



# Technical Specifications

## MOBOTIX MOVE NVR-16

Mx-S-NVR1A-16-POE

### MOBOTIX MOVE Plug & Play NVR Series

The MOBOTIX MOVE NVR “Plug & Play” series has been exclusively designed to support the MOBOTIX MOVE IP Camera series with powerful recording by deep integration protocols out-of-the-box. The integrated 16-port PoE switch allows direct connection of IP cameras without extra power supply. NVRs are equipped with M.2 (M-Key) and iSCSI communication interfaces that provide for seamless adaptation to the requirements of the installation. The web management interface allows monitoring and configuring PoE power consumption, network connection quality, and controlling the PoE power support of ONVIF S-conformant 3rd-party cameras. This provides flexibility in mixed camera environments besides the recommended usage with MOBOTIX MOVE IP camera series for full feature support. The MOBOTIX IoT camera range is fully integrated via ONVIF S.

- 2MP Full HD up to 4K IP camera support
- Integrated PoE switch (16 ports) for Plug & Play MOVE camera integration
- Support of MOBOTIX IoT cameras and 3rd-party cameras via ONVIF S protocol
- H.264/H.265 recording and playback
- Full HD local dual display/monitor output (HDMI/Display Port)
- iSCSI external NAS storage support
- iOS & Android app support provides convenient mobile access to live and recorded video on the NVR

<b>Technical Specifications</b>		<b>Mx-S-NVR1A-16-POE</b>
<b>System</b>		
Operating System	Embedded Linux	
CPU	Intel Apollo Lake J3455	
RAM	LPDDR4, 4 x 1 GB	
Boot Drive	eMMC Flash, 16 GB	
Graphics	Intel HD Graphics 500	
DISPLAY PORT Output	1920x1080@60Hz (Full HD)	
HDMI Output	1920x1080@60Hz (Full HD)	
Audio Input	MIC-in, 3.5 mm x1 earphone	
Audio Output	Line-out, 3.5 mm x1 earphone	
USB Ports	USB 2.0 x2 (front); USB 3.0 x2 (rear)	
<b>Recording / Playback</b>		
IPCAM Throughput	Average: 160 Mbps Peak: 240 Mbps	
GPU Hardware Decoding	24 CH real-time display, up to 720 fps@D1 decoding	
Compression Format	H.264 / H.265	
<b>Storage</b>		
Build-in SATA Interface	3.5" SATA3 x2	
Max. HDD storage support (internal & ext. iSCSI)	28 TB	
<b>Onboard Hardware Interface</b>		
M.2 (M-Key)	Yes	
<b>Network</b>		
WAN Uplink	RJ-45 x1, 10/100/1000 Mbps	
LAN Uplink	RJ-45 x1, 10/100/1000 Mbps	
LAN ports with PoE	RJ-45 x16, 10/100Mbps	
PoE Level	IEEE 802.3 af/at x16	
PoE & switch management	Linux SDK	
Supported protocols	User Authentication, IEEE 802.1x, IPv4, TCP, UDP, DHCP, SMTP, RTP, RTSP, HTTP, NTP, DDNS, iSCSI	

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<b>General</b>	
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Unit Dimensions (mm)	280 x 300 x 44
Unit Weight (kg)	2.5
Package Dimensions (mm)	495 x 345 x 181
Package Weight (kg)	8.5
Operating Temperature	0 to 40 °C/32 to 104 °F
Operating Relative Humidity	10 to 90 % non-condensing
System Power Supply	AC 100 to 240 V, 200 W, 56 V/3.57 A
PoE Budget per Port	30 W
Total PoE Budget	140 W

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# Power Consumption of MOBOTIX MOVE Cameras

Model	Order Code	Max. Power Consumption
BulletCamera 2MP	Mx-BC1A-2-IR...	5.6 W
BulletCamera 4MP	Mx-BC1A-4-IR...	13.68 W
SpeedDome	Mx-SD1A-330	25.4 W
SpeedDome IR	Mx-SD1A-340-IR	44 W (external PoE injector required)
VandalDome 2MP	Mx-VD1A-2-IR...	12.25 W
VandalDome 4MP	Mx-VD1A-4-IR...	13.68 W

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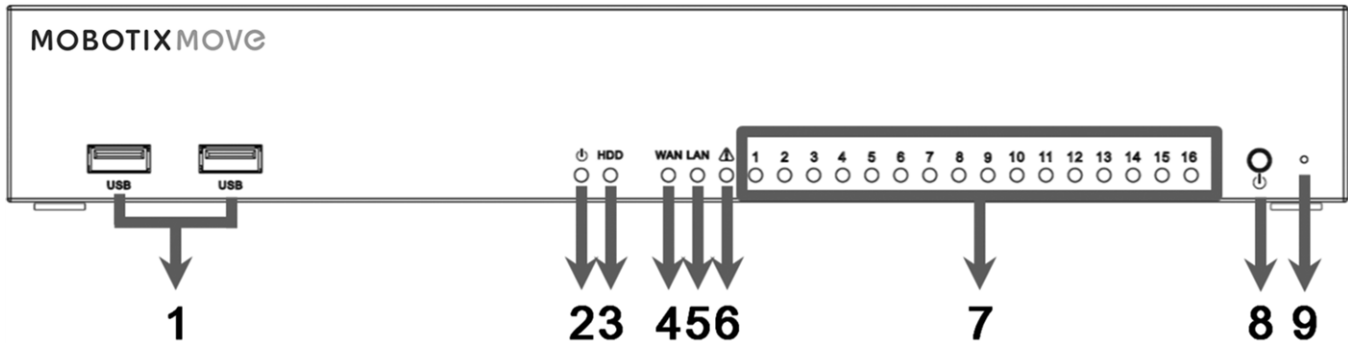
# List of Tested Hard Disks

