data protection guidelines.

Irisity IRIS Core AI Analytics - Intrusion

A MOBOTIX Certified App - the Iris Core AI Analytics app combines multiple features based on deep neural networks in one application. The specialized application Irisity IRIS Core AI Analytics — Intrusion reliably detects intrusions, even if the people or vehicles only cover a small part of the field of vision. Additional features of the app such as detecting people loitering, fires and unattended objects can be activated and licensed separately. - Detects when objects of interest enter user-defined recognition areas - The app reliably recognizes people and vehicles that only cover a small part of the field of vision (20 x 20 px) - False alarms are minimized by filtering out noncritical movements or objects such as trees, clouds, etc. - Triggering of MOBOTIX events via MxMessageSystem - Consolidated event search via MxManagementCenter Smart Data Interface and/or the MOBOTIX HUB

K

KEPLER NIGHT NURSE

KEPLER NIGHT NURSE is an MOBOTIX P7 compatible App for fall prevention and fall detection. The key detection features are: - Man down: Kepler Night Nurse detects a client's fall to the ground within 10 seconds. - In bed: Kepler Night Nurse detects a client who is in bed, regardless of where the bed is in the room. - Sitting on the edge of the bed: Kepler Night Nurse detects a client sitting on the edge of the bed within 10 seconds. - Out of bed: Kepler Night Nurse detects a client getting out of bed but staying in the room. - Out of the room: Kepler Night Nurse detects a client leaving the room. - In bathroom: Kepler Night Nurse detects a client going to the bathroom and can send a message when it takes a long time. - Getting up from chair: Kepler Night Nurse detects rising from a chair by a client, regardless of where the chair is located in the room. - Sitting position in bed: Kepler Night Nurse detects when a client is in sitting position in bed. The app is the main software component of the MOBOTIX c71 NightNurse camera.

L

LiDAR

Lidar (/ˈlaɪdɑːr/, also LIDAR, or LiDAR; sometimes LADAR) is a method for determining ranges (variable distance) by targeting an object or a surface with a laser and measuring the time for the reflected light to return to the receiver. It can also be used to make digital 3-D representations of areas on the Earth's surface and ocean bottom of the intertidal and near coastal zone by varying the wavelength of light. It has terrestrial, airborne, and mobile applications. Lidar is an acronym of "light detection and ranging" or "laser imaging, detection, and ranging".[4] It is sometimes called 3-D laser scanning, a special combination of 3-D scanning and laser scanning. Lidar is commonly used to make high-resolution maps, with applications in surveying, geodesy, geomatics, archaeology, geography, geology, geomorphology, seismology, forestry, atmospheric physics, laser guidance, airborne laser swath mapping (ALSM), and laser altimetry. It is also used in control and navigation for some autonomous cars and for the helicopter Ingenuity on its record-setting flights over the terrain of Mars. [Source: <https://en.wikipedia.org/wiki/Lidar>]

Long Pass Filter

A longpass (LP) Filter is an optical interference or coloured glass filter that attenuates shorter wavelengths and transmits (passes) longer wavelengths over the active range of the target spectrum (ultraviolet, visible, or infrared). Longpass filters, which can have a very sharp slope (referred to as edge filters), are described by the cut-on wavelength at 50 percent of peak transmission. In fluorescence microscopy, longpass filters are frequently utilized in dichroic mirrors and barrier (emission) filters. Use of the older term 'low pass' to describe longpass filters has become uncommon; filters are usually described in terms of wavelength rather than frequency, and a "low pass filter", without qualification, would be understood to be an electronic filter. [Source: https://en.wikipedia.org/wiki/Optical_filter#Longpass]

LPR

LPR (License Plate Recognition) is an image processing technology used to identify vehicles by their license plates.

M

M73

Weatherproof and robust, the latest generation of our successful M camera models features increased modularity as well as the latest MOBOTIX 7 system platform with intelligent Plug-In App concept. The result is a system completely unrivaled in terms of performance, functionality and design. Platform with the most flexible codec support: H.264, H.265, MxPEG+ and MJPEG - ONVIF Profile S and T conformity guarantees utmost interoperability - Increased modularity with flexible usage of a combination of up to three sensor or functional modules - 2 x 4K UHD resolution - Can optionally be used with an exchangeable CIF/VGA thermal sensor module - Wide Dynamic Range (WDR) with up to 120 dB - Easy Plug quick-mounting system - Robust in any environment: -40 to 65 °C/-40 to 149 °F, IP66, and IK10

Micro bolometer

A microbolometer is a thermal sensor for the detection of electromagnetic radiation. In addition to the detection of millimeter waves, UV and X-ray radiation, it is mainly used for the detection of mid and long wave infrared radiation. As a two-dimensional infrared focal plane array (IRFPA), they constitute the image sensor of thermal imaging cameras. Microbolometers are mainly used as detectors in wavelength ranges above about 3 μm. In this range, uncooled photodiodes are technically difficult to realize due to thermal excitation. Microbolometers can operate at room temperature - i.e. without complex cooling - but require temperature stabilization. Applications for microbolometer arrays include thermography, astronomy, surveillance, automotive, military and, more recently, smartphones. Also see: Bolometer

Milestone Alert Data

Milestone Alert Data (Alarm Events) are reported as XML.

MOBOTIX 7

open video system platform of MOBOTIX AG

MOBOTIX 7 BlockFlexMounts

BlockFlexMounts are MOBOTIX 7 optical sensor modules with minimal dimensions and prefabricated holes, enclosed in sleek aluminum blocks. For quick and easy mounting of individual integration solutions. For integration into plants: In existing installations, every millimeter is precious. That is why MOBOTIX BlockFlexMounts have small dimensions and numerous prefabricated holes for individual and stable mounting. This greatly simplifies the

integration of MOBOTIX S74 camera systems. Less space-saving standard lens holders (mounts) can be dispensed with. For discreet mounting: Video surveillance should not always be clearly visible. For mounting behind walls and ceilings as well as in objects, the BlockFlexMounts are perfect, as they are hardly visible when installed appropriately. Available variants: - 12MP IR Cut Day & Night Sensor Module, incl. Hemispheric Fisheye Lens 360° B016 - 4K IR-Cut day & night sensor module, incl. fixed lens with a model-dependent horizontal angle of view from 120° (super wide angle) to 8° (super telephoto): 120° B040, 90° B050, 60° B080, 45° B100, 30° B150, 15° B280 or 8° B500. - The S74 does not require a special firmware version to operate the BlockFlexMount modules!

MOBOTIX Activity Sensor AI

A MOBOTIX Certified App - The app's artificial intelligence-based algorithms detect and classify user-defined motion and objects in up to 20 detection areas. Best suited for: Utilities, Health Care, Energy & Mining; Industry & Production; Government; Traffic & Transportation; Retail; Healthcare; Education & Science - Motion detection of user-defined objects such as persons and/or vehicles - Detection and classification of objects based on artificial intelligence - Detection and specification of the motion direction MOBOTIX events via MxMessageSystem - Consolidated event search via MxManagementCenter Smart Data Interface - Definition of up to 20 detection areas within the camera's field of view

MOBOTIX Advanced Radiometry App

A MOBOTIX Certified App to monitor multiple temperature ranges with high accuracy on a single camera image and define different escalation levels. Connection to existing systems and integration into projects is child's play thanks to a variety of standard interfaces. - Extension of the temperature measurement functions of MOBOTIX Thermal Radiometry cameras (CNPP France compliant) - Individual calibration of up to 20 temperature measurement area (e.g. emissivity values) - Temperature events when defined temperature thresholds are exceeded - Detection of physical manipulation of the thermal sensor (e.g. sensor covered) - Reporting of temperature data and threshold status of each zone via MODBUS/TCP and JSON

MOBOTIX Analytics

A MOBOTIX Certified App - MxAnalytics collects behavioral data on individuals and objects. Detection zones are defined and counting corridors defined for this purpose. The camera then records how often the object has passed through each counting corridor within a certain period of time. In a heat map, the most frequented locations in the detection area color-

coded. In a heat map, the most frequented locations in the detection are color-coded. Furthermore movements in defined restricted areas can be detected. - Free of charge and license-free, unlimited use with any MOBOTIX 7 camera - Motion detection in (defined) restricted areas - Person/object counting based on motion detection (optional: accumulated) - Creates Heatmaps - Auto-generated counting and heat map reports Best suited for the requirements of the following industries: Utilities, Energy & Mining; Industry & Production; Government; Traffic & Transportation; Retail; Healthcare; Education & Science

MOBOTIX Analytics AI

A MOBOTIX Certified App - MOBOTIX Analytics AI recognizes objects (people, animals, vehicles). The application reliably detects the movement of these people and objects. The camera records how often the object has passed through each counting corridor within a certain period of time. Using the VMS MxManagementCenter, the numbers from several cameras can be cumulated, so that a total number is obtained for several counting corridors (e.g., entrances/exits). The special feature of MxAnalytics AI is the Deep Learning based object recognition, which allows individual analysis, e.g. "count only people or only bikes". Currently, the following object classes are detectable: Person, Bicycle, Car, Motorcycle, Airplane, Bus, Train, Truck, Boat, Bird, Cat, Dog, Horse, Sheep, Cow, Elephant, Bear, Zebra, Giraffe. In a heat map, the most frequented locations in the detection are color-coded. Furthermore movements in defined restricted areas can be detected. - Free of charge and license-free, unlimited use with any MOBOTIX 7 camera - Object recognition (people, animals, vehicles) - Motion detection in (defined) restricted areas - Person/object counting (optional: accumulated) - Creating Heatmaps - Auto-generated counting and heat map reports

