

NVR-EL16-2U12MP1

16 Channel 2U Network Video Recorder



- Multi-core embedded processor
- Smart H.265+/H.265/Smart H.264+/H.264/MJPEG support
- Up to 12MP Resolution for Preview and Playback
- Supports up to 4K Display and dual HDMI output
- 320 Mbps Incoming Bandwidth, Dual Gigabit Ethernet ports
- 8 SATA III Ports, Up to 10TB capacity for each HDD, 1 eSATA, RAID Support
- Made in South Korea and conforms to the Trade Agreements Act (TAA)

System Overview

IC Realtime's Elite NVR line starts with the NVR-EL16-2U12MP1. Combining 4K and H.265 encoding technology with high performance and flexibility, this 16 channel NVR features dual gigabit ethernet ports and 320 Mbps total bandwidth to handle the most demanding cameras up to 12MP. Storage is built to handle high resolution cameras, with storage for up to 8 HDDs at 10TB each with RAID support. This NVR also supports AI and IVS (by camera) such as Fisheye Dewarping, ANPR, Perimeter Protection, Intelligent Motion Detect, Face Detect and Recognition.

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Functions

IVS (Intelligent Video System) by camera

Working with IVS-enabled IP cameras, the NVR recognizes and records video that contains IVS data on all IP channels. The NVR records standard intelligence at-the-edge features, as well as premium IVS features that detect abandoned or missing objects, Tripwire violations, and intrusion violations. The NVR is also capable of recording business analysis data – Audio Detect, People Counting and Heat Map – from IP cameras with built-in Intelligent Business Analytics.

Smart Fan Design

The smart fan can automatically turn on or turn off according to the CPU temperature. This function can effectively reduce the fan noise to provide a better user experience.

Smart H.265+

Smart H.265+ is the optimized implementation of the H.265 codec that uses a scene-adaptive encoding strategy, dynamic GOP, dynamic ROI, flexible multi-frame reference structure and intelligent noise reduction to deliver high-quality video without straining the network. Smart H.265+ technology reduces bit rate and storage requirements by up to 70% when compared to standard H.265 video compression.

Fisheye Dewarp

The NVR features multiple fisheye dewarping modes to make viewing video easy whether it's live or during playback.

4K Resolution

4K resolution is a revolutionary breakthrough in image processing technology. 4K delivers four times the resolution of standard HDTV 1080p cameras and offers superior picture quality and image details. 4K resolution improves the clarity of a magnified scene to view or record crisp forensic video from large areas.

Technical Specification

System

Main Processor	Multi-core embedded processor
Operating System	Embedded LINUX, ICR 4.0

Video

Max IP Channels	16 Channel (up to 12MP)
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Audio

Two-way Talk	1 Channel Input, 2 Channel Output, RCA
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Display

Interface	2 HDMI, 2 VGA
Resolution	HDMI: 3840×2160, 1920×1080, 1280×1024, 1280×720 VGA: 1920×1080, 1280×1024, 1280×720 HDMI2/VGA2: 1920 × 1080
Display Split	1st Screen: 16CH: 1/4/8/9/16 2nd Screen: 1/4/8/9/16
OSD	Camera title, Time, Video loss, Camera lock, Motion detection, Recording
Display Output Max Decode	4-ch@4K(30fps), 16-ch@1080P(30fps)

Recording

Video/Audio Compression	Smart H.265+/H.265/Smart H.264+/H.264/MJPEG
Image Resolution	12MP, 8MP, 6MP, 5MP, 4MP, 3MP, 1080P, 1.3MP, 720P, D1 etc
Bandwidth	320Mbps
Bit Rate	16Kbps ~ 20Mbps Per Channel
Record Mode	Manual, Schedule (Regular, Motion Detection , Alarm, IVS), Stop
Record Interval	1 ~ 120 min (default: 60 min), Pre-record: 1 ~ 30 sec, Post-record: 10 ~ 300 sec
Target Resources	4x 8MP cameras @10Mbps 8x 4MP cameras @10Mbps 16x 1080P cameras @10Mbps

Intelligence

General IVS	Tripwire, Intrusion, Heat Map, Line Crossing, People counting, Face Detect/ Recognition, Crowd Distribution, Audio Detection (Supported by camera)
Perimeter Protection	16 channels, Tripwire; intrusion (Recognition of human and vehicle) (Supported by camera)
Intelligent Motion Detect	16 channels, Human/ Vehicle Recognition (Supported by camera) AI Search: Search by target classification (human, vehicle)
Face Recognition	14 channels (Supported by camera) AI Search: Pictures by channel, time and face attributes
Fisheye Dewarp	Supported by NVR
Video Metadata	16 channels, Human Body, Vehicle and Non-motor Vehicle (Supported by camera) AI Search: Search by target video by metadata
ANPR (Automatic Number Plate Recognition)	Search by License Plate number, vehicle color, types, etc. (Supported by camera)

Video Detection & Alarm

Trigger Events	Recording, PTZ, Tour, Video Push, Email, Snapshot, Buzzer and Screen Tips
Video Detection	Motion Detection, MD Zones: 396 (22 × 18), Video Loss and Tampering
Alarm Input / Output	Input: 16 Channel Output: 6 Channel

