

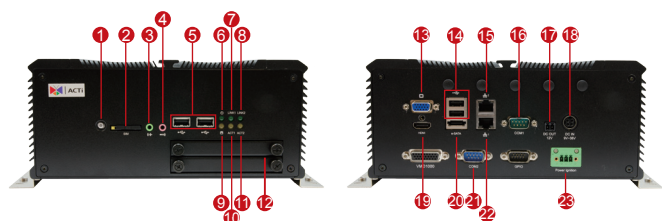
MNR-310

32-Channel 2-Bay Transportation Standalone NVR



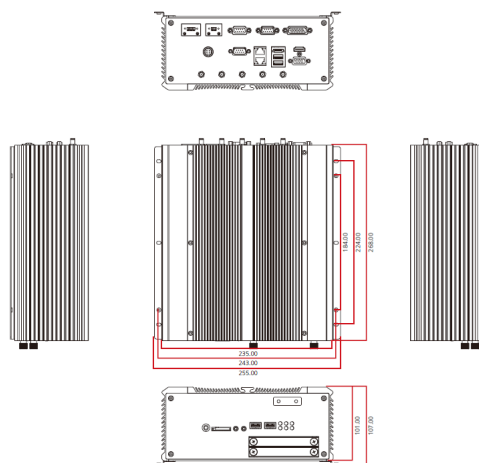
- 2-bay with software RAID (0,1)
- Manage up to 32 cameras or video encoders
- Recording up to 32 channels
- Live view local up to 4 channels, remote up to 32 channels
- Integrate with POS systems, access control and network I/O
- Synchronized playback local up to 4 channels, remote up to 32 channels
- Export video with RAW and AVI formats
- Event trigger, response and notification
- Mobile Client, Web Client, Workstation
- Location-based management with e-Map
- 16-channel free license included
- Non-ACTi camera support via licensed Camera Device Pack

PHOTO INDICATION



- | | | |
|--------------------|--------------------|--------------------|
| 1 Power Button | 9 HDD Activity LED | 17 12V DC Output |
| 2 SIM Card Holder | 10 ACT 1 LED | 18 9V~36V DC Input |
| 3 Audio Line-out | 11 ACT 2 LED | 19 HDMI Port |
| 4 Audio Mic-in | 12 HDD Trays | 20 eSATA Port |
| 5 USB 2.0 Ports | 13 VGA Connector | 21 COM 2 Port |
| 6 Power Status LED | 14 USB 2.0 Ports | 22 LAN 2 Port |
| 7 Link 1 LED | 15 LAN 1 Port | 23 Power Ignition |
| 8 Link 2 LED | 16 COM 1 Port | |

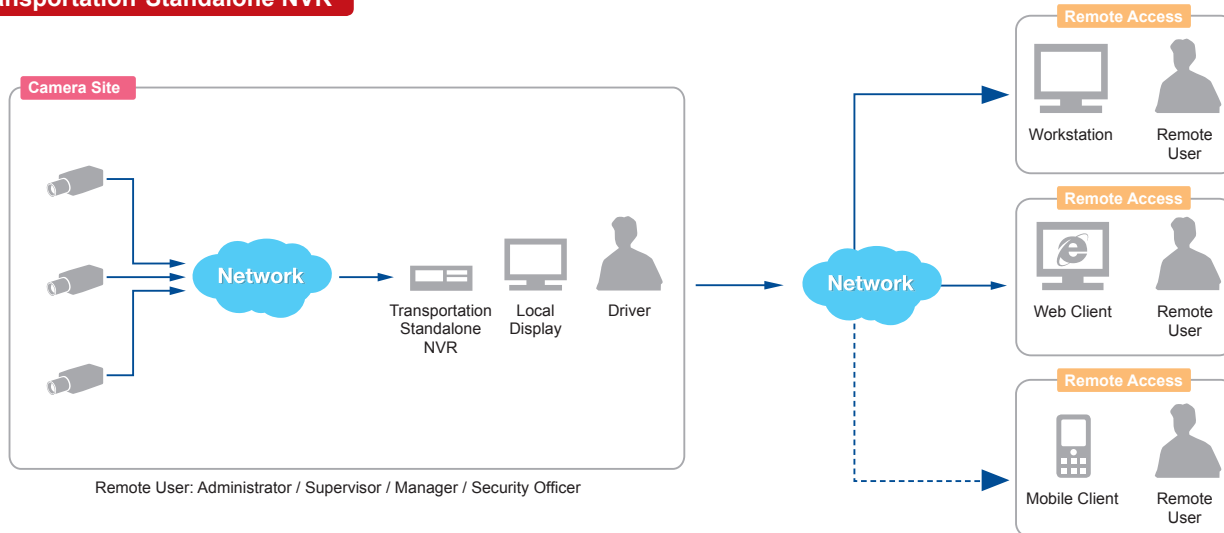
DIMENSION DIAGRAM



Unit: mm [inch]

