Technical Specifications

MOBOTIX MOVE NVR-8

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 8-port PoE switch allows direct connection of IP cameras without extra power supply. It is equipped with M.2 (M-Key) and 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

- Integrated PoE switch with 8 ports for Plug & Play MOVE camera integration

- Can handle additional 4 Plug & Play MOVE cameras via external switch

- Full HD local dual display/monitor output (HDMI/DisplayPort)

- Up to 2 x internal HDDs (RAID 0/1)

- Failover server support/Real time backup with alternative firmware

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- 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; serial number RD20C00001 and higher)

Product Information

Product Name	MOVE NVR-8
Order Code	Mx-S-NVR1A-8-POE

System

Operating System	Embedded Linux
CPU	Intel Apollo Lake E3930
RAM	2 x 1 GB, LPDDR4
Boot Drive	16 GB eMMC Flash
Graphics	Intel HD Graphics 500
DISPLAY PORT Output	1920x1080@60Hz (Full HD)
HDMI Output	1920x1080@60Hz (Full HD)
Audio Input	3.5 mm TRS phone jack
Audio Output	3.5 mm TRS phone jack
USB Ports	USB 2.0 x2 (front); USB 3.0 x2 (rear)

Recording/Playback

IPCAM Throughput	Average: 80 Mbps Peak: 120 Mbps
GPU Hardware Decoding	12 CH real-time display, up to 360 fps@D1 decoding
Compression Format	H.264/H.265

Storage & I/O

Digital Input	Input level 24V (H: $V_{in} \geqq$ 2.4V, L: $V_{in} \leqq$ 1.6V) 4 x Terminal Block
Digital Output	24V, 1A, Relay NC 4 x Terminal Block
Max. HDD storage support (internal & ext. iSCSI)	20 TB
Redundancy	**Failover:** N + M (include fallback) supported with alternative firmware

Onboard Hardware Interface

M.2 (M-Key)	Yes

Network

WAN Uplink	RJ-45 x1, 10/100/1000 Mbps
LAN Uplink	RJ-45 x1, 10/100/1000 Mbps
LAN ports with PoE	RJ-45 x8, 10/100Mbps
PoE Level	IEEE 802.3 af/at x8
PoE & switch management	Linux SDK
Supported protocols	User Authentication, IEEE 802.1x, IPv4, TCP, UDP, DHCP, SMTP, RTP, RTSP, HTTP, NTP, DDNS, iSCSI

General

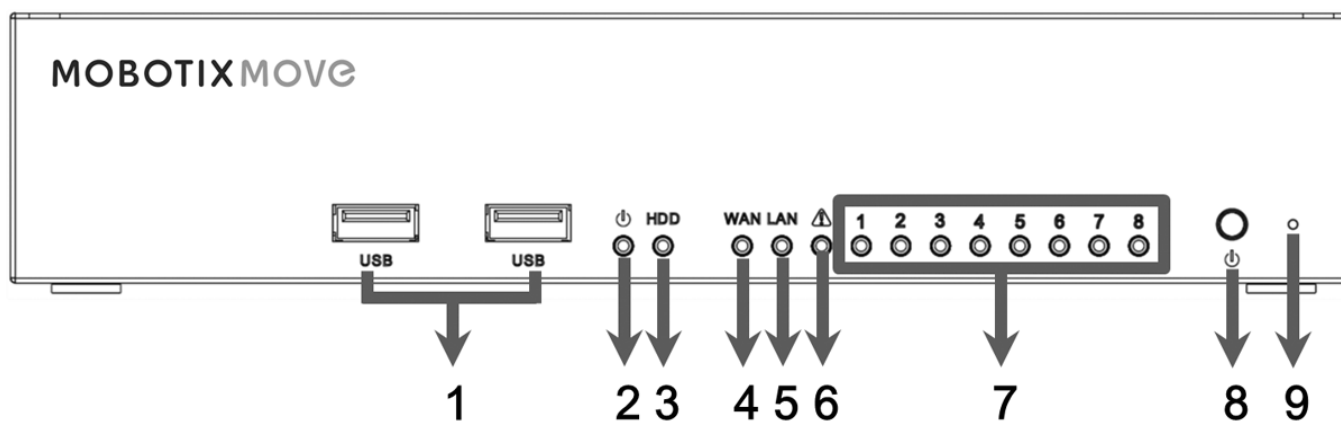|	
Unit Dimensions (mm)	220 x 275 x 44
Unit Weight (kg)	1.4
Package Dimensions (mm)	426 x 379 x 110
Package Weight (kg)	4.2
19" Rack Mounting Kit	Available as optional accessory Mx-M-NVR8-RM for devices with serial number RD20C00001 or higher.
Operating Temperature	0 to 40 °C/32 to 104 °F
Operating Relative Humidity	10 to 90 % non-condensing
System Power Supply	AC 100 to 240 V, 180 W, 56 V/3.2 A
PoE Budget per Port	30 W
Total PoE Budget	120 W