MOBOTIX Barcode Reader App

A MOBOTIX Certified App for high-performance capture of almost all commercially available barcode types in video streams. Codes can be read reliably even under difficult conditions. Perspective distortions are compensated, low contrast and faded imprints are compensated. Thus, the app is suitable for industrial use. - Reader supports more than 40 common 1D, 2D and Stacked barcode types (e.g. QR Code, Data Matrix Code, Dot Code, etc.) - Optimized for difficult barcode reads (e.g. damaged, faded or distorted barcodes, barcodes on difficult surfaces, DPM codes) - Quick reading of one or multiple barcodes in motion - Definition of up to 20 detection areas within the camera's field of view - MOBOTIX events via MxMessageSystem - Supports the reporting of barcode reads via generic XML, JSON and MODBUS/TCP

MOBOTIX Bridge

The MOBOTIX CLOUD Bridge is a powerful and fast connection to the MOBOTIX Cloud. It reliably masters growing demands and data volumes. The compact box is everything you need except your video cameras. - Encrypt data and ensure your internal network is secured against any external threats - Protect against data loss during bandwidth fluctuations and extended network outages (buffer memory) - High Performance SSD (robust, fast access, energy efficient). - Supports up to 20 cameras with 4MP image resolution - Extra durable, temperature range -10 to +50 °C / 14 - 122 F

MOBOTIX Certified Apps

Certified Apps are professional, deep learning based MOBOTIX camera apps from renowned partners that are explicitly verified and certified by MOBOTIX. All Certified Apps meet the highest cyber security requirements. Thanks to the high modularity, users can use exactly the apps they need in their video system to meet their requirements. The Certified Apps are all pre-installed in the MOBOTIX M73, S74 and D71 camera firmware and can be trialed free of charge for 30 days. The selection of apps will grow with the requirements. The range of apps in the camera can be automatically updated with simple firmware updates. The configuration and operation of the apps is very simple. It is done directly via the camera firmware. Additional video management software such as MxMC is not required. Camera events and other actions are triggered by an app using the familiar MxMessage system from MOBOTIX.

MOBOTIX CLOUD App

The MOBOTIX CLOUD App 8.3.3 (iOS and Android), which will be available in the App and Google Play Stores from September 2023, now also features the AI-based Video Search function already known from the CLOUD desktop version, in addition to some general improvements. This allows you to search the recordings stored in your CLOUD according to individual criteria, such as: Person Man Woman Vehicle Backpack Any color Yellow bus Person with red shirt Green car In doing so, we have deployed an enhanced AI model across all of our data centers that improves the accuracy of search results for users.

MOBOTIX ColorRecognition App

A MOBOTIX Certified App - the MOBOTIX ColorRecognition app detects colors based on pre-defined values. Corresponding color values increase or decrease when they are hidden or visible. This means that production and process organization sub-areas can be monitored and, if necessary, automated in industry, waste disposal companies and many other sectors.

Areas of application Intelligent video technology can promote the effective use of large areas. For example, color markings in containers or dump pits can automatically determine whether these unloading points are total and you have to empty them. This saves time and effort, especially in large areas. It is almost more interesting to determine whether the spaces are being used effectively. If containers or filling pits are permanently too empty, it makes sense to adjust the containers or use the areas alternatively. In combination with other functions or events (e.g., person recognition), the app could also be used to check whether protective clothing (e.g., a high-visibility vest) is worn. It is likewise conceivable to detect snow (white surface instead of dark asphalt). This can trigger automatic alarms (clear snow) when monitoring properties remotely.

MOBOTIX CREATOR

The MOBOTIX CREATOR (Successor of the MOBOTIX CREATOR is the MOBOTIX Systemsurveyor) assists in camera placement which is automatically calculated by AI algorithms. The parameters are for you to decide based on your project application. The building or site plan of the respective project serves as the basis for planning. This is uploaded by the planner or architect, for example as a CAD file. With the push of a button a simulation which encompasses lens angle , resolution, placement, distance and form factor takes place to provide a solution. In addition to the placement and the type of camera, even the mounting accessories, the required cabling, the network to be provided and the required storage capacities are determined.

MOBOTIX EverClear

Superhydrophilic MOBOTIX EverClear nano coating transforms water droplets into an ultra-thin water film upon impact. The coating ensures best image quality in rain and difficult external conditions and it reduces reflections and noise in low-light scenarios. EverClear is dirt-repellent and increases the stability as well as the scratch-resistance of the front glass, further reducing maintenance efforts. Coating endurance up to 3 years depending on environmental conditions and cleaning treatment.

MOBOTIX High-End TR Technology

What MOBOTIX high-end TR technology can do - Detection of persons/objects that "stand out" in terms of temperature - Display of temperature differences from 0.1°C (3.4°F) - Exceeding or falling below defined temperature limits triggers event (alarm, network message, activation of a switching output) - Screening via special TR windows or the complete sensor image - Temperature range from -40 to 550°C (-40 to 1022°F) Attention: Objects have different degrees of emission. Furthermore, radiation is reflected back from other objects. To

increase the measuring accuracy, a black body radiator is therefore necessary, at best installed directly next to the object to be measured. This is the only way to ensure an exact reference value comparison. Distance and influencing environmental conditions must also be taken into account.

MOBOTIX HUB

MOBOTIX HUB is a video management platform (VMP) for businesses of all types and sizes. It integrates all elements of state-of-the-art video surveillance systems - even in highly complex structures and across multiple locations. You can choose the video management platform of your choice from five different levels (application packages) and switch to a different level if required. As an open system with ONVIF compatibility, MOBOTIX HUB can connect additional video installations and new techniques continuously. MOBOTIX HUB already supports over 10,000 devices. In addition, you can use the system to integrate a wide range of intelligent software applications for additional functions. MOBOTIX HUB combines security and analysis cameras, access control systems, security systems, sensors, software, and hardware interfaces to industrial systems and much more in a common control and user interface. You have flexible access options – that are centralized, transparent, and user-friendly - via mobile devices, laptops and PCs through the comprehensive video wall.

MOBOTIX Keyboard

Universal USB control panel for operating MOBOTIX VMS systems (MOBOTIX MxMC and MOBOTIX HUB) as well as third party VMS. For controlling MOBOTIX Speeddome and pan/tilt devices. Integrated 3-axis joystick. Integrated jog shuttle. 38 freely definable control buttons with backlight. Integrated alarm buzzer. - USB keyboard for managing CCTV applications, with joystick and jog shuttle - Functions determined by the controlled application - Customizable features - Personalizable and printable keyboard stencils - Suitable for left and right handed users - HID Controller emulation for the use with the most important VMS

MOBOTIX LIVE App

Video Remote Station - Free Of Charge For Android And iOS. With the MOBOTIX LIVE app (former MxBell) MOBOTIX cameras and MOBOTIX door stations can easily be accessed with IOS or Android smartphones or tableta. MOBOTIX LIVE displays the live and playback views of MOBOTIX cameras as well as the ringing message of a MOBOTIX IP video door station. Browse the latest events at the door station or a camera in the playback screen. View up to four different live streams from cameras in the Grid View. With automatic camera search, live screen, camera connection via SSL and display of the connection status. Features - Shows

ringing messages from MOBOTIX IP video door stations (incl. push notification) - Displays alarms (event messages) from MOBOTIX IoT cameras (incl. push notification) - Live views of MOBOTIX IP cameras with gesture-controlled PTZ function - Open the door from anywhere, hands-free - Automatic camera search, live view and camera connection via SSL - Display of the connection status - Grid View can display up to 25 IoT cameras in parallel - Playback view provides access to the latest recorded events - Grid View simultaneously shows up to four different live streams from MOBOTIX door stations or IP cameras - Visitor view shows the last events where visitors pressed a bell at one of the connected door stations - Up to 8 soft-buttons to control cameras and other IP (IoT) devices with Http/Https API commands - Supports remote connections and mobile data - From iOS 11 and Android 5.0.0 - Depending on the type of your mobile device, the app can manage over 100 cameras (Type. Examples: Apple iPhone 11 more than 130 cameras; Samsung Galaxy S9 up to 50 cameras) - Import and export of the app configuration

MOBOTIX MOVE

In addition to the decentralized IoT camera range, MOBOTIX also offers the classic centrally managed MOBOTIX MOVE camera series. This series includes three different camera types in different detailed designs: PTZ SpeedDome cameras, Bullet cameras and Dome cameras. MOBOTIX MOVE cameras are central video systems in the ONVIF S/G/T standard with H.264/H.265 and require an additional central data storage (e.g. MOBOTIX NAS) and a video management system that supports the ONVIF standard (e.g. MxMC).

MOBOTIX MOVE 2MP ALPR Camera VB-2-IR-ALPR

MOBOTIX MOVE ALPR Vandal Bullet Network Camera VB-2-IR-ALPR (car license plate recognition) - integrated professional international license plate recognition for stationary and slow moving vehicles up to 18m distance - incl. MMC (make, model, color -recognition) - ALPR license key pre-installed - Max. Image resolution: 2 MP / 1080p (Full-HD), 1/2.8" Progressive CMOS (SONY) - Weatherproof ONVIF S/G/T/M vandal-proof bullet camera with integrated IR LEDs (up to 60m) for day and night use - Automatic switching from color to B/W image (mechanical IR cut filter) - Light sensitivity: color 0.02lx, B/W: 0.001lx, IR: 0lx - Remote zoom/focus - Motorized varifocal lens (F1.6-F2.9: 2.7 to 12 mm, angle of view H: 102.1°-31.5°, V: 70.3°-22.7°), auto-iris with automatic adjustment to changing light situations - Video codecs: H.264, H.265 MJPEG (up to 4 video streams simultaneously) - True WDR (130 dB) - Max. Frame rate: 2 MP H.264, H.265 @ 30 fps; MJPEG: 1080p @ 30 fps - Bi-directional audio (line in/out) - Alarm I/O - 64 GB SD card pre-installed - Power supply: PoE IEEE802.3af, class 0, max 12.95 watt, DC12V, 15.59 watt, AC24V, max 13.31 watt, max 25.08 VA - IP67, IK10 -

Ambient temperature -55 to 60 °C (heater On), Rel. humidity 10 to 90% non-condensing - Hardened and "self-cleaning" anti-reflective camera front glass coating with MOBOTIX EverClear - MTBF: 95,000h - Warranty: 5 years.

