Technical Specifications

MOBOTIX c71 Kepler NurseAssist *powered by Kepler Vision Technologies*

Detect falls and unauthorized bed leaving immediately in real time!

From now on, falls that are detected too late and unauthorized leaving of the bed can be avoided. Intelligent MOBOTIX sensor technology supports hospitals, nursing homes and retirement homes effectively and cost-efficiently in protecting patients and those in need of care - automatically around the clock.

- Monitor patient well-being with one optical sensor.

- Hemispherical optical sensor with 360° all-round vision without blind spots

- One sensor per patient/resident room is sufficient.

- Integrated AI-powered software detects incidents based on live images.

- Automatic alerts to staff in case of alarm.

- Direct patient dialog possible via integrated microphone/audio function.

- Simple and decent installation.

- GDPR compliant operation through event-controlled obscuring of live and recorded images.

HEVCAdvance™

BeyondHumanVision

MOBOTIX

Table of Contents

Order Information

Name	MOBOTIX c71 Kepler NurseAssist powered by Kepler Vision Technologies
Order Code:	Mx-c71A-NurseAssist

Hardware

Image sensor (DN)	4k (1:1) effective max. resolution 2144x2144
Light sensitivity	- Color sensor (day): 0,1 lx @ 1/60 s; 0,005 lx @ 1 s - BW sensor (night): 0,02 lx @ 1/60 s; 0,001 lx @ 1 s
Exposure control	Manual and automatic mode 1 s to 1/16,000 s
Operating temperature range	–10 to 50 °C/–14 to 122 °F
Internal DVR Storage	Internal microSD card (SDHC/SDXC), 8 GB out of the box, max. 1 TB.

Microphone/Speaker	Integrated Microphone:
	
	  ■ Sensitivity: -35 dB +/-4 dB (0 dB = 1 V/pa, 1 kHz)
	
	Integrated Loudspeaker:
	
	  ■ 0.9 W at 8 Ohm

Integrated illumination	850 nm IR, up to 15 m
Shock detector (tamper detection)	Yes
Max. power consumption	max. 25 W
Electrical surge protection	Available with MX-Overvoltage-Protection-Box (not part of the scope of delivery)
PoE standard	PoE Plus (802.3at-2009)/Class 4 (Class 3 can be enabled via HW switch. **Note:** IR illumination requires Class 4)
Interfaces	■ Ethernet 1000BaseT (RJ45 according to EIA/TIA-568B) ■ USB-C/USB2.0; High-Speed (V_{out} = 5.1 V, I_{out} = 0.9 A, P_{out} = 4.5 W)
Mounting Options	Ceiling mountable
Dimensions (Ø x height)	164 x 47,5 mm
Weight	Gross weight: 1.040 g
Housing	Aluminum, PBT-30GF

Technical Specifications

Standard accessories	2 terminal blocks
	1 mounting cable with sealing, 0.5 m/~2 in
	2 silicone sealings for patch cable
	1 Ethernet patch cable RJ45, 50 cm/19.7 in
	1 Allen wrench 2.5 mm
	1 c71 Kepler NurseAssist lens wrench
	4 dowels 8 mm
	4 stainless steel pan head-screws 4.5x60 mm
	4 stainless steel washers Ø5.3 mm
	1 Torx wrench TX 20
	4 sealing plugs, white
	1 Important Safety Information
	1 Camera Connection Flyer
Detailed technical documentation	**www.mobotix.com > Support > Download Center > Marketing & Documentation**
MTBF	80,000 hours
Certificates	EN 50121-4, EN 55032, EN 55035, EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4, EN 62368-1, EN 63000, AS/NZS CISPR32, 47 CFR Part 15b
Protocols	DHCP (client and server), DNS, ICMP, IGMP v3, IPv4, IPv6, HTTP, HTTPS, FTP, FTPS, NFS, NTP (client and server), RTP, RTCP, RTSP, SFTP, SIP (client and server), SMB/CIFS, SNMP, SMTP, SSL/TLS 1.3, TCP, UDP, VLAN, VPN, Zeroconf/mDNS
Manufacturer warranty	5 years

General Software Features

Feature	Properties
Software features	- H.264, H.265 Multistreaming - Multicast stream via RTSP - Digital pan, tilt, zoom/vPTZ (up to 8x zoom) - Genetec protocol integration - Programmable exposure zones - Snapshot recording (pre/post-alarm images) - Continuous recording - Event recording - Time-controlled flexible event logic - Weekly schedules for recordings and actions - Event video and image transfer via FTP and email - Playback and QuadView via web browser - Animated logos on the image - Master/Slave functionality - Privacy zone scheduling - Remote alarm notification (network message) - Programming interface (HTTP-API) - MxMessageSystem
ONVIF compatibility	Profile G, S, T, (M with later firmware release)
Master/Slave functionality	Yes
Remote alarm notification	email, network message (HTTP/HTTPS), SNMP, MxMessageSystem, MQTT
DVR/image storage management	- On internal microSD card - On external USB and NAS devices - Different streams for live image and recording - MxPEG+ only - MxFFS with buffered archive, pre- and post-alarm images, storage monitoring with error reporting