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

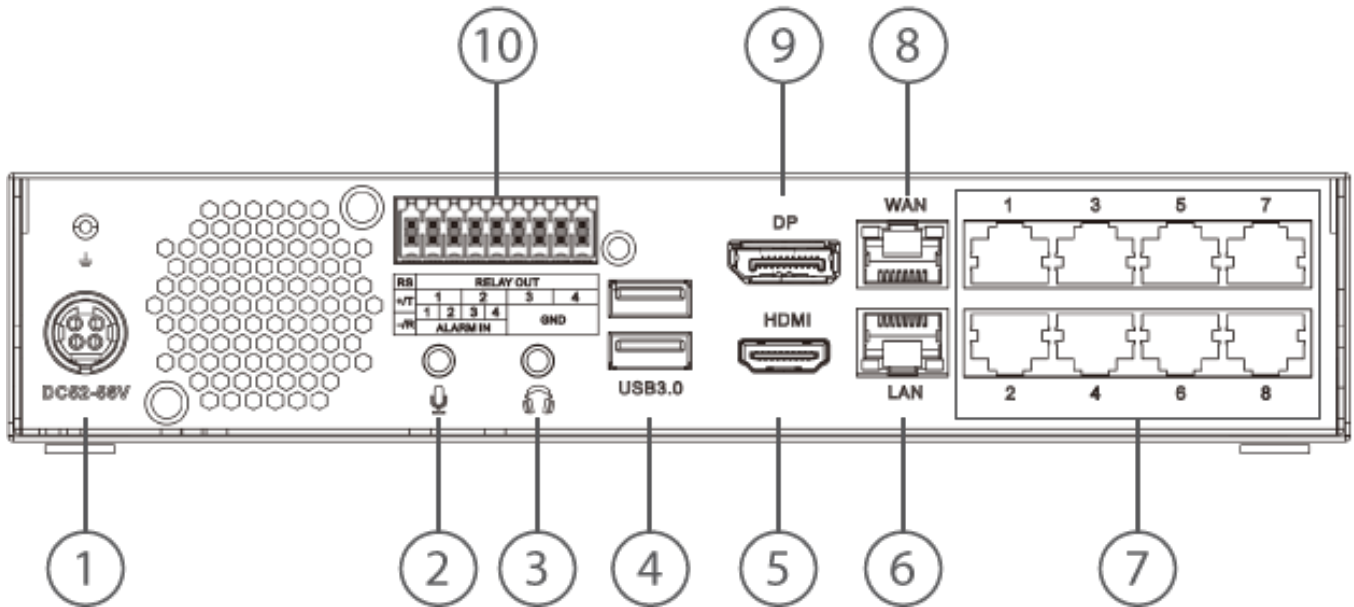| Item	Name	Description
1	USB 2.0 Port x2	USB ports allow users to connect external USB devices, such as a USB mouse, a USB keyboard, a USB storage device, etc.
2	Power LED	Lights up when the power is on.
3	HDD LED	▪ **Flashing:** The HDD is reading/writing data. ▪ **OFF:** The HDD is not running.
4	WAN LED	▪ **Orange:** Network speed is 1000Mbps. ▪ **Green:** Network speed is 10/100Mbps.
5	LAN LED	
6	P. Max	Lights up when there are 10 watts left to reach the power budget of PoE switch.
7	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. ▪ Lights up in Orange when the camera is powered by external power supply.
8	Power Button	Press to power on the NVR system.
9	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.

Item	Name	Description
		■ Power on the NVR system **and keep the button pressed for another ten seconds**.

Rear Panel

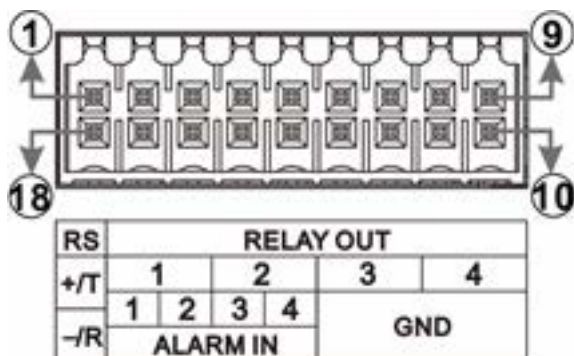| Item	Name	Description
1	Power Jack (DC 52 – 56 V)	Connect the power adapter and the power cord shipped with the NVR to power on the NVR system. Use other power supply may cause overloading.
2	Mic In	A 3.5 mm phone jack is provided to input/output audio.
3	Audio Out	
4	USB 3.0 Port x2	The USB ports allow users to connect external USB devices, such as a USB mouse, a USB keyboard, a USB storage device, etc.
5	HDMI Monitor	For connecting a monitor using its HDMI connector.
6	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.
7	PoE Switch	Provides network connectivity and power supply for up to 8 IP cameras.
8	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.

Item	Name	Description

		▪ **Orange LED:**
		   – Lights up in green when network speed is 10/100 Mbps.
		   – Lights up in orange when network speed is 1000 Mbps

9	DisplayPort	For connecting a monitor using its DisplayPort connector.
10	Alarm I/O Connectors	For connecting other devices to the NVR (see pin definition below).

Alarm I/O Connectors

NOTE! These connectors are available on MOVE NVR-8 devices with a serial number of RD20C00001 and higher.

Pin Definition of Alarm I/O

Pin	Definition	Pin	Definition	Pin	Definition	Pin	Definition
1	RS485+/T	6	Relay Out 3	10	GND 1	14	Alarm In 4
2	Relay Out 1	7		11	GND 2	15	Alarm In 3
3		8	Relay Out 4	12	GND 3	16	Alarm In 2
4	Relay Out 2	9		13	GND 4	17	Alarm In 1
5						18	RS485-/R

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