

# NVR-ICEL64-2U32MP1

## 64 Channel 2U 4K AI Network Video Recorder



- Multi-core embedded processor
- Max 64 IPC inputs, Max 1280Mbps Incoming Bandwidth, H.265/H.264/MJPEG support
- Up to 32MP Resolution for Preview and Playback
- Supports up to 4K and 8K Display and quad HDMI output
- Supports Video Content Analytics, Face Recognition, Intelligent Motion Detect and Metadata (by NVR)
- Dual 10/100/1000/2500 Ethernet ports
- 8 SATA III Ports, Up to 20TB capacity for each HDD, RAID 0/1/5/6/10 Support

## Technical Specification

### System

|                  |                               |
|------------------|-------------------------------|
| Main Processor   | Multi-core embedded processor |
| Operating System | Embedded LINUX, ICR Core 1.0  |

### Video

|                   |                                                                                                                            |
|-------------------|----------------------------------------------------------------------------------------------------------------------------|
| Max IP Channels   | 64 Channels (up to 32MP)                                                                                                   |
| Throughput        | <b>AI by Camera:</b> 1280 Mbps incoming and 1024 Mbps outgoing<br><b>AI by NVR:</b> 640 Mbps incoming and 512Mbps outgoing |
| Video Compression | Smart Encoding/H.265/H.264/H.264H/H.264B/MJPEG                                                                             |
| Image Resolution  | 32MP, 24MP;16MP; 12MP; 8MP; 6MP; 5MP; 4MP; 3MP; 1080p; 720p; D1; VGA; CIF                                                  |
| Record Mode       | Manual; Event; Scheduled                                                                                                   |

### Audio

|                   |                          |
|-------------------|--------------------------|
| Interface         | 1 input, 2 output (RCA)  |
| Two-way Talk      | Supported                |
| Audio Compression | G.711a; G.711u; PCM; AAC |

### Display

|                |                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Interface      | 2x VGA, 4x HDMI video output.                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Resolution     | <b>Simultaneous mode:</b><br>max. resolution of VGA1 and VGA2: 1080p,<br>max. resolution of HDMI1 and HDMI2: 4K<br>max. resolution of HDMI3: 8K<br>max. resolution of HDMI4: 1080p<br><br><b>Mixed mode:</b><br>Simultaneous video source output for VGA1 & HDMI1<br>Simultaneous video source output for VGA2 & HDMI2<br>max. resolution of VGA1 and VGA2: 1080p,<br>max. resolution of HDMI1, HDMI2 and HDMI3: 4K<br>max. resolution of HDMI4: 1080p |
| Display Decode | 2-channel 32 MP@30 fps; 2-channel 24 MP@30 fps;<br>4-channel 16 MP@30 fps; 5-channel 12 MP@30 fps;<br>8-channel 8 MP@30 fps; 11-channel 6 MP@30 fps;<br>12-channel 5 MP@30 fps; 16-channel 4 MP@30 fps;<br>32-channel 1080p@30 fps; 64-channel D1@30 fps                                                                                                                                                                                               |
| Display Split  | Main screen: 1/4/8/9/16/25/36/64<br>Sub screen: 1/4/8/9/16/36                                                                                                                                                                                                                                                                                                                                                                                          |

### Playback & Backup

|                        |                                                         |
|------------------------|---------------------------------------------------------|
| Multi-channel Playback | Up to 16 channels                                       |
| Record Mode            | Manual; Event; Scheduled                                |
| Backup Mode            | Portable hard drive, eSATA disk, USB device and network |

### Alarm

|                      |                                        |
|----------------------|----------------------------------------|
| Alarm Input / Output | Input: 16 Channel<br>Output: 8 Channel |
|----------------------|----------------------------------------|

### Network

|                       |                                                                                                                                                  |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| Ethernet              | 2 RJ-45 Ports (10/100/1000/2500Mbps)                                                                                                             |
| PoE                   | N/A                                                                                                                                              |
| Network Functions     | HTTP; HTTPS; TCP/IP; IPv4/IPv6; UPnP; SNMP; RTSP; UDP; SMTP; NTP; DHCP; DNS; DDNS; Alarm Server; IP Device Search; P2P; Auto Registration, iSCSI |
| Smart Phone           | Android, iOS/iPhone                                                                                                                              |
| Interoperability      | ONVIF (Profile S/profile T/Profile G); CGI; SDK                                                                                                  |
| Browser Compatibility | Chrome, IE 9 or later, Edge, Safari, Firefox                                                                                                     |

### Storage

|              |                                                     |
|--------------|-----------------------------------------------------|
| Internal HDD | 8 SATA III Ports, Up to 20 TB capacity for each HDD |
| eSATA        | 1 eSATA                                             |
| External HDD | N/A                                                 |
| RAID         | RAID 0,1,5,6,10 Support                             |

