Technical Specifications

MOBOTIX MOVE NVR-64

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 24-port PoE switch allows direct connection of IP cameras without extra power supply. It is equipped with iSCSI communication interfaces 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 extensive flexibility in mixed camera environments.

- 2MP Full HD up to 4K (12MP) IP camera support
- Support of MOBOTIX MOVE, IoT cameras and 3rd-party cameras via ONVIF S protocol
- H.264/H.265 recording and playback
- Dual streaming, up to 64 channels simultaneous real-time live, record and playback
- Integrated PoE+ switch with 24 (802.3af/at) ports for Plug & Play MOVE camera integration
- Can handle additional 40 Plug & Play MOVE cameras via external switch
- Full HD local dual display/monitor output (HDMI/DisplayPort)
- 8 x HDD-Cartridge (HOT-swappable, RAID 0/1/5/10)

- Failover server support/Real time backup with alternative firmware
- iOS & Android app support provides convenient mobile access to live and recorded video on the NVR
- Alarm I/O connectors (4 relay outputs, 4 signal inputs, 1 RS485 D+, 1 RS485 D– ports)

Product Information

Product Name	MOVE NVR-64
Order Code	Mx-S-NVR1A-64-POE

System

Operating System	Embedded Linux
CPU	Intel Skylake i5-6500
RAM	2 x 4 GB, DDR4
Boot Drive	32 GB 2.5” SSD for Linux
Graphics	Intel HD Graphics 530
DISPLAY PORT Output	Up to 4096x2304 @60Hz
HDMI Output	Up to 4096x2160 @24Hz or 2560x1600 @60Hz (HDMI 1.4)
Audio Input	3.5 mm TRS phone jack
Audio Output	3.5 mm TRS phone jack
USB Ports	USB 2.0 x 2 ; USB 3.0 x 3 (1 front, 2 rear)

Recording/Playback

IPCAM Throughput	Average: 480 Mbps Peak: 540 Mbps
GPU Hardware Decoding	64 CH real-time display, up to 1920 fps@D1 decoding
Compression Format	H.264/H.265

Storage & I/O

Build-in SATA Interface	1 x 2.5” SATA 8 x 3.5” SATA (Hot-swappable)
Build-in RAID	RAID 0/1/5/10
eSATA	1 x eSATA
Digital Input	Input level 24V (H: V_{in}≧ 2.4V, L: V_{in}≦ 1.6V) 4 x Terminal Block
Digital Output	24V, 1A, Relay NC 4 x Terminal Block

Network

WAN Uplink	2 x RJ-45, 10/100/1000 Mbps
LAN Uplink	2 x RJ-45, 10/100/1000 Mbps
LAN ports with PoE	24 x RJ-45, 10/100Mbps
PoE Level	24 x IEEE 802.3 af/at
PoE & switch management	Linux SDK
Supported protocols	TCP/IP, UDP/IP, RTP (UDP), RTP (TCP), RTSP, NTP, HTTP, DHCP (Server, Client), PPPoE, SMTP, ICMP, ARP, DNS, DDNS, HTTPS, ONVIF
Maximum Remote Users	**Playback:** 4 **Live unicast & multicast:** Unlimited
IP	IPv4/IPv6
Security	User access log, 802.1x authentication, Encryption

Functions/Performance

Language support	English, French, German, Russian, Turkish, Arabic, Traditional Chinese, Japanese
Browser Support	Any current browser
Viewer Software	Webviewer
Camera Setup	**Register:** Auto, Manual **Setup Items:** IP address, PTZ control, Image setup, Video Format, Motion Detection, Audio detection, Schedule, Video Analytics, Fisheye, Mask, Text Overlay, Alarm, IR exposure, Reboot, Default
PTZ Control	Local, Via GUI, Webviewer
App Support	**Operating Systems:** iOS/Android **Protocols:** TP, RTSP, HTTP, WebAPI **Control:** Control Live (6 channel)/Playback (6 channel)
Redundancy	**Failover:** N + M (include fallback) supported with alternative firmware
System Control	Mouse, Web
System Log	max 20.000 entries
Recording	**Resolution:** CIF ~ 12 MP **Compression:** H.264/H.265 **Mode:** Schedule (Continuous/Event), Event (Pre/Post) **Event Trigger:** Camera event (MD, Video analytics, Alarm In, Network Failure detection, Periodical Event, Manual Trigger) **Event Action:** E-mail, PTZ preset, Event full screen, Push notification, Alarm Out