MOBOTIX MOVE 2MP ALPR Camera VB-2-IR-D-ALPR

MOBOTIX MOVE ALPR Vandal Bullet Network Camera VB-2-IR-D-ALPR (car license plate recognition) - integrated professional international license plate recognition for slow and fast moving vehicles up to 35m distance - incl. MMC (make, model, color -recognition) - ALPR activation license key pre-installed - Max. Image resolution: 2 MP / 1080p (Full-HD), 1/2.8" Progressive CMOS (SONY) - Weatherproof ONVIF S/G/T/M vandal-proof bullet camera with integrated IR LEDs (up to 60m) for day and night use - Automatic switching from color to B/W image (mechanical IR cut filter) - Light sensitivity: color 0.02lx, B/W: 0.001lx, IR: 0lx - Remote zoom/focus - Motorized zoom lens (F1.6-F2.4: 9 to 22 mm, angle of view H: 36.1°-15.4°, V: 19.8°-8.8°), auto-iris with automatic adjustment to changing light situations - Video codecs: H.264, H.265 MJPEG (up to 4 video streams simultaneously) - True WDR (130 dB) - Max. Frame rate: 2 MP H.264, H.265 @ 30 fps; MJPEG: 1080p @ 30 fps - Bi-directional audio (line in/out) - Alarm I/O - 64 GB SD card pre-installed - Power supply: PoE IEEE802.3af, class 0, max 12.95 watt, DC12V, 15.59 watt, AC24V, max 13.31 watt, max 25.08 VA - IP67, IK10 - Ambient temperature -55 to 60 °C (heater On), Rel. humidity 10 to 90% non-condensing - Hardened and "self-cleaning" anti-reflective camera front glass coating with MOBOTIX EverClear - MTBF: 95,000h - Warranty: 5 years.

MOBOTIX MOVE 2MP Vandal Bullet Analytics

Performant 2MP, full HD 1080p resolution camera with integrated Video Analytics features, perfect for the daily security and surveillance needs. The camera performs fast and reliable auto focus and adapts to different indoor and outdoor scenes. The MOBOTIX MOVE 2MP Vandal Bullet Analytics Camera extends the existing range of MOVE IP Camera series with a performant 2MP resolution camera with DNN (Deep Neural Network) video analytics features. The camera performs fast and reliable auto focus and adapts to different indoor and outdoor scenes. The integrated MOBOTIX MxMessageSystem allows direct communication and interaction with MOBOTIX IoT cameras via the IP network. The MOBOTIX EverClear superhydrophilic and self-cleaning nano coating of the front glass ensures best image quality even in rain and reduces cleaning efforts and operational costs. - EverClear coating of front glass - Motorized Vari-Focal Lens 2.7 to 12 mm, F1.6 to F2.9 with Zoom and One-Push Auto Focus - Wide Dynamic Range (WDR) max. 130 dB - MOBOTIX MxMessageSystem communication system - Integrated Video Analytics - Integrated IR LEDs up to 40 m Distance -

ONVIF Profile S/G/T/M support - Triple Power Support (PoE/12 VDC/24 VAC) - Temperature Range -55 to 60 °C/-67 to 140 °F with activated heater - IP67 and IK10

MOBOTIX MOVE 2MP Vandal Dome

A performant 2MP, full HD 1080p resolution camera for the daily security and surveillance needs. The camera easily adapts to different indoor and outdoor scenes. - 2.8 to 12 mm Manual Vari-Focal Lens - Wide Dynamic Range (WDR) max. 130 dB - Light Sensitivity: Color 0.08 lux, B/W 0.008 lux - PoE Power Support - Integrated IR LEDs up to 40 m distance - Outdoor suitable (IP66) and vandal proof design (IK10) - ONVIF Profile S/G/T/M support - Temperature Range -55 to 60 °C/-67 to 140 °F

MOBOTIX MOVE 2MP Vandal Fixed Dome Analytics

Performant 2MP, full HD 1080p resolution camera with integrated Video Analytics features, perfect for the daily security and surveillance needs. The camera performs fast and reliable auto focus and adapts to different indoor and outdoor scenes. The MOBOTIX MOVE 2MP Vandal Fixed Dome Analytics Camera extends the existing range of MOVE IP Camera series with a performant 2MP resolution camera with DNN (Deep Neural Network) video analytics features. The camera performs fast and reliable auto focus and adapts to different indoor and outdoor scenes. The integrated MOBOTIX MxMessageSystem allows direct communication and interaction with MOBOTIX IoT cameras via the IP network. The MOBOTIX EverClear superhydrophilic and self-cleaning nano coating of the dome ensures best image quality even in rain and reduces cleaning efforts and operational costs. - EverClear coating of dome - Motorized Vari-Focal Lens 2.7 to 12 mm, F1.6 to F2.9 with Zoom and One-Push Auto Focus - Wide Dynamic Range (WDR) max. 130 dB - MOBOTIX MxMessageSystem communication system - Integrated Video Analytics - Integrated IR LEDs up to 40 m Distance - ONVIF Profile S/G/T/M support - Triple Power Support (PoE/12 VDC/24 VAC) - Temperature Range -55 to 60 °C/-67 to 140 °F - IP66 and IK10 - Quick Connection Mount

MOBOTIX MOVE 4K (8MP) Vandal Bullet Analytics

Performant 4K (8MP) resolution camera with integrated Video Analytics features, perfect for the daily security and surveillance needs. The camera performs fast and reliable auto focus and adapts to different indoor and outdoor scenes. The MOBOTIX MOVE 4K (8MP) Vandal Bullet Analytics Camera extends the existing range of MOVE IP Camera series with a performant 4K (8MP) resolution camera with DNN (Deep Neural Network) video analytics features. The camera performs fast and reliable auto focus and adapts to different indoor and outdoor scenes. The integrated MOBOTIX MxMessageSystem allows direct communication and interaction with MOBOTIX IoT cameras via the IP network. The MOBOTIX EverClear

superhydrophilic and self-cleaning nano coating of the front glass ensures best image quality even in rain and reduces cleaning efforts and operational costs. - EverClear coating of front glass - Motorized Vari-Focal Lens 3.6 to 11 mm, F1.5 to F2.0 with Zoom and One-Push Auto Focus - Wide Dynamic Range (WDR) max. 130 dB - MOBOTIX MxMessageSystem communication system - Integrated Video Analytics (DNN ready) - Integrated IR LEDs up to 40 m Distance - ONVIF Profile S/G/T/M support - Triple Power Support (PoE/12 VDC/24 VAC) - Temperature Range -55 to 60 °C/-67 to 140 °F with activated heater - IP67 and IK10

MOBOTIX MOVE 4K (8MP) Vandal Fixed Dome Analytics

Performant 4K (8MP) resolution camera with integrated Video Analytics features, perfect for the daily security and surveillance needs. The camera performs fast and reliable auto focus and adapts to different indoor and outdoor scenes. The MOBOTIX MOVE 4K (8MP) Vandal Fixed Dome Analytics Camera extends the existing range of MOVE IP Camera series with a performant 4K (8MP) resolution camera with DNN (Deep Neural Network) video analytics features. The camera performs fast and reliable auto focus and adapts to different indoor and outdoor scenes. The integrated MOBOTIX MxMessageSystem allows direct communication and interaction with MOBOTIX IoT cameras via the IP network. The MOBOTIX EverClear superhydrophilic and self-cleaning nano coating of the dome ensures best image quality even in rain and reduces cleaning efforts and operational costs. - EverClear coating of dome - Motorized Vari-Focal Lens 3.6 to 11 mm, F1.5 to F2.0 with Zoom and One-Push Auto Focus - Wide Dynamic Range (WDR) max. 130 dB - MOBOTIX MxMessageSystem communication system - Integrated Video Analytics (DNN ready) - Integrated IR LEDs up to 40 m Distance - ONVIF Profile S/G/T/M support - Triple Power Support (PoE/12 VDC/24 VAC) - Temperature Range -55 to 60 °C/-67 to 140 °F with activated heater - IP66 and IK10 - Quick Connection Mount

MOBOTIX MOVE 5MP Indoor Micro Dome

The MOBOTIX MOVE 5MP Indoor Micro Dome Camera is equipped with a small yet robust 3-axis gimbal design. The fixed lens can be adjusted to the desired angle, allowing to capture the ideal field of view even when installing the camera at an unfavorable position. The WDR engine utilizes state-of-the-art image processing technology, providing up to 5-megapixel, high-quality WDR video with IR illumination. Its WDR capability captures more image details under challenging light conditions, such as receptions, hallways, and staircases. - Progressive Scan CMOS Sensor supports up to 2720x1976 (5MP) resolution - True WDR 120 dB - Multi Codec support (H.265/H.264/MJPEG) - Low-Latency Streaming/Quad Streams support - True Day/Night function (ICR) - IR LEDs (working distance up to 15 m) - Audio support (integrated microphone and speaker) - 3D Motion Compensated Noise Reduction (MCTF) - Smart

Event functions: - Motion Detection - Network Failure Detection/Tampering Alarm - Periodical Event/Manual Trigger - Text Overlay and Privacy Masks - Micro SD/SDHC/SDXC Card support (SD up to 1TB) - ONVIF Profile S/G/T support

MOBOTIX MOVE 5MP Vandal Bullet Analytics

Performant 5MP resolution camera with integrated Video Analytics features for the daily security and surveillance needs. The camera performs fast and reliable auto focus and adapts to different indoor and outdoor scenes.
n EverClear coating of front glass - Motorized Remote Zoom & Focus - Motorized Vari-Focal Lens 2.7 to 12 mm, F1.6 to F2.9 with One-Push Auto Focus - Wide Dynamic Range (WDR) max. 130 dB - MOBOTIX MxMessageSystem communication system - Integrated Video Analytics - Integrated IR LEDs up to 40 m Distance - ONVIF Profile S/G/T support - Triple Power Support (PoE/12 VDC/24 VAC) - Extended Temperature Range: -40 to 60 °C/-40 to 140 °F (min. temp. for cold start -30 °C/-22 °F) - IP66 and IK10

MOBOTIX MOVE 5MP Vandal Fixed Dome Analytics

Performant 5MP resolution camera with integrated Video Analytics features for the daily security and surveillance needs. The camera performs fast and reliable auto focus and adapts to different indoor and outdoor scenes.
n EverClear coating of dome - Motorized Remote Zoom & Focus - Motorized Vari-Focal Lens 2.7 to 12 mm, F1.6 to F2.9 with One-Push Auto Focus - Wide Dynamic Range (WDR) max. 130 dB - MOBOTIX MxMessageSystem communication system - Integrated Video Analytics - Integrated IR LEDs up to 40 m Distance - ONVIF Profile S/G/T support - Triple Power Support (PoE/12 VDC/24 VAC) - Extended Temperature Range: -40 to 60 °C/-40 to 140 °F (min. temp. for cold start -30 °C/-22 °F) - IP66 and IK10 - Quick Connection Mount

MOBOTIX MOVE CMS

A Management App for MOBOTIX MOVE NVR. The app is available for Microsoft Windows only.

