WatchNET®
Security Since 2000

EN-64HP

EN-64HP
Linux-embedded Standalone NVR

HDMI | VGA | SATA | eSATA | eMap | RAID | Linux | intel | Hot Swap | H.265

Key Features

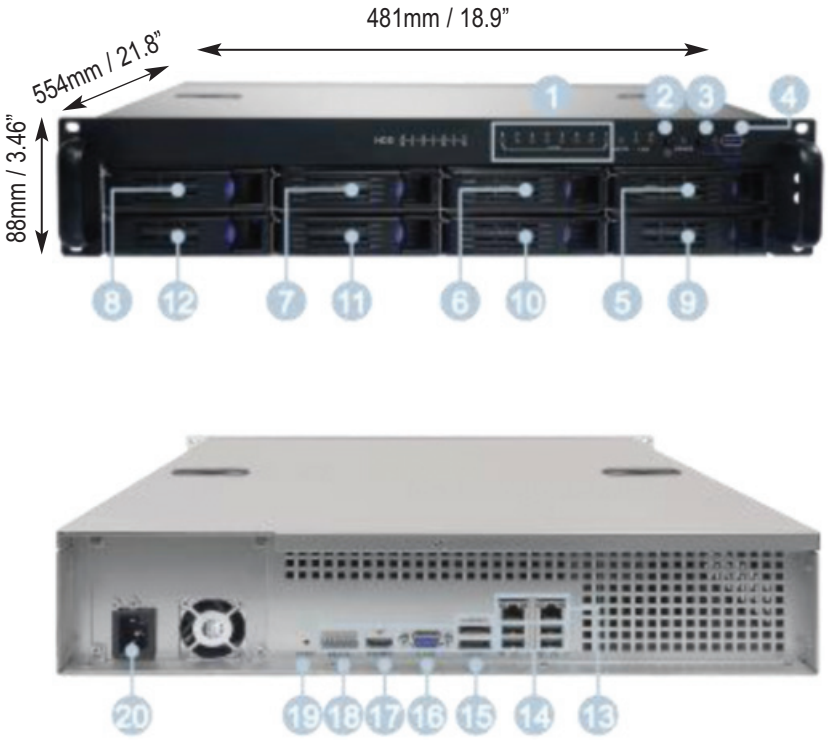
- Impressive Hardware Decode 4K Ultra HD Performance
- Real-time Liveview Local Display
  - Dual/Mirror Display via HDMI/VGA
  - Dewarp up to 12 MP Panomorph IP cameras
  - Two-way Audio via USB Type Sound Adapter
  - Liveview Instant Playback
- Real-time Remote Monitoring
  - Built-in Mini-CMS Server (up to 256CH)
  - Quick Navigation with Dynamic E-Map
  - Liveview Instant Playback
  - Multi-window Operation
  - Region of Interest (ROI): Monitor 5 or 7 Regional Images from One High-resolution Camera
- Excellent Megapixel Real-time Video Recording
  - Up to 16-channel Real-time Recording
  - Up to 12 Megapixel Recording Resolution
  - Camera Group Recording: Assign Video Keeping Days for Each Camera
  - Support 120FPS Camera Recording and Monitoring
  - Event Smart Recording
- Multi-channel Playback on Remote Client
  - Maximum 16-channel Playback Simultaneously
  - Remote Multi-NVR Playback & Smart Search
  - Time-divided Search: Quickly Find the Key Frame to Export Related Video and Snapshot
  - Event Search: Explore Event Data in A Smarter and More Efficient Way
  - Export Video with Watermark
- Monitor Everywhere via iOS and Android Mobile Device
- Up to 256TB Storage Capacity (Up to 16TB per HDD) (NVR: 128TB + Watch*NET* Storage Expansion Units: 128TB)
- Connect up to 4 iSCSI Server to Expand Storage Space
- Multi-RAID Configuration for Future HDD Expansion
- S.M.A.R.T HDD Health Monitoring
- Powerful Event and Action Management
  - Detection of Device Connection Lost, External Events and Camera Motion/ IVA
  - Notification via Liveview Pop-out Window, Email, SMS, Buzzer and External Devices
  - Event & Action Summary
- Advanced and Reliable Security System
  - Reliable Linux Security System
  - NVR Failover and System Monitoring
  - Built-in NVR Relay Server
  - Built-in SNMP Server to Central Monitor NVRs' Status
  - Integrated Access Control Server
  - Integrated Modbus Analog I/O-Digital I/O Box Server
  - Integrated IP Video Door Intercom Server
  - Manage and Configure Watch*NET* PoE Switches on NVR
  - Detail Log Information
  - Flexible User Privilege Management
- Diverse Backup Methods
  - Export Files from Remote and Local Playback
  - One Touch USB Backup
  - Become NVR Backup Server
  - Local Backup to Watch*NET*: Schedule/Manual
  - Remote Backup to NAS: Schedule/Manual
  - NVR Edge Backup
  - Event Backup to External FTP: Video Clip & Snapshot
  - Export File with Free-Installation Video Player