Search & Playback	**Playback Bandwidth:** 64Mbps (64 channels simultaneously) **Performance:** Local 1, Remote 4 **Mode:** Date & Time (Calendar)/Event log list **Simultaneous Playback:** Maximum 64 channels (Local monitor, Remote, CMS) **Resolution:** CIF ~ 12 MP **Fish-eye Dewarping:** Yes **Playback Control:** Fast/Slow Forward/Backward
Backup	**Export format:** MP4,AVI, MKV, MOV, Raw **Function:** Multi-channel (Up to 64 channel) play, customized OSD display
Video	**Channels:** total up to 64 (Network/IP), max. 24 via integrated PoE ports **Local Display:** 1x HDMI, 1x display port dual monitor **Multi-Screen Display:** [Local monitor] 1/64, [Web] 1/64 **Performance (Local Display):** 12 MP (30fps), 8.3 MP (120fps), 1080p (480fps), 720P (960fps), D1 (1560fps)
Audio	**Input:** 64 channels via camera network stream **Audio Communication:** 2-way with camera

Indicator/Display

Front Indicator	**LED Status Indicator (38EA):** 8 x HDD action, 1 x Power, 2 x WAN status, 2 x LAN status, 24 x PoE power status, 1 x PoE power shortage
Display port/HDMI	**Both monitors:** Live/Playback/Setup **Extended Mode:** main/sub monitor control

General

Unit Dimensions (mm)	428 x 435 x 88
Unit Weight (kg)	7.5

Package Dimensions (mm)	575 x 575 x 175
Package Weight (kg)	9.5
19" Rack Mounting Kit	Included
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, ATX 520 W (53 V/360 W for PoE; 12 V/160 W for HDD/system)
PoE Budget per Port	max. 30 W
Total PoE Budget	360 W
Color/Material	Black/Metal

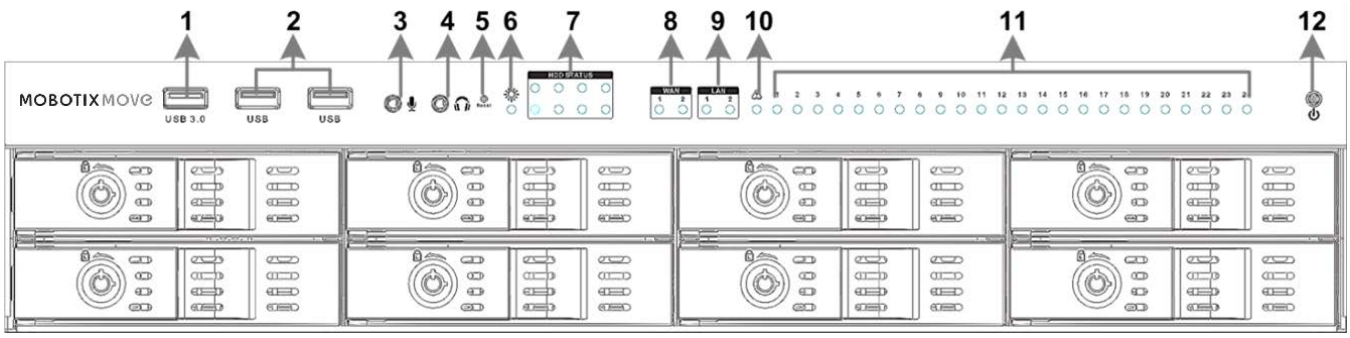
List of Tested Hard Disks

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	Capacity
Seagate	Skyhawk	ST1000VX005	1 TB
		ST2000VX008	2 TB
		ST2000VX015	2 TB
		ST3000VX009	3 TB
		ST4000VX007	4 TB
		ST4000VX013	4 TB
		ST6000VX001	6 TB
		ST8000VX004	8TB
	SkyHawk AI	ST8000VE000	8 TB
		ST10000VE001	10 TB
		ST14000VE0008	14 TB
		ST16000VE000	16 TB
		ST18000VE002	18 TB
	Ironwolf	ST12000VN0008	12 TB
	Ironwolf Pro	ST16000NE000	16 TB

Brand	Series	Model Number	Capacity
Western Digital	Purple	WD10PURZ	1 TB
		WD20PURZ	2 TB
		WD30PURZ	3 TB
		WD40PURZ	4 TB
		WD60EJRX	6 TB
		WD60PURZ	6 TB
		WD62PURZ	6 TB
		WD82PURZ	8 TB
		WD84PURZ	8 TB
		WD102PURZ	10 TB
		WD121PURZ	12 TB
		WD140PURZ	14 TB
		WD180EJRX	18 TB
		WD180PURZ	18 TB
	Purple pro	WD8001PURP	8 TB
		WD141PURP	14 TB
	Gold (Ultrastar)	WD102KRYZ	10 TB
		WD121KRYZ	12 TB
		WD141KRYZ	14 TB
		WD161KRYZ	16 TB
		WD181KRYZ	18 TB
		WUH721818ALE6L4	18 TB