MOBOTIX MOVE NVR

MOBOTIX now offers the MOVE NVR (Network Video Recorder), a particularly practical and easy-to-use plug & play solution - ideal for local video surveillance systems with a limited number of MOBOTIX MOVE cameras. This compact end-to-end video solution is recommended for numerous applications: in retail stores, restaurants or private homes - whenever the existing video analysis functions of the MOBOTIX MOVE cameras are sufficient. All connected cameras are supported by the integrated, cost- and license-free MOBOTIX MOVE NVR

video management software, which is tailored to the MOBOTIX MOVE cameras Benefits - Just plug & play: Connect cameras and monitor to MOBOTIX MOVE NVR and directly see live images - Everyday use does not require any specialized video knowledge - Direct connection of up to two high-resolution displays, keyboard, mouse and joystick - Once installed, the MOBOTIX MOVE NVR system does not incur any further costs - Local standalone video systems are safe from cyber attacks

MOBOTIX MOVE PTZ SpeedDome Mx-SD1A-540-IR-VA

High-Quality PTZ Camera by MOBOTIX 5MP Speed Dome IR Light Video Analytics Camera
PRODUCT PROFILE: - Image sensor SONY STARVIS II, 5MP 1/2.8" Progressive CMOS IMX675 - Resolution 2608 x 1964 Pixel - Ambarella CV25 Processor - P-IRIS / Auto-IRIS / WDR - Light sensitivity: 0.02Lx color - 40x optical zoom - Motorized zoom lens (F1.6-F4.95: 4.3 to 170 mm) - Horizontal FOV: 62.6° (wide), 1.9° (tele) - Vertical FOV: 48.8° (wide), 1.4° (tele) - Infrared illumination up to 300 m - 10 analytics functions incl. DNN face and car license plate recognition - MxMessage communication system

MOBOTIX MOVE PTZ SpeedDome Mx-SD1A-831-LIR-VA

High-Quality PTZ Camera by MOBOTIX 4K Speed Dome IR Light Video Analytics Camera
PRODUCT PROFILE: - LiDAR autofocus system - Image sensor SONY STARVIS II, 8MP 1/1.8" Progressive CMOS IMX678 - Resolution 3856 x 2180 pixels (4k) - Ambarella CV25 Processor - P-IRIS / Auto-IRIS / WDR - Light sensitivity: 0.08 Lx color - 31x optical zoom - Motorized zoom lens (F1.35-F4.6: 6.9 to 214.6 mm) - Horizontal FOV: 61.8° (wide), 2.2° (tele) - Vertical FOV: 35.9° (wide), 1.3° (tele) - Infrared illumination up to 300 m - 10 analytics functions incl. DNN face and car license plate recognition - MxMessage communication system

MOBOTIX MOVE PTZ SpeedDome Mx-SD2A-230-LL-FM-VA

High-Quality PTZ Camera by MOBOTIX 2MP Speed Dome Low-Light Flush Mount Video Analytics Camera
PRODUCT PROFILE: - Flush Mount - Image sensor SONY STARVIS II, 2MP 1/2.8" Progressive CMOS IMX662 - Resolution 1965 x 1113 Pixel - Ambarella CV25 Processor - Low Light / P-IRIS / Auto-IRIS / WDR - Light sensitivity: 0.01 Lx color, 0.001 lx b/w - 30x optical zoom - Motorized zoom lens (F1.6-F4.7: 4.3 to 129 mm) - Horizontal FOV: 59.3° (wide), 1.9° (tele) - Vertical FOV: 34.9° (wide), 1.4° (tele) - 10 analytics functions incl. DNN face and car license plate recognition - MxMessage communication system

MOBOTIX MOVE PTZ SpeedDome Mx-SD2A-230-LL-VA

High-Quality PTZ Camera by MOBOTIX 2MP Speed Dome Low Light Video Analytics Camera
PRODUCT PROFILE: - Image sensor SONY STARVIS II, 2MP 1/2.8" Progressive CMOS IMX662 -

Resolution 1965 x 1113 Pixel - Ambarella CV25 Processor - Low Light / P-IRIS / Auto-IRIS / WDR - Light sensitivity: 0.01 Lx color, 0.001 lx b/w - 30x optical zoom - Motorized zoom lens (F1.6-F4.7: 4.3 to 129 mm) - Horizontal FOV: 59.3° (wide), 1.9° (tele) - Vertical FOV: 34.9° (wide), 1.4° (tele) - 10 analytics functions incl. DNN face and car license plate recognition - MxMessage communication system

MOBOTIX MOVE SD-230 SpeedDome 2MP Low-Light

The MOBOTIX MOVE SD-230 2MP PTZ SpeedDome camera features enhanced light sensitivity of up to 0.001 lux. In the event of external influences such as vandalism or vibrations, the motorized Outdoor PTZ camera immediately returns to its original position thanks to servo feedback technology. It is easy to install and ready to use. - Weatherproof 2MP network camera with H.264, H.265, ONVIF S/G/T and WDR - Motor-controlled, fine-mechanical tilting and panning function - Servo feedback avoids drifting in case of vandalism or vibration - Low-light camera module with 2MP resolution (1945 x 1097) - High light sensitivity (min. 0.001 lx in black and white mode/0.02 lux in color mode) - Automatic day/night switching with infrared blocking filter - IP66, IK10, ambient temperature range: -40 to 55 °C (-40°F to 131°F) - MOBOTIX EverClear nano-coating for the highest image quality even in the rain

MOBOTIX MOVE SpeedDome SD-330

The motor-controlled Outdoor PTZ camera features servo feedback technology and an electronic image stabilizer. These functions offer decisive advantages in places with strong air circulation (wind, heavy vehicles) – especially when using a higher optical zoom. - Weatherproof 3MP network camera with H.264, H.265, ONVIF S/G/T and WDR - Motor-controlled, fine-mechanical tilting and panning function - Up to 30x optical zoom - Recording on NAS or an internal SD card (not included) - Automatic day/night switching with infrared blocking filter - IP66, IK10, ambient temperature range: -40 to 55 °C (-40°F to 131°F) - Replacement domes (clear/tinted), wall, pole and corner mounts optional

MOBOTIX MOVE SpeedDome SD-340-IR

The extremely fast panning and tilt technology with powerful, long-lasting and at the same time energy-saving electric motors obtains the desired results more quickly. Clear images, even at the highest zoom level and under any lighting conditions, are also a part of our Premium PTZ camera's seamless, complete range of features. - Weatherproof 3MP network camera with H.264, H.265, ONVIF S/G/T and WDR - Motor-controlled, fine-mechanical tilting and panning function - Up to 40x optical zoom - Automatic day/night switching with infrared blocking filter - Integrated infrared lighting (LED, up to 200 m) - Recording on NAS or an

internal SD card (not included) - IP66, ambient temperature range: -40 to 55 °C (-40°F to 131°F) - Wall, pole and corner mounts optional

MOBOTIX MOVE Vandal Multisensor Camera 4x5MP

MOBOTIX MOVE Vandal Multisensor Camera 4x5MP has four sensor modules which can be arranged next to each other as required and thus optimally aligned to the detection area. Each sensor module can be tilted by up to 90 degrees. In addition, it can be rotated in 20 degrees to the left and right respectively. With its individually adjustable sensor modules, the multisensor camera provides four independent plus a combined video stream with up to 360° coverage. Each individual image sensor has a resolution of up to 5MP and an individually adjustable angle of view of 53.7°-111.5° (horizontal) and 40.2°-79° (vertical). Typical applications: - Industrial plants - Parking and waiting areas (indoor or outdoor) - Public areas and buildings, prisons - City/traffic control - Casinos, hotel lobbies - Sales and storage areas - Airports, train stations, ports - Sports facilities - Up to 8 individual video streams plus a single combined 4-sensor stream (20MP, 360° possible) - 4 individual, manually alignable sensor modules with vario lens (F1.6 2.8-8 mm) - Multi codec support (H.265/H.264/MJPEG) - True day/night function and integrated IR illumination, WDR - 3D Motion Compensated Noise Reduction (MCTF) - M.2 SATA3 SSD support for high-performance in-camera recording - Additional support for Micro SD/SDHC/SDXC cards - 10 integrated video analysis functions with Deep Neural Network accelerated engine, similar to the new MOBOTIX MOVE PTZ cameras (for details see next section 3) or 4K MOVE VA cameras - ONVIF profile S/G/T/M support - MOBOTIX EverClear coating - FIPS140-2 compliance (level 3) by using a certified "Trusted Platform Module" TPM - Weatherproof (IP66) and vandal-proof (IK10) - NEMA 4x compliant - Camera weight: 2.4 kg (5.3 lb)