SOLUTION ARCHITECTURE

Transportation Standalone NVR



PRODUCT SPECIFICATION**MNR-310****• General**

Full Name	ACTi Transportation Standalone Network Video Recorder MNR-310
Maximum Number of Clients	1 local, 3 remote
Maximum Number of Cameras	32 Channels
Maximum Number of POS Devices	32 Channels (requires additional license)
Maximum Number of Access Control and Network I/O Devices	32 Channels (requires additional license)
Free License	16 (16 channels for ACTi and 1 channel for third-party video device)
Compression	H.264, MPEG-4, MJPEG
Maximum local display resolution	1920 x1200

• Live View

Display Layout Mode	Local: 1, 3, 4, 5, 6, 8, 9, 10, 12, 16; Remote: 1, 3, 4, 5, 6, 8, 9, 10, 12, 16, 18, 24, 25, 35, 36, 48, 49, 64, Custom
View Manager	An interface to define display layouts and the pre-set cameras within layout in the public or private view
View Patrol	Automatic switch between different views or devices
View Panel	Contains the list of pre-defined views for quick launch
Digital Zoom	Zoom in/out digitally by mouse scroll wheel or by zoom control buttons
Camera Tree	Drag and drop video source from camera tree into display layout; display camera status on the tree
Manual Recording / Snapshot	Instant recording upon mouse click / Instant snapshot upon mouse click or hot key
Event Panel	Display event status upon alarm or upon connection loss or recovery between server and client or when the allocated disk space is full or Point-of-sale (POS), Access control and Network I/O status
Two-way Audio	Audio sound from and to all the audio supported devices; audio broadcast to multiple devices at the same time
Multiple Stream Management	Live view of stream 1, stream 2 or stream 3 of multi-stream devices
Instant Playback	Instant playback in live view window
Web Controller	Display and connect to pre-configured embedded website

• e-Map

Layout	Area maps with camera icons, small live view windows; hyperlinked
e-Map Type	Google Maps; Static Map (JPG image)
Setup	e-Map image upload; Google maps settings and preset management; camera positioning; vision angle and pointed direction of camera; view positioning; source positioning; extended devices for Point-of-sale (POS), Access control and Network I/O
PTZ Mode	Mouse PTZ mode to control e-Map video streams

• PTZ

Control	Pan, tilt and zoom controls; speed control; both buttons and mouse controls
Preset Points and Tours	Create preset points; create auto tours between preset points
Number of Preset Points	32
Joystick	USB based joystick supported
Default Protocol	Auto-detect camera's PTZ protocol. Available protocols: ACTi, Pelco-P, Pelco-D, Dynacolor, Visca

• Recording

Recording Throughput	Maximum total bitrate 192 Mbps
Scheduled Recording	Record video with user defined schedule
Event Recording	Record video when the alarm event is triggered, including the pre-event buffered video clip
Speed Up	Different recording frame rate settings for non-event and triggered event
Manual Recording	Instant recording upon mouse click
Pre-Event Recording	User-defined time period to record before event occurs, and the maximum buffer is 60 seconds (default 5 seconds)
Post-Event Recording	User-defined time period to record after event occurs, and the maximum buffer is 3600 seconds (default 30 seconds)
Multiple Stream Management	Recording of stream 1, stream 2 or stream 3 of multi-stream devices
Recording Frame Rate	Max 960 fps total; Max 30 fps per camera

• Storage

Interface	Serial ATA
Bundled System Drive	32G mSATA SSD
HDD Bay	2
Maximum Add-on HDD Capacity	1T x 2 = 2TB
RAID Level	Software RAID 0, 1
External Storage Support	eSATA, iSCSi, USB mass storage (USB 2.0)