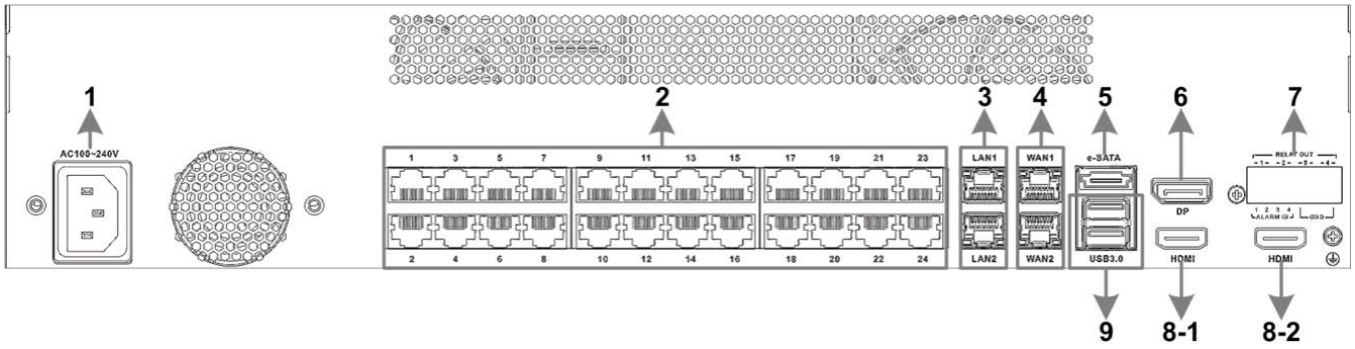
Front Panel



Item	Name	Description
1	USB 3.0 Port x1	USB 3.0 port supports 3.0, 2.0 or 1.0 devices. Data can be transmitted and backed up via external hard drive or USB Thumb drive.
2	USB 2.0 Port x2	USB 2.0 ports allow users to connect external USB devices, such as a USB mouse, a USB keyboard, a USB storage device, etc
3	Mic In	A 3.5 mm phone jack is provided to input/output audio.
4	Audio Out	
5	Reset Button	To restore the factory defaults of the NVR system, use a proper tool for pressing the Reset button, then proceed as follows: ■ Power off the NVR system. ■ Press and hold the Reset button. ■ Power on the NVR system **and keep the button pressed for another ten seconds**.
6	Power LED	Lights up when the power is on.
7	HDD LED (RAID)	■ **Flashing:** The HDD is reading/writing data. ■ **OFF:** The HDD is not running.
8	WAN LED	■ **Orange:** Network speed is 1000Mbps. ■ **Green:** Network speed is 10/100Mbps.
9	LAN LED	
10	P. Max	Lights up when there are 10 watts left to reach the power budget of PoE switch.
11	Camera LED	Lights up when the camera is powered up and has good network connection. ■ Lights up in Green when the power source is from NVR.

Item	Name	Description
		■ Lights up in Orange when the camera is powered by external power supply.
12	Power Button	Press to power on the NVR system. ■ Press for 3 seconds to open the power option (power off/cancel/reboot) on screen. ■ Press for 10 seconds to trigger forced shutdown.

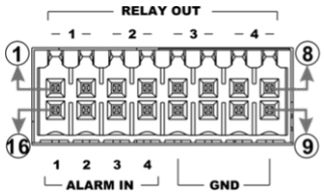
Rear Panel



Item	Name	Description
1	Power Jack	Connect the power cord shipped with the NVR to power on the NVR system.
2	PoE Switch	Provides network connectivity and power supply for up to 24 IP cameras.
3	LAN (RJ-45) 10/100/1000 Mbps	The NVR is capable of connecting the Smart PoE Switch via LAN port. ■ **Green LED:** Flashes when data is being transmitted via network. ■ **Orange LED:** — Lights up in green when network speed is 10/100 Mbps. — Lights up in orange when network speed is 1000 Mbps.
4	WAN (RJ-45) 10/100/1000 Mbps	This port is for connecting to the Internet (i.e., DSL router). ■ **Green LED:** Flashes when data is being transmitted via network. ■ **Orange LED:** — Lights up in green when network speed is 10/100 Mbps. — Lights up in orange when network speed is 1000 Mbps
5	eSATA	This port is for connecting an external SATA device
6	DisplayPort (DP1)	For connecting a monitor using its DisplayPort connector.
7	Alarm I/O Connectors	For connecting other devices to the NVR (see pin definition below).
8-1, 8-2	HDMI 2, HDMI 3	For connecting monitors using their HDMI connectors.
9	2 x USB 3.0 Port	USB 3.0 ports support all 3.0/2.0/1.0 devices. Data can be transmitted and backed up via external hard drives or USB Thumb drives.

Alarm I/O Connectors

Pin Definition of Alarm I/O



Pin	Definition	Pin	Definition	Pin	Definition	Pin	Definition
1	Relay Out 1	5	Relay Out 3	9	GND 1	13	Alarm In 4
2		6		10	GND 2	14	Alarm In 3
3	Relay Out 2	7	Relay Out 4	11	GND 3	15	Alarm In 2
4		8		12	GND 4	16	Alarm In 1

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BeyondHumanVision

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