MOBOTIX NAS

MOBOTIX Storage And ONVIF-S Recorder - Perfect device to store MOBOTIX IoT cameras, MOBOTIX MOVE cameras and ONVIF-S based IP cameras. Through our VMS (MxMC). 2.0 and higher) the user can playback all recording of the MxNAS including the ONVIF-S footage. A highly efficient complete solution with secure data storage from a single source, which now allows decentralized and centralized video components to be easily combined. - Integrated recording software supports MJPEG, H.264 and ONVIF-S compatible network cameras - Unlimited number of recording channels for MOBOTIX IoT cameras (with MxPEG+ video codec) - Hot swappable HDD, redundant power supply and support of external JBOD storage - Recording software supports MOBOTIX MOVE and third-party ONVIF cameras - Ready for up

to 32 ONVIF recording channels - No license fees required for MOBOTIX IoT cameras - Fully supported by MOBOTIX

MOBOTIX p71 ECO Thermal

The MOBOTIX p71 ECO Thermal camera provides you with a low-cost basic thermal solution for indoor use with a wide viewing angle. Reliably cover a wide range of basic applications such as perimeter protection, intrusion prevention and temperature monitoring. - Single-lens indoor thermal camera - Versatile since it can be manually adjusted along three axes - Wide viewing angle of up to 105° x 75° - CIF resolution (320x240), 9 fps - Visible Temperature range from -40 to +330°C - MOBOTIX 7 Platform with app support - Integrated Audio (Mic & Speaker)

MOBOTIX Partner Toolbox

A free sales promoted platform and app for business partners of MOBOTIX AG. It offers a comprehensive selection of customizable marketing materials. This includes brochures, industry flyers, videos, image download center, application examples, product catalog and lens tables.

MOBOTIX SYNC

MOBOTIX SYNC is a Management Server which store metadata and attached images generated by MOBOTIX Certified Apps (e.g. Vaxtor ALPR / OCR Apps) or other compatible data sources. The main features are: - Store metadata and attached images generated by MOBOTIX Certified Apps (e.g. Vaxtor ALPR / OCR Apps) or other compatible data sources, - 4 camera device licenses included (additional camera device licenses via additional license on demand), - Monitor incoming license plates / metadata (e.g. plate reads) in real time, - Search and filter existing license plates / metadata based on content such as Plate, Country, Camera, Zone, Make, Model, Color, Direction, etc., - Download and export customized license plate lists and search results, - Management of cameras includes: -- Camera zones, -- Manage and synchronize denied & granted license plate list, -- Assign actuators (incl. camera I/Os), - Manage data retention policies separately for images and metadata, - Supports GDPR measures with dedicated reports and data deletion - Granular user and group permissions, - Login management including LDAP integration, - Audit trail of all interactions on the system including actions made by cameras, - Send notifications (e.g. via E-Mail), - SYNC server license with runtime of 3 years after activation.

MOBOTIX Thermal Dashboard

PlugIn for MOBOTIX HUB and MxMC. With the PlugIn thermal values can be displayed in diagram form in addition to camera and thermal images. This makes it easy to identify the causes of temperature spikes and drops and to create evaluations.

MOBOTIX Thermal Heat Detection App

A MOBOTIX Certified App which is approved by the CNPP. Suitable for early fire detection and reliable monitoring of critical areas. Monitor multiple temperature ranges with high accuracy on a single camera image and define different escalation levels. Connection to existing systems and integration into projects is a breeze. - Extension of the temperature measurement functions of MOBOTIX Thermal Radiometry cameras (according to CNPP France 19005 certification) - Definition of up to 20 temperature measurement areas within the field of view of the camera - Individual calibration of each temperature measurement area (e.g. emissivity values) - Temperature events when defined temperature thresholds are exceeded - Detection of physical manipulation of the thermal sensor (e.g. covering the sensor) - MOBOTIX events via MxMessageSystem - Required for the installation of a CNPP-certified thermal camera

MOBOTIX Thermal Validation App

A MOBOTIX Certified App which is able to deliver reliable results for the use of thermal cameras. The main features are: - Filters out vehicles as a non-critical heat source. - Reduces false alarms - Can be run in parallel with other apps. - Extension of the temperature measurement functions - Filters out vehicles as a non-critical heat source. - Reduces false alarms - Can be run in parallel with other apps. - Extension of the temperature measurement functions

Modbus

The Modbus protocol is a communication protocol based on a client/server architecture. It was created in 1979 by Gould-Modicon for communication with its programmable logic controllers. In the industry, Modbus has become a de facto standard because it is an open protocol. Since 2007, the Modbus/TCP version has been part of the IEC 61158 standard. Using Modbus, a client (e.g. a PC) and several servers (e.g. measurement and control systems) can be connected. There are two versions: One for the serial interface (EIA-232 and EIA-485)[2] and one for Ethernet. Three different operating modes are distinguished for data transmission: - Modbus/RTU - Modbus/ASCII - Modbus/TCP Each bus participant must have a unique address. The address 0 is reserved for a broadcast. Each participant may send mes-

sages via the bus. As a rule, however, this is initiated by the client and an addressed server responds.

MQTT

MQTT (originally MQ Telemetry Transport) is an open network protocol for machine-to-machine (M2M) communication that enables the transmission of telemetry data in the form of messages between devices, despite high delays or limited networks. Corresponding devices range from sensors and actuators, cell phones, embedded systems in vehicles or laptops to fully developed computers. MQTT was an acronym for MQ Telemetry Transport until version 3.1, where MQ is derived from MQSeries and stands for Message Queueing. With version 3.1.1 it was defined that MQTT does not stand for any acronym. The MQTT protocol is also known under older names such as "WebSphere MQTT" (WMQTT), "SCADA Protocol" or "MQ Integrator SCADA Device Protocol" (MQIsdp). The Internet Assigned Numbers Authority (IANA) reserves ports 1883 and 8883 for MQTT. MQTT messages can be encrypted using the TLS protocol. An MQTT server ("broker") holds the entire data set of its communication partners and can thus be used as a state database. Thus, it is possible to connect small unperformant MQTT devices to an MQTT broker, where the devices collect data and/or receive commands, while a complex state picture is only created on the MQTT broker and can be evaluated here or by a powerful communication partner. Location interventions can thus be transmitted to the MQTT broker by one or more powerful instances and propagated to the individual devices. Thus, MQTT is very well suited for automation solutions and is widely used in the field of IoT due to its ease of use. Specification The MQTT specification distinguishes TCP/IP-based and non-TCP/IP networks and systems. Main specification The protocol enables an observer behavior pattern in a simple way. It is particularly suitable for connections that allow only a small amount of administrative data. The OASIS standardization process is based on version 3.1 of the MQTT specification. Version 5 was released in January 2018, which should make it more convenient for developers to use. Specification of MQTT-SN (formerly MQTT-S), version 1.2 (MQTT for Sensor Devices). Designed for embedded devices on non-TCP/IP networks, such as ZigBee. MQTT-SN is an observer pattern messaging protocol for sensor networks. It extends MQTT for use beyond TCP/IP infrastructure and is particularly optimized for use with sensor and actuator solutions. The original name was MQTT-S. However, this created misunderstandings (s for secure?), so in 2013 a renaming to MQTT-SN was initiated (SN for Sensor Networks). [Source: <https://de.wikipedia.org/wiki/MQTT>]

MX-GPS-Box

Weatherproof GPS timer for MOBOTIX systems including outdoor temperature sensor and brightness sensor. Connection via MxBus 2-wire connection. Box can be mounted in the wall bracket of the M1x, M2x, D1x and D2x in an access-proof manner

MX-NPA-Box

Weatherproof PoE injector and network connectors"

MX-Overvoltage-Protection-Box

Network connector with surge protection

MxAnalytics

MxAnalytics analyzes the behavior of people and objects. Statistical behavioral data of people and objects is collected. For this purpose, detection zones are defined (complete live full image or partial image) and counting corridors are defined. The camera then records how often each counting corridor is traversed within a specific time period. In a heatmap, the most frequently used locations in the detection zone are marked in colour.

MxBus

Smart Functional Extension Solution For MOBOTIX IoT Systems Originally developed for the MOBOTIX IP video door station, the encrypted (128 bit) MxBus system represents the uncomplicated, easily expandable and cost-effective communication system for numerous peripherals of MOBOTIX IoT cameras and is a core component in the MOBOTIX decentralized system. With MxBus, IO-functions for smart homes and alarm systems can be easily extended to the cameras or the IP door station. MOBOTIX offers IO-, GPS-, temperature- and other accessories as well as radar-based proximity sensors via MxBus. - Encrypted transmission of data (9,600 baud) and power - Simultaneous supply and use of up to 7 MxBus modules on one camera - Maximum length of MxBus two-wire cable: 100 m (solid wire YSTY, core diameter 0.6 to 0.8 mm) - Configuration of MxBus modules via camera software (firmware) - MxBus comes as a standard function for all MOBOTIX IoT video systems

MXCloud

A scalable cloud video management system for an unlimited number of websites and users

MxControlCenter

MxControlCenter is a video management system from MOBOTIX

MxDigitizer

Interface Box for Integrating Analog Cameras

MxDisplay+

MxDisplay+ is an IP-based remote station for IP video door stations. It supports gesture control and manages access to the T26 IP video door station, all MOBOTIX cameras and the time-based access control for each entrance, reads and writes RFID transponders, controls Smart Home functions and acts as an alarm center. Without a PC or additional infrastructure.

MxFFS

short for MOBOTIX Flash File System

MxManagementCenter

MxManagementCenter is a video management software from MOBOTIX AG for setting up and using a video surveillance system with a wide range of functions for different tasks and user groups.

MxMessage

A message transmitted within the MXMessageSystem

MxMessageSystem

The MxMessageSystem is a communication system based on name-oriented messages. This means that a message (MxMessage) must have a unique name with a maximum length of 32 bytes.

