



## Enterprise NVR AM-P24160-UHD Ingenious 160CH 12MP H.265+ Enterprise Ultra HD NVR



Superior Engineering Design & Sensational Image Quality

### AM-P24160-UHD Ingenious 160CH 12MP H.265+ Enterprise Ultra HD NVR



H.265 VIDEO COMPRESSION



4K ULTRA HD RESOLUTION



HDMI



VGA



RAID



VIDEO ANALYTICS



HDD HOT SWAPPABLE



SMART RECORD & PLAYBACK



RJ45 LAN



HDD GROUPING & QUOTA



TRIGGER ALARM



P2P CLOUD

#### Features :

- Latest H.265+ HEVC compression with failover system architecture embedded NVR
- Supports 12MP/4K(8MP)/6MP/5MP/4MP/3MP/1080P/720P/4CIF IP Camera Input
- Hot swappable 24 HDD port with extensive storage up to 240TB
- Redundancy Supports by RAID-0/1/5/10/50/60, JBOD, Standby HOT spare N+M
- Array configuration available One key build, Manually rebuild and Rebuild automatically
- Very high bandwidth 1.44Gbps throughput for fast accessibility & Superior video performance
- Complete failover system architecture by 1+1 redundant SMPS, RAID, N+M hot standby, 4port LAN port
- Video analysis Supports with AVTRON(iCRYs series) cameras such as Facial Detection/Crowd/Loitering/People Counting/Missing & Foreign Object/Trip-wire/Perimeter & many more
- Built-in Electromagnetic interference, Fuzzy video, Noise, Video color cast video diagnosis function
- Supports ANR function, I-frame recording, Smart record and Smart search, Record TAG, Lock, Encryption
- 64Ch real-time synchronous display on local HDMI screen
- Software & Hardware alarm linkage for various analytics, diagnosis and alarm
- 4 port x Optical, 4 port x RJ-45(Giga), Dual IP address, Aggregate redundancy and Load balance
- 2 Port x HDMI, 1 x VGA, Selectable video source and program
- HDMI resolution up to 4K and VGA resolution up to 1080P real-time viewing output
- Advanced HDD grouping & quota function with customized recoding setup & S.M.A.R.T HDD technology
- P2P secure cloud monitoring on iOS,IPAD,Android handsets, Alert management
- 256Ch CMS Software, Supports up to 150CH Viewing at single Screen others 100CH/80CH/64CH/49CH/36CH/25CH/16CH & many more
- ANR(automatic network replenishment) to Supports offline network storage data(SD Card/USB) videos automatically download to NVR hard drive when network re-established
- Network protocols TCP/UDP/FTP/SMTP/upnp/RTSP/RTP/HTTP & many more, Auto search with Avtron(iCRYs series) camera
- Hardware & Software alarm linkage, Digital zooming on Live/Record/Playback
- Supports Email, FTP, Recording, PTZ movement, Tour, Alarm, Buzzer for Motion, Video Loss, Blind, etc..
- Network & HDD fault triggers like Disk error, Network error, Conflict error and so-on
- Backup through USB Flash drive/HDD/CD&DVD-RW/eSATA Device/Network download
- Quick Playback & Back up, Customized GUI display, Complete PTZ control(Preset, Cruise, Pattern & many more)
- Supports 1 eSATA for Backup, USB3.0, Two-Way Audio Inter Communication Through (CMS,Mobile, NVR)
- Third party alarm integration by 8CH alarm input & 4CH output to activate the other system(expandable up to 16)
- Latest ONVIF S profile compliance, Email notification, Manual & Schedule snapshot
- Easy, fast response & friendly graphical user interface, Advanced encryption secure access

## Intelligent Video Analytic Functions :

### Double Trip Wire



The application detects moving objects that cross a two trip line, making it possible to automatically trigger an event. Ideal for illegal turn or traffic flow (vehicles or people) and specify the minimum to maximum time intervals or when the person or an object enters in unauthorized zone and crosses, the both virtual lines trigger an event.

### Facial Detection



The application is able to identify and capture human faces from live video & it can save the images to the specified Recording Path either in NVR or CMS or Local Computer with Date & Time Stamp. Ideal for ATM windows, Service and Ticket Counters, Retail POS counters, Doorways and Passageways, Lobby and Reception areas.

### People Counting



The application sense people from an overhead position in the desired areas, how many persons Enter & Exit passing through. Functional to maintain Visitor Data, supervise stock point, evaluate traffic in key areas & manage the traffic flows. Ideal for Customer Service Centers, Airports, Changing Rooms, Point-of-Sale (POS) transactions Desk.