Playback & Backup

Sync Playback	1/4/9/16
Search Mode	Time /Date, Alarm, MD and Exact Search (accurate to second)
Playback Functions	Play, Pause, Stop, Rewind, Fast play, Slow Play, Next File, Previous File, Next Camera, Previous Camera, Full Screen, Backup Selection, Digital Zoom
Backup Mode	USB Device/Network/eSATA Device

Network

Ethernet	2 RJ-45 Ports (10/100/1000Mbps) Independent or Joint Working
PoE	N/A
Network Functions	HTTP, HTTPS, TCP/IP, IPv4/IPv6, UPnP, RTSP, UDP, SMTP, NTP, DHCP, DNS, IP Filter, PPPoE, DDNS, FTP, Alarm Server, IP Search
Max. User Access	128 users
Smart Phone	Android, iOS, iPhone
Interoperability	ONVIF 2.4, SDK, CGI

Storage

Internal HDD	8 SATA III Ports, Up to 10 TB capacity for each HDD
eSATA	1 eSATA
External HDD	N/A
RAID	RAID 0,1,5,6,10 Support

Auxiliary Interface

USB	3 USB Ports (2 Rear USB 3.0 , 1 Front USB 2.0)
RS232	1 Port, for PC Communication and Keyboard
RS485	1 Port, for PTZ Control

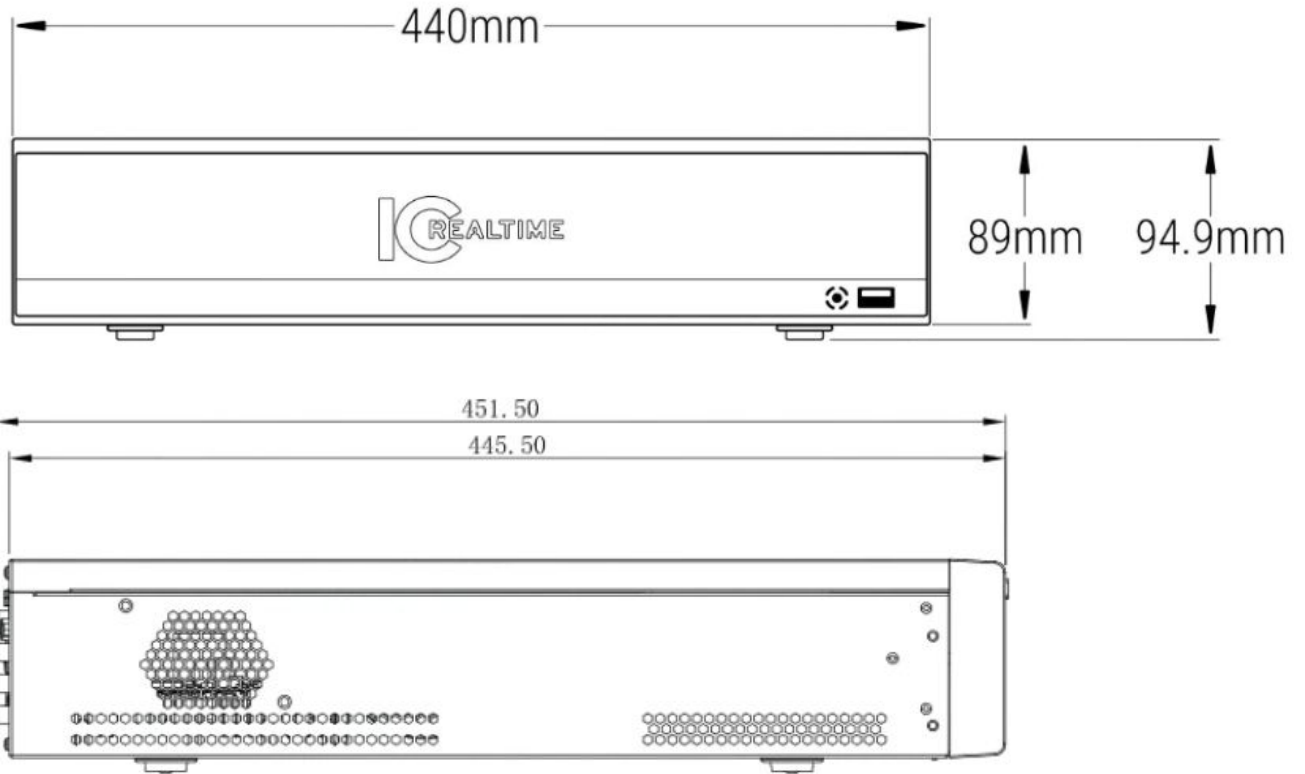
General

Power Supply	AC100V ~ 240V, 50 ~ 60 Hz
Power Consumption	<16.7W (Without HDD)
Smart Fan	Support, Temperature regulated
Working Environment	+14°F ~ +131°F (-10°C ~ +55°C), 86 ~ 106kpa
Storage Conditions	-4°F ~ +158°F (-20°C ~ +70°C), 0 ~ 90% RH
Installation Type	Rack mountable
Dimensions (W×D×H)	2U, 17.3" x 17.7" x 3.7" (440mm x 451.5mm x 94.9mm)
Weight	14.4 lb (6.55kg) (without HDD)

Certifications

Certifications	FCC: Part 15 Subpart B, UL Certified
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Dimensions (mm/in)



Panels