MxMultiSense

Weatherproof multi-sensor module with four environmental sensors: passive infrared sensor PIR, brightness sensor, temperature sensor ($\pm 0.1^{\circ}\text{C}$ / 0.18°F) and acoustic sensor (level of sound waves)

MxPEG

MxPEG is a video codec and also a simple audio/video container format. MxPEG was developed by Mobotix in 2000. The goal was to have an encoder that could work on underpowered CPUs (for example, Intel StrongArm running at 206 MHz) and without any dedicated video compressing hardware. MxPEG was designed to be closely related to JPEG. Basically, it should add interframe compression where Motion JPEG (MPEG) only makes use of JPEG's

intraframe compression. This typically yields a bandwidth reduced by two thirds, compared to Motion JPEG.

MxProximityBox

Weatherproof proximity sensor for MOBOTIX systems Precise detection of approaching objects based on radar microwave technology Detection range (horizontal x vertical): 80° x 34° range: up to 8 m (person), up to 20 m (vehicle) Camera connection and power supply via MxBus Protection class IP66/IK07, -20 to 60 °C Box can also be mounted behind wooden, plastic, glass or drywall walls The MX Proximity Box cannot be mounted behind certain materials, as these materials further Radar waves are impermeable (e.g., glass, wood, plastic, glass, plastic). e.g. metal or metal-coated surfaces). Other materials are suitable because they only dampen the radar waves slightly (e.g. uncoated glass, plastic, various wood-based materials, plasterboard).

MxSwitch

PoE+ switch for hat rails PoE switch that can be easily installed on the hat rail in small electrical cabinets. MxSwitch supplies power to up to four PoE devices (for example, MOBOTIX cameras, infrared illuminators) while also making it incredibly easy to connect and power a complete Door Station, thanks to exclusive MOBOTIX MxSwitch technology.

MxThinClient

IP-Videointerface to display the live image of a MOBOTIX camera on a monitor or TV set with HDMI connection.

N

NAS

Network Attached Storage (NAS) refers to easy to manage file servers. In general, a NAS is used to provide independent storage capacity in a computer network without a lot of effort.

NETD

The NETD value (Noise Equivalent Temperature Difference) indicates the smallest possible temperature difference that can be displayed by a thermal imaging camera. The smaller the NETD value, the finer and clearer the image of the thermal imaging camera. The NETD value is given in mK.

NPA-Box

Weatherproof PoE injector The Network Power Adapter box (NPA) is an interface box for network connection of the camera with simultaneous PoE power supply from external power supplies or batteries with 12 to 57 V DC. Ideally suited for battery-powered mobile video systems.

O

OCR

OCR, Optical Character Recognition, or text recognition, is a technology that enables the conversion of various documents, such as scanned paper documents, PDF files or digital images, e.g. video images of car license plates, into editable and searchable data.

ONVIF

ONVIF (Open Network Video Interface Forum) is an open industry forum that provides and promotes standardized interfaces for effective interoperability of IP-based physical security products.

ONVIF Profile A

For door control and event management Site information and configuration Event and alarm management Door access control ONVIF Profile A is for products used in an electronic access control system. A Profile A conformant device can retrieve information, status and events, and configure entities such as access rules, credentials and schedules. A Profile A conformant client can provide configurations of access rules, credentials and schedules. The client can also retrieve and receive standardized access control-related events.

ONVIF Profile C

For door control and event management Site information and configuration Event and alarm management Door access control ONVIF Profile C is for products used in an electronic access control system. Profile C conformant devices and clients support site information, door access control, and event and alarm management.

ONVIF Profile G

For edge storage and retrieval Configure, request and control recording Receive audio and metadata stream ONVIF Profile G is designed for IP-based video systems. A Profile G device (e.g., an IP network camera or video encoder) is one that can record video data over an IP network or on the device itself. A Profile G client (e.g., a video management software) is one

that can configure, request, and control recording of video data over an IP network from a Profile G conformant device. Profile G also includes support for receiving audio and metadata stream if the client supports those features.

ONVIF Profile S

For basic video streaming Video streaming and configuration ONVIF Profile S is designed for IP-based video systems. A Profile S device (e.g., an IP network camera or video encoder) is one that can send video data over an IP network to a Profile S client. A Profile S client (e.g., a video management software) is one that can configure, request, and control video streaming over an IP network from a Profile S device. Profile S also covers ONVIF specifications for PTZ control, audio in, multicasting and relay outputs for conformant devices and clients that support such features.

ONVIF Profile T

For advanced video streaming H.264 / H.265 video compression Imaging settings Motion alarm and tampering events Metadata streaming Bi-directional audio ONVIF Profile T is designed for IP-based video systems. Profile T supports video streaming features such as the use of H.264 and H.265 encoding formats, imaging settings, and alarm events such as motion and tampering detection. Mandatory features for devices also include onscreen display and metadata streaming, while mandatory features for clients also include PTZ control. Profile T also covers ONVIF specifications for HTTPS streaming, PTZ configuration, motion region configuration, digital inputs and relay outputs, and bidirectional audio for conformant devices and clients that support such features.

P

p71

The MOBOTIX p71 indoor camera impresses with its flexibility and wide range of applications. The viewing angle can be adjusted on three axes to any point in the room. With integrated audio capabilities and infrared LEDs, the camera can be used reliably day and night. The various apps for the MOBOTIX P7 platform make the p71 even more powerful, offering comprehensive automation solutions as well as video analysis functions, evaluations and much more. It is used in companies in all industries as well as in sensitive private areas. - MOBOTIX7 Platform with app support - Flexible codec support: H.264, H.265, MxPEG+ and MJPEG - ONVIF Profile G, S, T conformity guarantees utmost interoperability - 4K UHD or 4MP

ULL resolution - Integrated Audio (Mic & Speaker) - Integrated IR LED up to 30m - Wide Dynamic Range (WDR) with up to 120 dB

Pelco-D

Pelco-D is a popular PTZ (Pan / Tilt / Zoom) camera control protocol used in the CCTV industry.

Perimeter protection

The term perimeter protection is defined as safeguarding the surroundings of a building, facility or installation and includes the protection of the outer zone as part of a complete security concept. Depending on the protection level and structural conditions, a reliable and effective security solution is required which is able to recognize reliably and immediately potential threats around the clock, every day of the year, in any weather. In order to minimize the possible time of intervention in difficult and extensive terrain, an early detection is as important as the avoidance of false alarms in adverse weather conditions (e. g. poles moving in wind, rain, snow fall) as well as the possibility to integrate 3rd party sensors for example with MOBOTIX functional boxes. Reliable motion detection even in complete darkness without costly installation and maintenance and the differentiation of objects are just some decision criteria for a modern and intelligent perimeter solution from MOBOTIX.

Pixel

In digital imaging, a pixel (picture element) is the smallest element in a raster image or display device; the smallest controllable element of a picture represented on the screen. Pixel is usually abbreviated with px Each pixel is a sample of an original image; more pixel typically provide more accurate representations of the original image. The intensity of each pixel is variable. In der digitalen Bildverarbeitung, a color is typically represented by three or four color channels e.g red, green, and blue, or cyan, magenta, yellow, and black.

Power over Ethernet

Power over Ethernet (PoE) is the term used to describe the process by which network-compatible devices can be supplied with power via the eight-core Ethernet cable. In addition to the downward-compatible variants standardized by IEEE 802.3, there are some proprietary processes and simple, passive variants. Application areas The main advantage of PoE is that a power supply cable can be saved, allowing Ethernet-connected devices to be installed in hard-to-reach places or in areas where many cables would interfere. Power to the device does not need to be supplied separately with a power cable and power supply or solved with a battery. Instead, the device draws its power from the data network. For this purpose,

power must be fed into the data line in addition to the data signals - usually at a central point, in the network distributor. On the one hand, this can partly save installation costs, and on the other hand, the use of a central uninterruptible power supply (UPS), which is easy to implement in this way, can increase the reliability of the connected devices. PoE is used by network devices that require little power. It is typically used in IP phones, small hubs, cameras, small servers or in wireless transmission devices such as WLAN access points or Bluetooth devices. Comparison of PoE standards

Standard	Output voltage in V (DC)	Output current operation in mA (DC)	Output current start mode in mA (DC)	Power of (PSE) supply in W: max.	Power at the terminal device (PD) in W: max.	PSE class	Supported terminal devices (PD type)	Used wire pairs
PoE (802.3af-2003)	36-57	350	400	15.4	12.95	1; 2; 3	1	2
PoE Plus (802.3at-2009)	42.5-57	600	400	30	25.5	4	1 and 2	2
4-pair PoE (802.3bt-2018)	42.5-57	2× 960	?	45; 60; 75; 90	40; 51; 62; 71	5; 6; 7; 8	1; 2; 3; 4	2 and 4

gths. [Source: https://de.wikipedia.org/wiki/Power_over_Ethernet#Spezifikation]

Proximity-Box

Radar-Based Motion Sensor Thanks to integrated radar technology, the MX-Proximity-Box detects the approach and direction of motion of objects, even through walls made of wood, plastic or plasterboard. The system complements the well-established PIR sensor technology and works best at close range at distances of up to eight meters.

PTMount Plate

Adapter for surface mounting of a PTMount incl. cable bushing

Pyrometer

(from the ancient Greek πῦρ pyr, English 'fire'), also called radiation thermometers, are used for non-contact temperature measurement. Temperatures between -50 °C and +3000 °C can be measured with such devices.

Q

Q71

360° camera technology - compact, complete and versatile. The MOBOTIX Q71 sees everything and always. Its 360° optics are everywhere. For the first time, IR and LED white light are combined in one hemispherical camera. So you can even make the night colorful! 12 megapixels and WDR provide brilliant image quality and impressive details. The integrated audio function makes you heard. Embedded in the MOBOTIX 7 platform with its intelligent apps, the comprehensive video system offers you an infinite range of analysis options.