### Foreign Object



### Missing Object



**Foreign:** The application Detects object abandoned/left behind/ Suspicious Objects Left in Pre-defined Area. It triggers an event. Ideal for Public Transports, Museums, Art Galleries & Public Places  
**Missing :** The application detects when a particular object was moved or removed from the desired drawn Virtual area, it trigger an event. Ideal for Museums, Warehouse, Art Gallery, Jewelry showroom.

### Crowd



The application estimates the density of people in pre-defined area, once the density crosses a certain limits or suddenly group of a people enter into in the pre-defined area, it triggers an event. Ideal for Retailers, Shopping Malls, Waiting Areas, Hospitals, Parking Zones, Silent Zones.

### Loitering



If somebody enters the marked area and stays there for a certain period of time, the alarm is automatically triggered. Ideal for Public areas, Border Fences, Buildings, Government Restricted Zone, Banks, Parking Areas.

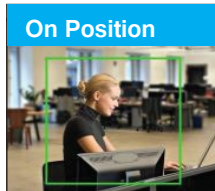
### Parking



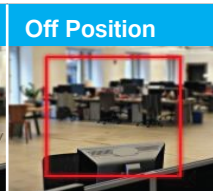
The application detects illegal parking with pre-defined restricted zones, speed limit settings.

Ideal for VIP parking Zone, No Parking Zone, Special Allocated Parking Zone, Parliament House.

### On Position



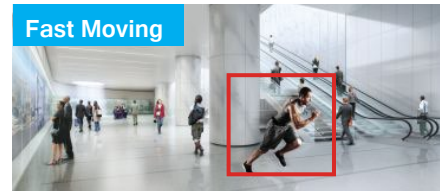
### Off Position



The application triggers an alarm when the Duty Officers are absence from their pre-defined sitting positions.

Ideal for Reception, Customer Service Desk, POS Desk, Entry/Exits Security Guards Cabin.

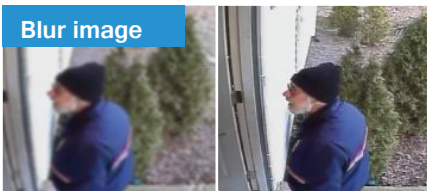
### Fast Moving



The application triggers an alarm when the person runs in a not allowing Running pre-defined Zone.

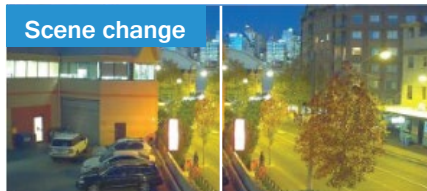
Ideal for Temple, Hallways lobbies, Platforms Walking Zone, Airports Runways.

### Blur image



The application trigger an alarm if someone deliberately or accidentally disturbed the lens focus or change the image Sharpness.

### Scene change



The application trigger an alarm if the camera Rotated/Manipulation/Direction Shifted from the user-selected Viewing direction or camera lens is covered by some bag or cloths, Spray Painting, Video Tamper.