Technical Specifications

Feature	Properties
Camera and data security	User and group management, SSL connections, IP-based access control, IEEE 802.1X, intrusion detection, digital image signature
Digitally signed firmware	Yes (to prevent firmware file tampering)

App Specifications

General App Information

Product Name	
Order Code (only available in a bundle with the MOBOTIX c71 Kepler NurseAssist camera)	Camera & Basic App Bundle: Mx-APP-KEP-NUA-EXT Extended App license: Mx-APP-KEP-NUA-EXT
Supported MOBOTIX Cameras	MOBOTIX c71 Kepler NurseAssist (basic version pre-installed)
Minimum Camera Firmware	v7.3.5.x
MxManagementCenter compatibility	- min. MxMC v2.5.3 - Configuration: Advanced Config license required - Event Search: Smart Data Interface license included

General Features

App Features Basic Version	- monitoring of the well-being of patients in private rooms, corridors and common areas of Healthcare facilities. - minimization of reaction times due to decentralized state-of-the-art fall detection. - prevention of accidents through person down, person in bed and person out of bed event. - automatized detection and localization of the bed in the patient's room. - GDPR compliant operation through event-controlled obscuring of live and recorded images - Dynamic masking of a person in bed as additional privacy protection measure
App Features Extended Version	Plug-In license required to extend the NurseAssist status and alarm notifications with the following functions: - Person sits on the edge of the bed - Person has left the room - Person has entered the room - Person has entered the bathroom / is in the bathroom - Bed is not recognized / is not present **NOTE!** The Plug-In license requires MOBOTIX c71 NurseAssist Smart Sensor or licensed Kepler NurseAssist Certified App.
Maximum number of detection areas	1
Recognized objects	Persons
Supported image sensor types	Day/Night MOBOTIXc71 Kepler NurseAssist default
Meta Data / Statistic format	JSON
Supported Reporting Interfaces	JSON / XML via HTTP(S), MQTT, MxMessageSystem

Technical Specifications

MxMessageSystem supported	Yes
MOBOTIX Events	Yes
ONVIF Events	Yes (Generic Message event)

Scene Requirements

Room size	max. 25m^2 assuming an almost square room (e.g. 5x5 m) by radius of 4 m - long and narrow rooms will not work.
Required installation position (camera)	ceiling-mounted
Recommended installation height (camera)	2,0m - 3,5m
Mounting distance from bed	0,5m - 3,0m
Mounting distance from wall	> 70cm

Technical App Specifications

Synchronous / Asynchronous App	asynchronous
Simultaneous execution of other apps	No
Accuracy	min. 99% (considering scene requirement and no view blocking objects)

Further Video Analysis

Feature	Properties
Video motion detection	Yes
MxActivitySensor	Version 1.0, 2.1, 3.0

Feature	Properties
MxAnalytics	Yes with a later FW release
MOBOTIX App support	Yes with a later FW release

Video Management Software

Feature	Properties
MOBOTIX HUB	Yes **www.mobotix.com > Support > Download Center > Software Downloads**
MxManagementCenter	Yes (latest version recommended) **www.mobotix.com > Support > Download Center > Software Downloads**
MOBOTIX Cloud	Streaming & Events supported
MOBOTIX LIVE App	Yes (available in Google Play Store (Android) and Apple App Store (iOS)).
3rd Party VMS Software	see ONVIF Profile S, T and G specification

Dimensions

NOTE! Download the drilling template from the section or on the MOBOTIX website: **www.mobotix.com > Support > Download Center > Marketing & Documentation > Drilling Templates**.

CAUTION! Always print or copy the drilling template at 100% of the original size!
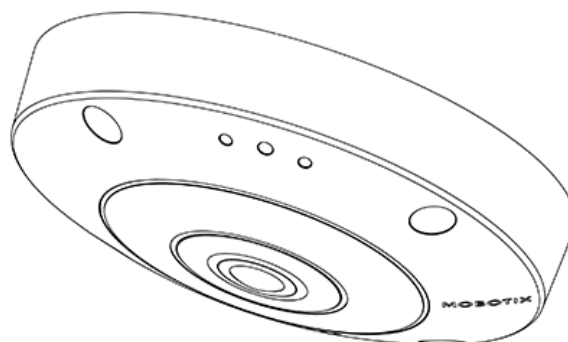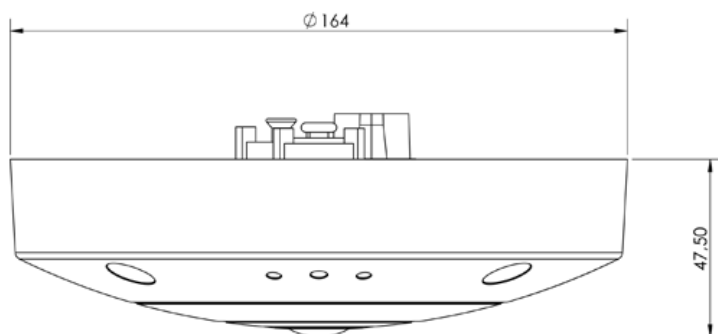
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