**Note:**

To ensure long-term reliable operation, make sure that you are using **server-grade hard disks** from the manufacturers' series listed below.

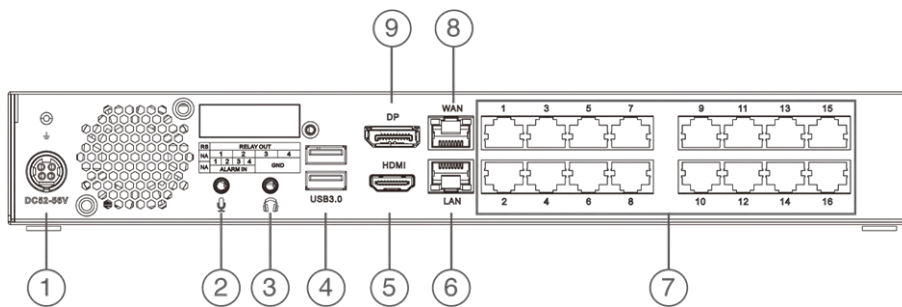
Brand	Series	Model Number	Firmware	Capacity
Seagate	Skyhawk	ST8000VX004	AV01	8 TB
		ST14000VX008		14 TB
Western Digital	Purple	WD82PURZ	82.00A82	8 TB
		WD140PURZ		14 TB

# Front Panel



Item	Name	Description
1	USB 2.0 Port x2	The USB ports allow users to connect external USB devices, such as a USB mouse, a USB keyboard, a USB storage device, etc.
2	Power LED	This lights up when the power is on.
3	HDD LED	<ul style="list-style-type: none"> <li>Flashing: The HDD is reading/writing data.</li> <li>OFF: The HDD is not running.</li> </ul>
4	WAN LED	<ul style="list-style-type: none"> <li>Orange: Network speed is 1000Mbps.</li> </ul>
5	LAN LED	<ul style="list-style-type: none"> <li>Green: Network speed is 10/100Mbps.</li> </ul>
6	P. Max	This lights up as warning when there are 10 watts left to reach the power budget of PoE switch.
7	Camera LED	<p>Lights up when the camera is powered up and has good network connection.</p> <ul style="list-style-type: none"> <li>Lights up in Green when the power source is from NVR.</li> <li>Lights up in Orange when the camera is powered by external power supply.</li> </ul>
8	Power Button	Press this button to power on the NVR system.
9	Reset Button	Press this button with a proper tool to restore the factory defaults of the NVR system.

# Rear Panel



Item	Name	Description
1	Power Jack (DC 52 – 56 V)	Connect the power adaptor and the power cord shipped with the NVR to power on the NVR system. Use other power supply may cause overloading.
2	Mic In	A 3.5 mm phone jack is provided to input/output audio.
3	Audio Out	
4	USB 3.0 Port x2	The USB ports allow users to connect external USB devices, such as a USB mouse, a USB keyboard, a USB storage device, etc.
5	HDMI Monitor	The video connectors are used to connect to a corresponding HDMI jack of the monitor.
6	LAN (RJ-45) 10/100/1000 Mbps	<p>The NVR is capable of connecting the Smart PoE Switch via LAN port.</p> <ul style="list-style-type: none"> <li>■ Green LED: Flashes when data is being transmitted via network.</li> <li>■ Orange LED: <ul style="list-style-type: none"> <li>— Lights up in green when network speed is 10/100 Mbps.</li> <li>— Lights up in orange when network speed is 1000 Mbps.</li> </ul> </li> </ul>
7	PoE Switch	The PoE switch provides network connectivity and power supply for up to 16 IP cameras.
8	WAN (RJ-45) 10/100/1000 Mbps	<p>This port is for connecting to the Internet (i.e., DSL router).</p> <ul style="list-style-type: none"> <li>■ Green LED: Flashes when data is being transmitted via network.</li> <li>■ Orange LED: <ul style="list-style-type: none"> <li>— Lights up in green when network speed is 10/100 Mbps.</li> <li>— Lights up in orange when network speed is 1000 Mbps</li> </ul> </li> </ul>
9	DisplayPort	The video connector is used to connect to a corresponding DisplayPort output jack of the monitor.

# Imprint

This document is part of the camera manufactured by MOBOTIX AG (called manufacturer in the following); the document describes how to use and to configure the camera and its components.

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