More than  
**18 IVA Functions**  
are available

## Technical Specifications

Model No	AM-P24160-UHD
<b>System</b>	
Video Compression	H.265+ HEVC, H.264 Hardware Compression
Audio Compression	ADPCM-DV14/G.711A/G.711U
Operation System	Embedded Linux
Signal System	Auto detect
Bandwidth Throughput	Incoming 960Mbps, Outgoing 480Mbps
<b>Record/Playback/Stream</b>	
IPC input	160CH @ 4K/12MP/6MP/5MP/4MP/3MP/2MP/720P/4CIF
Live display channel	64CH/40CH/36CH/25CH/20CH/16CH/10CH/9CH/8CH/6CH/4CH/1CH
Record resolution	4K 12MP, 8MP, 6MP, 5MP, 4MP, 3MP, 2MP, 1.3MP, 1MP, VGA, D1, DCIF, 2CIF, CIF, QCIF
Record frame rate	Main stream 25fps(P)/30fps(N), Sub stream 25fps(P)/30fps(N)
Record function	Smart record, Record encryption, Record TAG, One key start recording, Trigger recording
Smart Record	Different recording bitrate at different time zone & I-frame recording
Trigger Record	Manual/Timing/Motion Detection/Port Alarm/ IVA Alarm/Video Occlusion
Playback Channel	16CH @ 1080P/720P/D1, 8CH @ 4MP/3MP, 4CH @ 4K/6MP/5MP
Smart Search	YES, Quickly Search Target iVA Videos , Only for iCRYs Series Cameras
Playback Function	Play, Pause, Stop, Rewind, Fast & Slow play, Next & Previous file, Next & Previous Camera, Full screen, Repeat, Shuffle, Backup selection, Digital Zoom
instant Access Function	Quick Playback up to last 5min, Quick Backup
Record Stream Bit Rate	VBR/CBR, Main stream
Sub stream & Bitrate	D1/CIF/QCIF, VBR/CBR, Second stream
Record quality	Best/Better/Good/Normal/Worst
<b>Array &amp; Storage</b>	
Array Method	RAID0, RAID1, RAID5, RAID10, JBOD(>0 , Each Raid Group Supports up to 100Mbps Input)
RAID Management	Single Button Configuration, Restore Automatically and Manually Array Rebuild
Redundant Recording	200Mbps Input
Hot Backup Disk	Raid Hot Backup Disk and Overall
Hot Standby	N + M
Hard disk Interface	24 HDD (SATA Port)
Hot Swap	all 24 Hot Swappable
Hard disk Capacity	Max. up to 10TB each port
eSATA Interface	1 Port, for backup
ANR	Download stored videos automatic from camera SD card when Cameras online in NVR
Management Function	HDD Grouping and Quota, HDD Health Check(SMART), Record file TAG, File lock
<b>Video/Audio/Interface</b>	
Network	4 x Optical Giga, 4 x RJ45 Port - 100/1000MBPS Auto Detection(Load Balance, Redundant, Dual IP)
HDMI output	2 x HDMI Port @ Resolutions 4096x2160,3840x2160,2560x1600,1920x1080,1280x720,1280x800, 1366x768,800x600,1024x768,1440x900 adjustable output, Self-detection
VGA output	1 x VGA Port @ Resolution up to 1920x1080,1280x720,1280x800,1366x768, 800x600, 1024x768,1440x900 adjustable output, Self-detection
Alarm	8CH Input/ 4 CH output
Audio	1Ch input and output, 3.5mm Jack( Intercom)
Communication Protocol	2 x RS485, 1 x RS232
USB	4 Port (2 xUSB 3.0, 2 x USB2.0)

## Technical Specifications

Model No.	AM-P24320-UHD
<b>Video Analytics</b>	
Video Analytics	Tripwire/Double tripwire/intelligent tracking/Heat map/Object left and lost/Running/Loitering/Parking/Early warning/Crowd/Face detection/People counting/Perimeter/Audio and Video abnormal detection/On duty Detection
Video diagnosis	Video color cast detection, Noise Detection, Electromagnetic interference testing, Fuzzy video Detection
Motion detection	Yes, Zones :396(22x18), Sensitivity Level 1~ 100
HDD alarm trigger	Disk full, No disk, R/W error, Redundancy error, HDD overload/temp.
Intelligent alarm	illegal Access, IP Address Conflict, Network Lost, MAC Conflict, Video loss and Blind
Event & Alarm trigger	E-MAIL, Snap, NVR buzzer, OSD, Alarm server devices, Video recording, Alarm out, PTZ trigger
Private functions	Corridor, Plug & Play, Image flip, One key control(iCRYS series cameras)
<b>Network, Storage, Software</b>	
Network protocol	TCP/UDP/MULTICAST/UPnP/HTTP/HTTPS/DHCP/DNS/DDNS/NTP/PPPoE/FTP/RTSP/SMTP/SADP, Alarm Server, Auto Search iCRYS Series IP Camera
FTP & E-Mail alert	Yes, Event based, Schedule
Key functions	One Key Record, One Key Intercom, Digital Zooming
Snap shot	Schedule, Link with FTP or Email
Backup	E-SATA device/Flash drive/USB HDD/USB DVD-RW/Network download(IE/CMS)
OSD Setups	Channel name/Color/Position/Transparency/Text/Masking/Date and Time format
Log generation	Channel wise, Event based, Date and Time selection, Export
Onvif	YES, Profile S
CMS software	iCRYS Series, up to 256CH(IP+NVR+Matrix)
3rd Party VMS/NVR /CMS	Onvif/SDK/CGI
Mobile	Android, IPAD, iOS, P2P cloud Supports, DDNS
P2P functions	Live, Playback, Push Alert, Grouping,
Web Browser	Yes, All browsers IE, Safari, Chrome, Edge
Pre & Post recording	Pre : 5 to 15sec, Post : 10 to 60 sec
Remote connection	Max 160Ch remote channel
Encryption	Off/AES
<b>General</b>	
Power supply	Dual SMPS, 100 ~ 240VAC, 50 ~ 60Hz
Power consumption	Average <650W
Language	English
Operating temp. & humidity	0°C ~ 50°C & 0% ~ 95% RH
Enclosure	4U 19" Rack mount, Metal housing, Black color
Weight (g) & Dimension	<25Kg NVR, 545(D) x 447(W) x 174mm(H)

### Dimension :