### Auxiliary Interface

|       |                                                 |
|-------|-------------------------------------------------|
| USB   | 4 (2 front USB 2.0 ports, 2 rear USB 3.0 ports) |
| RS232 | 1 Port                                          |
| RS485 | 1 Port (half-duplex serial communication)       |

### General

|                     |                                                           |
|---------------------|-----------------------------------------------------------|
| Power Supply        | 100~240 VAC, 50/60 Hz                                     |
| Power Consumption   | ≤ 18 W (without HDD)                                      |
| Operating Humidity  | 10%~93% (RH)                                              |
| Working Environment | 14 °F to +131 °F (−10 °C to +55 °C)                       |
| Installation Type   | Rack mountable                                            |
| Dimensions (WxDxH)  | 17.4" × 18.0" × 3.46"<br>(442.0 mm × 457.2 mm × 88.0 mm ) |
| Weight              | 15.8 lb (7.2kg) (without HDD)                             |
| Gross Weight        | 21.5 lb (9.76kg) (without HDD)                            |

### Certifications

|                |                                      |
|----------------|--------------------------------------|
| Certifications | FCC: Part 15 Subpart B, UL Certified |
|----------------|--------------------------------------|

## AI Features

### AI Capabilities

|                |                                                                                                                                                                          |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AI by Recorder | Face Recognition, Video Content Analytics, Intelligent Motion Detection, Metadata                                                                                        |
| AI by Camera   | Face Detection and Recognition, Video Content Analytics, Intelligent Motion Detection, License Plate Recognition, People Counting, Heat Map, Object Monitoring, Metadata |

### Video Content Analytics (VCA)

|                              |                                                                                                                                                                         |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Capabilities                 | Line Cross (Tripwire) & intrusion; Recognition of human and vehicle                                                                                                     |
| Performance (AI by Recorder) | <b>32 channels</b> (in simultaneous video output mode), 10 IVS rules for each channel<br><b>24 channels</b> (in mixed video output mode), 10 IVS rules for each channel |
| Performance (AI by Camera)   | <b>64 channels</b>                                                                                                                                                      |
| AI-Pick                      | Search target by Similarity threshold                                                                                                                                   |

### Intelligent Motion Detect (iMD)

|                              |                                                                                                                              |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| Capabilities                 | Secondary filtering for human and motor vehicle , reducing false alarms caused by leaves, rain and lighting condition change |
| Performance (AI by Recorder) | <b>32 channels</b>                                                                                                           |
| Performance (AI by Camera)   | <b>64 channels</b>                                                                                                           |
| AI-Pick                      | Search target by Similarity threshold                                                                                        |

### Face Detection

|                              |                                                                                                         |
|------------------------------|---------------------------------------------------------------------------------------------------------|
| Capabilities                 | <b>Gathers Face attributes:</b> Gender; Glasses; Expressions; Beard; Face Mask                          |
| Performance (AI by Recorder) | <b>8 channels</b> (in simultaneous video output mode)<br><b>5 channels</b> (in mixed video output mode) |
| Performance (AI by Camera)   | <b>64 channels</b>                                                                                      |

### Face Recognition

|                              |                                                                                                                                                                                                               |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Capabilities                 | Captures faces within camera images and compares them to an internal database.                                                                                                                                |
| Performance (AI by Recorder) | <b>8 channels</b> (Face Capture in simultaneous video output mode)<br><b>5 channels</b> (Face Capture in mixed video output mode)                                                                             |
| Performance (AI by Camera)   | <b>32 channels</b> (Face Capture in simultaneous video output mode)<br><b>16 channels</b> (Face Capture in mixed video output mode)                                                                           |
| Attribute Search             | Target face can be searched using the following attributes: Gender, Glasses, Mask. Similarity threshold can be set manually.                                                                                  |
| Image Search                 | Similarity threshold can be set for each target face image during search.                                                                                                                                     |
| Database Management          | Up to 40 face databases with 300,000 images, with a total capacity of 4.8 GB. Name, gender, birthday, address, credential type, credential No., countries & regions and state can be added to each face image |
| Database Application         | Each database can be applied to video channels independently                                                                                                                                                  |