- 4K effective resolution: 12MP 2880x2880 (original hemispherical image) - Integrated IR and white light LED spotlight - Platform with the most flexible codec support: H.264, H.265, MxPEG+ and MJPEG - ONVIF Profile S and T conformity guarantees utmost interoperability - Wide Dynamic Range (WDR) with up to 120 dB - Easy Plug quick-mounting system - Robust in any environment: -40 to 65 °C/-40 to 149 °F, IP66, and IK10 (with optional accessory)

Quad High Definition

The resolution QHD corresponds to 2560x1440 pixels (picture elements) in the aspect ratio 16:9, which is multiplied by 3 686 400 pixels, i.e. about 3.7 megapixels.

R

REST API

REST stands for REpresentational State Transfer, API for Application Programming Interface. This refers to a programming interface that is based on the paradigms and behavior of the World Wide Web (WWW) and describes an approach for communication between client and server in networks. The architectural approach known as REST (or ReST) describes how distributed systems can communicate with each other. In this sense, a REST API is an alternative to other interfaces such as SOAP or WSDL. However, REST itself is neither a protocol nor a standard. However, implementations of the architecture that are characterized as "RESTful" use standardized processes such as HTTP/S, URI, JSON or XML. [Source: <https://www.cloudcomputing-insider.de/was-ist-eine-rest-api-a-611116/>]

S

S74

Weatherproof and robust, the latest generation of our successful S camera models features increased modularity as well as the latest MOBOTIX 7 system platform with intelligent Plug-

In App concept. The result is a system completely unrivaled in terms of performance, functionality and design. - Platform with the most flexible codec support: H.264, H.265, MxPEG+ and MJPEG - ONVIF Profile G, S, T conformity guarantees utmost interoperability - Increased modularity with flexible usage of a combination of up to three sensor or functional modules - 2 x 4K UHD resolution - Wide Dynamic Range (WDR) with up to 120 dB - Easy Plug quick-mounting system - Robust in any environment: -40 to 65 °C/-40 to 149 °F, IP66, and IK10

Small Form-factor Pluggable

Small Form-factor Pluggable (short: SFP, colloquially also Mini-GBIC) are small, standardized modules for network connections (INF-8074i). SFP is a specification of a generation of modular optical or electrical transceivers. These devices are designed as interconnect connectors for fast Ethernet, Fibre Channel and SONET. The original specification is defined for up to 5 Gbps (gigabits/second). SFP modules fit into an SFP cage and are easily and quickly interchangeable (hot swappable). Network devices can therefore be easily switched to other media and are quickly repaired in the event of a defect. SFPs are smaller and take up less space than GBICs, allowing devices to be manufactured with significantly greater port densities. Depending on the line type (multimode or single mode fiber), wavelength (850 nm, 1310 nm, 1550 nm or CWDM - typically between 1311 and 1611 nm) and data rate, the SFPs are available in different versions. The LC connector is used as standard. Modules for multimode fiber have a black, sometimes beige, release lever, modules for singlemode fiber have a blue one. SFPs for twisted pair cable (1000BASE-T) are also available, but are not supported by all devices. Furthermore, there are SFP modules that require only a single fiber instead of a fiber pair ("BX optics"). The transmit and receive directions are implemented using two different wavelengths. [Source: https://de.wikipedia.org/wiki/Small_Form-factor_Pluggable]

software development kit

A software development kit is a collection of programming tools and program libraries used to develop software. It supports software developers to create applications based on it.

spot metering

Spot metering is a method of measuring exposure. Only a very small area of the viewfinder image is measured. The area that is measured is often shown in the viewfinder as a small circle and is approximately 2-4% of the viewfinder area.

Standard Definition

Standard Definition (SD) resolution is equivalent to 1024×576 pixels (picture elements), which when multiplied equals approximately 0.59 megapixels.

T

T26

The high-resolution, hemispheric IP Video Door Station from MOBOTIX is an innovative, powerful solution that is easy to install. The T26 is based on the VoIP/SIP Video Intercom standard. All the modules offered for outdoor areas are weatherproof and maintenance-free and can be used in temperatures ranging from -30°C to 50°C (-22°F to 140°F). - Mx6 system platform with H.264 and ONVIF compatibility - Recording with sound, integrated mailbox function - Available in day or night variants (6MP color or B&W sensor) - Equipped with shock detector and MxAnalytics as standard - Installation via CAT cable or two-wire cable - Two-way video communication around the world - Available in white, silver, dark gray or black

thermal imaging camera

A thermal imaging camera (also known as a thermographic, thermal, or infrared camera, or in the military thermal imaging device (often referred to as FLIR for Forward Looking Infrared)) is an imaging device similar to a conventional camera, but which receives infrared radiation. Infrared radiation is in the wavelength range from about 0.7 μm to 1000 μm. W

Thermal Offset Correction

thermal offset correction for Thermal Radiometry profiles von MOBOTIX Thermal-Cameras. If this mode is activated the Environment Settings of the Thermal Sensor Settings do not effect the measured temperature anymore, but they still influence the RAW data of the sensor.

Thermal Radiometry

Thermal sensor technology from MOBOTIX thermal cameras that can trigger automatic events within a temperature range of -40°C up to +550°C. This technology is ideal for automatic alarming of temperature limits or ranges. This is critical when detecting sources of fire or heat. With a thermal empfindability of 0.05°C (NETD=50mK) within a temperature range of -40°C and +550°C, different temperature conditions can be very easily configured in a TR (Thermal Radiometry) window or over the complete sensor image. Thereby it is possible to define up to 20 different temperature events with a typical accuracy of ±10°C.

Thermography

Thermography is a non-contact imaging technique that makes visible the heat radiation (mid-infrared) of an object or body that is invisible to the human eye. Thermography records and displays temperature distributions on surfaces and objects. In addition to passive temperature measurement, active irradiation can also be performed by infrared radiators. This is the basis for material testing procedures, for example.

U

Ultra High Definition

Ultra HD resolution is equivalent to 4096×2160 pixels (picture elements), which when multiplied equals 8,847,360 pixels, or about 8.8 megapixels.

UTMC

The Urban Traffic Management Control or UTMC programme is the main initiative in the United Kingdom for the development of a more open approach to Intelligent Transport Systems or ITS in urban areas. Originating as a Government research programme, the initiative is now managed by a community forum, the UTMC Development Group, which represents both local transport authorities and the systems industry. UTMC systems are designed to allow the different applications used within modern traffic management systems to communicate and share information with each other. This allows previously disparate data from multiple sources such as Automatic Number Plate Recognition (ANPR) cameras, Variable Message Signs (VMS), car parks, traffic signals, air quality monitoring stations and meteorological data, to be amalgamated into a central console or database. The idea behind UTMC is to maximise road network potential to create a more robust and intelligent system that can be used to meet current and future management requirements. [Source: https://en.wikipedia.org/wiki/Urban_Traffic_Management_and_Control]

V

v71

MOBOTIX v71- Indoor Camera Meets Industry Standards The MOBOTIX v71 indoor camera impresses with its flexibility and wide range of applications. Three manually movable axis allow the exact alignment of the configurable optics. Integrated audio capabilities and infrared LEDs, the v71 for reliable day and night use. The various apps for the 7 platform make the v71 even more powerful, offering comprehensive automation solutions as well as

video analysis functions. The MOBOTIX v71 meets the IK10 protection class and is used in companies in all industries. - 7 Platform with app support - Flexible codec support: H.264, H.265, MxPEG+ and MJPEG - ONVIF Profile G, S, T conformity guarantees utmost interoperability - 4K UHD or 4MP ULL resolution - Integrated Audio (Mic & Speaker) - Integrated IR LEDWide Dynamic Range (WDR) with up to 120 dB

Vaxtor AIN - Airplane Identification

A MOBOTIX Certified App - The software recognizes the identification numbers issued by the ICAO and the FAA, which are located on the outside of airplanes and helicopters. Many private planes and light aircraft travel are not equipped with a transponder. This is where the app comes in, as it helps to identify and track aircraft in real time as they move, take off or land. This is a valuable tool, particularly for smaller airports with limited human resources. The software reports extra metadata such as the time and date in addition to the aircraft tail number. This data helps to improve processes and increase security. The application also provides significant support within insurance and supply chain management, as well as assisting law enforcement authorities by tracking unauthorized small aircraft. - Recognition of ICAO and FAA registration prefixes - Operation with speeds up to 50 km/h - Real-time results: Aircraft ID, Aircraft type, Country, etc. - Triggering of MOBOTIX events via MxMessageSystem - Consolidated event search via MxManagementCenter Smart Data Interface and/or the MOBOTIX HUB - Metadata transferred via generic transmission protocols and/or pre-defined third-party interfaces - Blocked and safe lists (granted and denied; e.g. grant/deny access, alarm, etc.) - The application provides high accuracy of 99%

Vaxtor GEN - Generic Optical Character Recognition

A MOBOTIX Certified App - It was developed to read any combination of uppercase latin characters and/or numbers arranged in up to three lines. Operating under any lighting conditions, it is unaffected by image quality, print degradation and font shape variations it can process still images and recorded or live video streams. - generic optical character recognition to read any combination of uppercase latin characters and/or numbers - reads characters arranged in up to three lines - user-defined specification of the required code format - recognition log - MOBOTIX events via MxMessageSystem - numerous integration options for further processing of the generated meta data (generic as well as native reporting interfaces) - Two lists for individual actions (e.g. access granted/denied, alarm, etc.) - Free flow and signaled mode