• Search & Playback

Recording Search	Search video recordings by time, events (motion, DI, Video Status, Network Status, Manual Recordings, extended device status, event confirm status with invalid or valid), channel, bookmark, notification and listed as clickable time-based thumbnails for full-size view and snapshot download
Smart Search	Smart search of recorded video by Motion Detection and Tamper
Playback Control	Continuous forward and backward playback with speeds 1x/2x/4x/8x/16x or frame-by-frame; pause; stop
Synchronized Playback	Up to 4 channels for local display; up to 32 channels for remote client
Manual Snapshot	Instant snapshot from playback upon mouse click
Digital Zoom	Zoom in/out digitally by PiP (Picture-in-Picture)
Video Cropping	Crop a short video clip from long recording file and save it as an independent file
Video Export	Export video clips in EXE, AVI or RAW format; text overlay and Point-of-sale (POS) transaction data supported

MNR-310

• Event Management

Event Trigger	[NVR]: Disk full, Disk not found, Disk is available, Schedule service start and stop, Video Push start and stop, CPU limit exceeded [Video Device]: Video motion detection, Passive IR sensor, External device through digital input, Sound detection, Intelligent event detection, Video Push start and stop, Video loss, Video Recovery, Network loss and recovery [Extended Device]: Point-of-sale (POS) status, Network I/O status, Access Control status, Car park status
Event Response	Pop-up window with live video and event confirmation activation, Switch to hotspot window, Switch to customize view, Command a PTZ device to go to a preset point, Play alert sound, Activate external device through digital output, Execute system command to activate other programs, Upload video or snapshot to FTP server, E-mail notification with snapshots, Push notification
Manual Event	Manually activate external devices through digital output via live view monitor
Event Handling	Define the schedule of event manager

• System

Permission Control	Unlimited number of users, Active Directory, Customizable permissions for user groups, Account lockout, Playback password protected, Password validity period
Operating System	Win 7 Std. Embedded
Language	Multi-language support
Language Import/Export	Possibility to import or export language packs for convenient local language management
Customizable User Interface	Define the layout of user interface for live view and playback
Quick Setup	Configure basic settings of NVR
GPS Position	Manual setting

• Remote Access

PC Client Program	User interface program (Workstation) with live view, PTZ, playback, e-Map, video push, event management, setup
PC Web Browser	Microsoft Internet Explorer with live view, PTZ, playback, e-Map, video push, event management, setup
Mobile Client Program	Mobile device application (Active Mobile Client) supports live view, PTZ control, video push, event or time based search and playback; Supported devices: iPhone, iPad, iTouch and Android device

• Hardware

CPU	Intel Processor
RAM	2GB
Dimensions (W x H x D)	235 mm x 101 mm x 268 mm (9.25" x 3.97" x 10.55")
Weight	5.25 KG (without HDD)
Operating Temperature	-20°C ~ 60°C (-4°F ~ 140°F)
Operating Humidity	10% ~ 90% RH (non-condensing)
Power Source	110V~220V AC / 9V~36V DC
Approvals	CE (EN 55022 Class A, EN 55024), FCC (Part15 Subpart B Class A), e-Mark (e13), MIL-STD-810F, UL (for optional power adapter)
USB 2.0	4 (2 Front Ports, 2 Rear Ports)
RJ-45 Connector	2, Gigabit Ethernet ports (1000 Base-T), RJ-45 connector
Audio Port	Mic-in x 1; Line-out x 1
SIM Card Holder	1
eSATA Port	1
Display Port	VGA x 1; HDMI x 1
COM 1	RS232/422/485 with isolated 3kV x 1
COM 2	RS232 x 1
Power Ignition Module	1

• Integration

Unified Solution	Fully compatible with ACTi cameras, encoders, central management system, TV wall and intelligent video surveillance software
Open Platform Solution	Support ONVIF compliant devices
ISV CMS Integration	Software Development Kit (SDK) available
Third-Party Integration	Point-of-sale (POS), Access control, Network I/O, Car Park
Licensing Part Numbers	ACTi video device license: LNVR3003 Third-party video device integration license: LCDP1003 POS device integration license: LPOS3000 Access control and network I/O device integration license: LEXD3000

• Optional Module

GPS Module	Support, COM port interface
3G + 4G Module	Support, Mini-PCIe module
Wifi Module	Support, Mini-PCIe module
Power Ignition Module	Support
Adapter (AC110~240V)	Support
Anti-Vibration Kit	Support