System	
CPU	Intel High Speed CPU
Operating System	Linux Embedded
HDD Tray	8 (Swappable)
Max. Capacity[1]	Up to 128TB (2.5”/3.5” SATA HDD x 8)
LAN Port[2]	Gigabit x 2
USB Connector	USB 3.0 x 1 (Front) / USB 2.0 x 4 (Rear)
GPIO	4-in, 2-out
Video Output Connector	HDMI x 1, VGA x 1 (For Dual Display)
Disk Management	Linear (JBOD), RAID 0/1/5/6/10
Multi-RAID Number	Up to 2 volume (Global Hot Spare)
Operating Temperature	0~40^{0}C / 32~104^{0}F
Operating Humidity	0~95% R.H.
Power Supply	Input: 100-240V AC, 50/60Hz, Output: 300W
Power Consumption	84W (With 8 x 500GB HDD installed and in RAID 5 building process)
Certification	CE, FCC, BSMI, VCCI and C-TICK
H/W Dimensions	88.1(H) x 481(W) x 554(D) mm 3.46(H) x 18.9(W) x 21.8(D) inch
User Interface	1. Local display monitoring/[layback/settings 2. Remote Client with login short cut 3. Mobile App: Android and IOS
Liveview	
H/W Decode Max Resolution per Cannel	Resolution up to 12MP per channel (H.264)
H/W Decode Local Display Max. FPS in Signal Page	4MP 360FPS/Full HD 900FPS/HD 1200FPS/ D1 1600FPS (H.264)
Display Capability	Dual display to display digerent liveview display modes on two monitors, Mirror display to display same liveview display mode on two monitors
Liveview Control	PTZ panel, PTZ Patrol, Auto Focus, Digital Zoom in/out, Audio, Snapshot, Auto/Manual stream change, Instant playback, ROI, Two way audio[2], Panomorph[7]
E-Map[3]	Multi-layer maps, Pop-out event window, Event instant playback
Mini-CMS Server Monitoring[3]	Up to 256 channels from multiple NVR sites
Liveview Optimization	Smart dual stream auto switch
Recording	
Max. Network Throughput[4]	650Mbps
Video Format[8]	H.265, H.264, MPEG4, MJPEG, Axis Zipstream (H.264)
File Format	AVI
HDD Capacity Automatic Recycle	1. Max. days of each camera 2. Total capacity percentage
Recording Modes	No recording, Event recording, Schedule recording, Always recording, Audio recording by event, Pre-event & Post-event recording, Manual recording