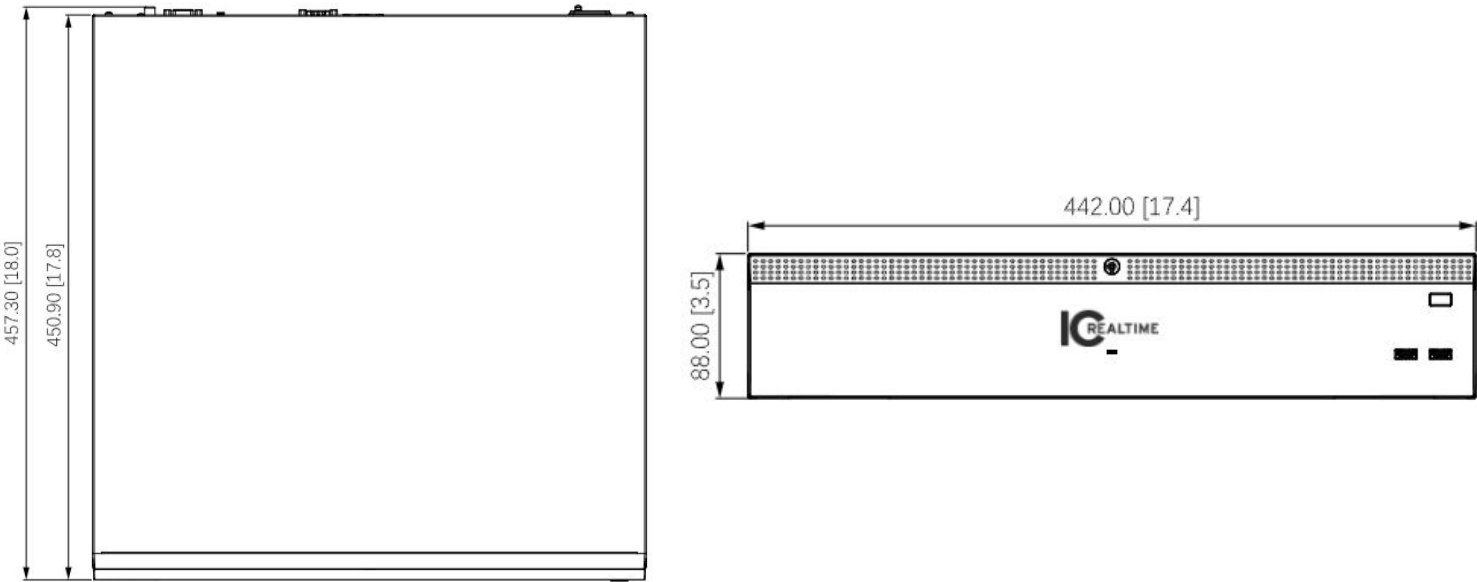
### Video Metadata

|                              |                                                                                                                                                                                                                        |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Capabilities                 | Gathers <b>Human attributes:</b> Top color, top type, bottom color, bottom type, hat, bag and gender<br>Gathers <b>Motor Vehicle attributes:</b> License plate, plate color, vehicle color, vehicle type, vehicle logo |
| Performance (AI by Recorder) | <b>8 channels</b>                                                                                                                                                                                                      |
| Performance (AI by Camera)   | <b>64 channels</b>                                                                                                                                                                                                     |

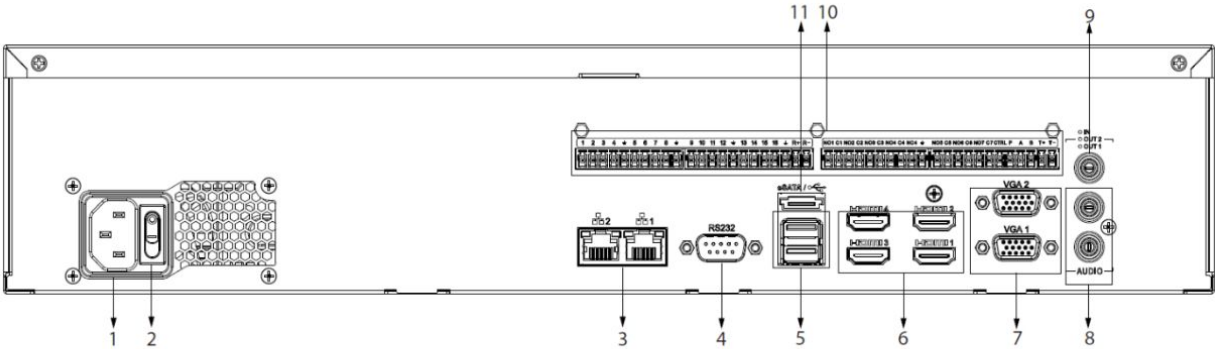
### Vehicle License Plate Recognition

|                            |                                                                             |
|----------------------------|-----------------------------------------------------------------------------|
| Capabilities               | Compares License Plates captured from motor Vehicles                        |
| Performance (AI by Camera) | <b>64 channels</b>                                                          |
| Database Management        | 1. Create up to 20,000 plate numbers<br>2. Blocklist and allowlist creation |

Dimensions (mm/in)



Panels



| No. | Description       | No. | Description              |
|-----|-------------------|-----|--------------------------|
| 1   | Power Supply      | 7   | VGA Ports                |
| 2   | Power Switch      | 8   | AUDIO OUT, RCA Connector |
| 3   | LAN Network Ports | 9   | AUDIO IN, RCA Connector  |
| 4   | RS-232 Port       | 10  | Alarm In/Out             |
| 5   | USB Ports         | 11  | eSATA Port               |
| 6   | HDMI Ports        |     |                          |