Vaxtor Helix-6

Vaxtor Helix-6 is a powerful ALPR Back Office for collation and management of multiple Vaxtor On-camera and on-PC ALPR reads, along with their associated meta data and images. Available in 5 versions, Helix Base can store 100,000 reads whilst Helix Ultimate has unlimited storage only limited by hardware. Once stored, users can perform comprehensive searches on historical data and export the results. Helix also manages whitelists, blacklists, alarms and authorisations enabling it to perform as a parking management, a complete security or access control system* or a traffic monitoring system. FEATURES Web-based Application and SQL Database: Multiple simultaneous users supported via web browser Username / Password Login: User Authority levels controlled by administrators Alarm Notifications: Email, on-screen & Pushbullet alerts for mobile devices, Alerts include blacklist, speeding vehicles etc. Master / Slave Architecture: Synchronisation of lists across servers Access Control: By whitelist or advanced logic based on plate, category and zone Configurable Complex Schedules: For access control within certain zones HTTP REST API: API available for integration with third party software

Vaxtor LPR - License Plate Recognition Multi Lens

A MOBOTIX Certified App - When used with the S74 MOBOTIX video system (for example), the license plate recognition app can simultaneously recognize number plates on two image sensors. This helps you to save on resources, as with the app license there is no need for an additional camera. In addition, access control or locating vehicles is effective and convenient. Additional metadata such as direction of travel, country, type of license plate, time and date can give your traffic systems extra support. The possibility of multi-lens application ensures maximum flexibility. You can monitor two directions of travel at once or double the number of lanes being monitored (e.g. at gas stations) compared to single-lens application. - License plate recognition for one- and two-line number plates - Simultaneous recognition on two image sensors - Monitors the dwell time of number plates in the coverage areas - Supports Latin, Hebrew, Arabic and Thai characters for worldwide use - Triggering of MOBOTIX events via MxMessageSystem - Consolidated event search via MxManagementCenter Smart Data Interface and/or MOBOTIX HUB - Metadata transferred via generic transmission protocols and/or pre-defined third-party interfaces - Blocked and safe lists (granted and denied; e.g. access granted/denied, alarm, etc.)

Vaxtor LPR - License Plate Recognition

A MOBOTIX Certified App - Vaxtor LPC recognizes license plates with global country coverage (Latin, Thai and Arabic characters) based on deep learning processes. The application can be

used up to maximum speeds and on multiple lanes up to 160 km/h. Via a blocking or permission list, authorized or blocked or searched vehicles can be defined specifically. For example, a gate or barrier in an access road can open or be blocked automatically. - License required, one-time payment for unlimited period of use - Recognition of license plates with global country coverage with an accuracy of more than 99% - Use of "block" and "allow" lists possible - App-integrated Smart Data Interface for data retrieval with MxManagementCenter version 2.4 or higher (e.g. to search for specific license plates, even across multiple LPR cameras) Best suited for the requirements of the following industries: Utilities, Energy & Mining; Industry & Production; Government; Traffic & Transportation; Retail

Vaxtor MMCR - Make Model Color Recognition

A MOBOTIX Certified App - This Vaxtor license plate recognition app, which can be used worldwide, offers reliable recognition of single and double-line license plates in addition to integrated recognition of the color, manufacturer and model type of the vehicles, thus providing additional data for advanced application solutions. Automatic detection of vehicle type, make, model and color enable advanced authentication checks at entrances and exits of buildings and protected areas, for police and traffic checks, for advanced traffic monitoring and for collecting statistical data. Typical fields of application: In cities and towns, you can gain information about traffic flows and traffic density in the city. For example, you can prevent trucks from driving into the city center. In this way, MOBOTIX apps contribute to the further development of cities as intelligent smart cities. The police can use the application to search for suspicious and wanted vehicles effectively. The matching of license plates with makes enables the identification of suspicious vehicles to fight crime. Access can be effectively controlled thanks to double security matching in the logistics sector, in industry, or secured residential complexes, which contributes significantly to security. Functions: - Recognition of single and double line license plates - Recognition of Latin, Hebrew and Arabic license plates for global use - Additional recognition of vehicle manufacturer, model, color and class - Detection protocol (Smart Data / event search via MxManagementCenter AND MOBOTIX HUB) - MOBOTIX Events via MxMessageSystem - Two lists for individual actions (e.g. access granted/denied, alarm, etc.) - Freeflow and Signaled Mode Best suited for the requirements of the following industries: Traffic & Transportation; Retail; Utilities, Energy & Mining; Industry & Production; Government

Vaxtor OCR Container Code Recognition

A MOBOTIX Certified App - United States Department of Transportation (USDOT) numbers are commonly found on the sides or doors of US trucks. They appear in a variety of fonts,

sizes, and colors. The SDOT number is a unique identifier when collecting and monitoring safety information from logistics companies. The Vaxtor app detects the USDOT number in real-time. It reports it and other metadata such as time, date, and GPS location to facilitate tracking and identification of all FMCSA (Federal Motor Carrier Safety Association) registered vehicles. Comprehensive reporting to a back-office or third-party applications ensures that a powerful system can quickly reduce overhead costs, improve efficiency, and ensure compliance. Advantages - High accuracy: detection rate of over 98%. - Operating speed up to 50km/h - On-board databases: 100,000 read operations can be temporarily stored in the camera - Event search via MxManagementCenter Smart Data Interface and / or MOBOTIX HUB - Metadata transfer via transfer protocols and / or 3rd party interfaces - Lists for individual actions (e.g. access granted/denied, alarm, etc.) Best suited for the requirements of the following industries: Government, Traffic & Transportation, Logistics & Freight

Vaxtor UIC Railway Code Recognition

A MOBOTIX Certified App - With the Vaxtor UIC Railway Code Recognition App, MOBOTIX offers a cost-effective and powerful artificial intelligence-based video analytics solution for its MOBOTIX 7 camera series to recognize the 12-digit numbers of the International Union of Railways wagons and passenger coaches, commonly called UIC codes or numbers. Recognition and identification of rolling stock enable automated solutions to facilitate tracking, control and documentation of shipments and increase visibility. Central fields of application: - Process automation - Process documentation - Container tracking - Border control

Vaxtor USDOT Number Recognition

A MOBOTIX Certified App - United States Department of Transportation (USDOT) numbers are commonly found on the sides or doors of US trucks. They appear in a variety of fonts, sizes, and colors. The SDOT number is a unique identifier when collecting and monitoring safety information from logistics companies. The Vaxtor app detects the USDOT number in real-time. It reports it and other metadata such as time, date, and GPS location to facilitate tracking and identification of all FMCSA (Federal Motor Carrier Safety Association) registered vehicles. Comprehensive reporting to a back-office or third-party applications ensures that a powerful system can quickly reduce overhead costs, improve efficiency, and ensure compliance. Advantages - High accuracy: detection rate of over 98%. - Operating speed up to 50km/h - On-board databases: 100,000 read operations can be temporarily stored in the camera - Event search via MxManagementCenter Smart Data Interface and / or MOBOTIX HUB - Metadata transfer via transfer protocols and / or 3rd party interfaces - Lists for individual

actions (e.g. access granted/denied, alarm, etc.) Best suited for the requirements of the following industries: Government, Traffic & Transportation, Logistics & Freight

Video Graphics Array

The VGA resolution corresponds to 640x480 pixels (picture elements) in the aspect ratio 4:3, which multiplied corresponds to 307 200 pixels, i.e. about 0.3 megapixels.

video surveillance

Video surveillance is the observation of places by optical-electronic devices, optical room surveillance systems (video surveillance system).

video surveillance system

Video surveillance systems are used for observation with optical-electronic equipment. A main field of application of video surveillance systems is the surveillance of public or private rooms, traffic and technical installations of all kinds.

Visage Face Recognition

A MOBOTIX Certified App - The app recognizes faces based on encrypted image data stored in the camera. The application has a 97% hit probability for access applications. Face recognition is based on face descriptors. The system calculates the similarity between the input face descriptor and all face descriptors previously stored in a gallery. The goal is to find the face(s) from the gallery that are most similar to the input face. Since all biometric templates are exclusively mathematical representations of users' faces, biometric and personal information is strictly separated. This way of handling data ensures the highest level of privacy, even when dealing with extremely sensitive data. - Face Recognition used for access checks, online logins, transactions, etc. - License required, period 1 or 2 years - The app can be configured (even for multiple cameras simultaneously) via MxManagementCenter Version 2.2 or higher (Advanced Config license required). - Improved face recognition model is more robust to particularly, challenging conditions such as faces with different sizes, lighting, pose, and wearing beards, glasses, and masks Best suited for the requirements of the following industries: Utilities, Energy & Mining; Industry & Production; Government; Traffic & Transportation; Retail; Healthcare; Education & Education-

VMS

A video management system, also known as video management software plus a video management server, is a component of a security camera system that in general: - Collects video from cameras and other sources - Records / stores that video to a storage device - Provides

an interface to both view the live video, and access recorded video A VMS can be the software component of a network video recorder (NVR) and digital video recorder (DVR), though in general a VMS tends to be more sophisticated and provide more options and capabilities than a packaged NVR device. Due to improvements in technology, it is necessary to make a distinction between a VMS and the built-in features of modern network based security cameras. Many modern network cameras offer internal capabilities to record and review video directly themselves via a web browser and without the use of a VMS. However a camera's built-in web interface is typically exclusive to the camera itself and does not normally provide a shared access capability across other network cameras. [Source: https://en.wikipedia.org/wiki/Video_management_system]

VoIP

IP telephony, or Voice over IP, is telephoning via computer networks that are built according to Internet standards. Typical telephony information, i.e. voice and control information for setting up a connection, is transmitted via a data network. (Wikipedia)

W

white balance

White balance is used to make the camera sensitive to the color temperature of the light at the shooting location. The digital recording of images (photo and film) and video technology - like analogue technology - allows a colour temperature adapted to the lighting conditions.

wide dynamic range

In a WDR (Wide Dynamic Range) image, several images are taken with different exposures and then combined to form an image with a higher dynamic range, so that details and structures can be seen even in dark areas.

Y

YUV

The YUV color model is used for analog color television according to the PAL and NTSC standards. It uses two components to represent the color information: the luminance (luma, luminous intensity per area, i.e. luminance) Y the chrominance (color portion, chroma), whereby this consists of the two sub-components U and V.

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