Playback	
Multi-channel Playback[5]	Max. 16-channel simultaneously
Multi-NVR Playback	Remotely playback recording videos up to 16 channel from multiple Watch*NET* NVRs
Recording Types	Normal, Event, Video clip, Recovery, Time overlap, Failover (remote), USB device (local)
Search Modes	Date, time, channel and recording type
Smart Search	Motion detection, Foreign object detection, Missing object detection, Camera tampering detection, Lose Focus
Playback Control	Rewind, Slow Motion, Fast forward, Frame by frame Playback, Panomorph[7], Snapshot, ROI, Customized watermark
Backup Methods	Export files on remote and local playback, One touch USB backup, Become NVR backup server, Local backup to Watch*NET*, Remote backup to NAS, NVR edge backup, instant export while playback videos on remote, Event backup to external FTP
Video Player	Installation-free NVR Player with multi-channel playback
Event & Action Management	
Event Types	1. Camera Events: Connection lost, Connection lost delay, Motion detection, Audio detection, Cross-line detection, Temperature detection, People counting threshold alarm, Digital input 2. NVR Events: NVR connection lost, UPS lower power warning, Storage threshold warning, Abnormal shutdown, External event (HTTP in), built-in digital input 3. Storage Event: RAID Degraded / Rebuilding / Failed 4. NVR Hardware Events: CPU temperature warning, CPU fan warning, System fan warning, HDD error warning, HDD fail warning, Redundant power supply failure (optional)
Action Types	Alert sound, Event log history, Video pop-out window, Highlight video window, Event recording, E-Mail notification, Video clip/snapshot via E-Mail, SMS, Buzzer alarm, Go to pre-set point, Camera digital output, SNMP trap, External IO box, Stack light, Network harm speaker, User-defined action (HTTP out), Backup to external FTP, Built-in digital output
Chain Event	Precise alarms when multi-events triggered within user-defined time
Security Management	
User Privilege	Administrator, Power user and User
Advanced User Management	Random password sent by E-mail, Event log, File access, Current user log and Historical user log
NVR Failover	Monitor up to 4 NVRs in default (Option up to 16 NVRs)
Access Control Device Management	Manage up to 4 access control devices in default (Option up to 15 boxes)
IR Range Access Control	White/Black List to permit or prohibit specific IP address
Timeout Settings	Set up auto timeout period
Advanced Security	Video Watermark and Password on exported video file

Network Service	
Protocol	HTTP, TCP/IP, DHCP, DNS, DDNS, UPnP, FTP, NTP, SMTP, IPv6 (for NVR)
Two LAN Port Applications	Share IP, Separated IP and Load balance
File Sharing	Windows networking, FTP service
Built-in Servers	Built-in DHCP/NTP server
Remote Web Browser PC Requirements	
OS (32 and 64-bit)	Windows Vista / 7 / 8 / 10
CPU	<16 CH: Intel Dual Core CPU 3.0GHz or above ≧16 CH: Intel i5 / i7 CPU 3.3GHz or above
Memory	<16 CH: DDR3 4G or above ≧16 CH: DDR3 8GB or above

Appearance



1. LED indicators: LAN, eSATA, HDD1, HDD2, HDD3, HDD4, HDD5, HDD6, HDD7, HDD8
2. Power button
3. USB BACKUP button (For auto video backup)
4. USB 3.0 x 1 (Support auto video backup)
5. HDD1
6. HDD2
7. HDD3
8. HDD4
9. HDD5
10. HDD6
11. HDD7
12. HDD8
13. Gigabit LAN x 2
14. USB 2.0 x 4
15. eSATA x 2
16. VGA output
17. HDMI output
18. DI/DO (4 in 2 out)
19. Reset button
20. Power connector

Note 1. The standard system is shipped without HDD.
Note 2: User is advised to connect cameras and Watch*NET* NVR with Gigabit switch.
Note 3: E-Map and Built-in Mini-CMS Server Monitoring is not supported on local display.
Note 4: Maximum network throughput is varied in different environment.
Note 5: Multi-channel playback on remote web browsers is supported up to 16 channels and multi-channel playback on local display is supported up to 4 channels,
Note 6: Camera is needed to support two-way audio and integrated with Watch*NET* NVR. On local site, it is necessary to prepare a USB type external audio sound adapter for connecting speaker/microphone to NVR.
Note 7: Watch*NET* NVR supports dewarping display image of ACTi, AXIS, VIVOTEK, ImmerVision Panomorph and fisheye cameras.
Note 8: Watch*NET* NVR supports H.264, MPEG4, MJPEG, MxPEG format for local display.

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CANADA:
351 Ferrier Street, Unit 5
Markham, ON L3R 5Z2
Toll Free: 1-866-843-6865
Tel: 416-410-6865

USA:
171 Cooper Ave. Suite 110
Tonawanda, NY 14150 USA
Toll Free: 1-866-843-6865
Local: 1-716-877-7277

UAE:
P O Box 126312
No 703, Oxford Towers
Business Bay, Dubai, UAE
Tel: + 971 4 2767117

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info@watchnetinc.com
www.watchnetinc.com