

# DHI-N70

## Dahua 3U VIDEO MATRIX PLATFORM



### Series Overview

The Video Matrix Platform delivers a next-generation, telecom-grade video processing solution. In addition to being developed with a robust ATCA framework (Advanced Telecom Computing Architecture), this platform also has a modular design with a card-based structure that allows its input and output cards to be flexibly configured to suit your specific needs. This powerful platform efficiently acquires various types of signal sources, performs audio and video encoding, accesses network signals, and decodes and transmits videos to the video wall. It also features advanced functions such as matrix switching, plan management, video splicing, window roaming, and live video. Its versatility allows it to be effectively utilized in command centers, monitoring stations, conference rooms, exhibition halls and more locations.

### Functions

#### Flexible Card Selection

Designed for easy card insertion, you can freely insert video input and output cards into the system without restrictions.

#### Stable Resolution Even at 4K

Supports acquiring and outputting signals at 4K@60 Hz, providing ultra-high resolution output through advanced video capture and splicing techniques.

#### LED Display Compatibility

The resolution can be customized for output ports, ensuring optimal compatibility with LED displays.

- Standard 19" 3U rack-mounted server with ATCA telecommunication-grade architecture. There are 9 slots for audio and video cards.
- Developed with a modular design, it is easy to insert cards and configure it to meet your needs.
- Offers redundant dual power supply, making it highly suitable for locations such as machine rooms.
- The embedded LINUX operating system is secure, reliable, stable, efficient, and user-friendly for developers and maintenance personnel.
- Supports input of up to 2 channels at 4K@60 Hz for UHD encoding, or 2 channels at 1080p@60 Hz for HD encoding.
- Supports up to 18 channels of 4K and 18 channels of 1080p signal output through HDMI ports, allowing for seamless splicing across up to 36 screens.
- Support decoding up to 432-channel HD videos at 1080p@25 fps.
- Decodes videos in 32 MP, 16 MP, 12 MP, 8 MP, 5 MP, 3 MP, 1080p, 720p, and D1.
- Supports the following standards: H.265, H.264, SVAC, MPEG4 and MJPEG.
- The device can be freely controlled through the webpage, desktop client, mobile client and network keyboard.
- Features splicing, scaling, video integration, roaming, window opening, and layering.
- Supports 1, 4, 6, 8, 9, 16, 25, and 36 splits. You can also customize the split windows.
- Up to 128 presets can be set for scenes. You can also customize the layout of each scene on the video wall.
- Supports setting the default background color for the video wall and offers subtitles. You can also easily turn the screen on and off as needed.



#### Effortless Integration with Security Platforms

Seamlessly integrates with Dahua's general and industry-specific platforms, creating a complete end-to-end solution for the security industry.

Scene

Suitable for command centers, monitoring centers, operation centers, digital exhibition halls and more scenes.

Technical Specification

|                  |                                                                                                                                                                                      |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| System           |                                                                                                                                                                                      |
| Main Processor   | 64-bit high-performance octa-core processor                                                                                                                                          |
| Operating System | Embedded Linux operating system                                                                                                                                                      |
| Bus              | Dual bus for the network and serial ports                                                                                                                                            |
| Slot             | 9 slots in total. 1 for the main control card and 8 for audio and video cards. Additionally, the audio and video cards can be freely inserted into their slots without restrictions. |
| Cabinet          | Standard sized cabinet with a dual power supply and intelligent temperature control fan.                                                                                             |

|                   |                                                                  |
|-------------------|------------------------------------------------------------------|
| Port              |                                                                  |
| USB               | 2 × USB 3.0 ports                                                |
| Network Port      | 2 × RJ-45 10/100/1,000 Mbps self-adaptive Ethernet ports         |
| RS-232            | 2                                                                |
| RS-485            | 1                                                                |
| HDMI              | 4 output ports, including 2 HDMI 2.0 ports and 2 HDMI 1.3 ports. |
| Alarm Input Port  | 2 alarm input ports.                                             |
| Alarm Output Port | 1 alarm output port.                                             |
| Audio Output Port | One 3.5 mm jack port                                             |
| Type-C Port       | 1 Type C port                                                    |

|                       |                                                                                                                                                                                                                                                               |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DH-VCC0402EH-N70      |                                                                                                                                                                                                                                                               |
| Video Input           | 2 channels, including 1 HDMI 2.0 port and 1 HDMI 1.3 port.                                                                                                                                                                                                    |
| Audio Input           | 2-channel HDMI embedded audio port                                                                                                                                                                                                                            |
| Encoding Format       | H.264; H.265                                                                                                                                                                                                                                                  |
| Encoding Capability   | Supports encoding for one channel output at 4096 × 2160@60 Hz, as well as one channel output at 1920 × 1080@60 Hz simultaneously.                                                                                                                             |
| Audio Encoding Format | PCM                                                                                                                                                                                                                                                           |
| Video Output          | 4 channels, including 2 HDMI 2.0 ports and 2 HDMI 1.3 ports. The maximum output resolution is 2-ch 4096 × 2160@60 Hz and 2-ch 1920 × 1080@60 Hz. Only the first 2 HDMI ports can output videos in 4096 × 2160@60 Hz. You can customize the output resolution. |
| Audio Output          | 4 × HDMI ports which can output audios independently.                                                                                                                                                                                                         |
| Video Format          | Supports decoding the videos in the following compression formats: H.265, H.264, MJPEG, PEG4, SVAC and MPEG2.                                                                                                                                                 |
| Decoding Capability   | Supports decoding up to 100 channels. It can decode 3-channel videos in 32 MP@25 fps, 48-channel videos in 2 MP@25 fps, or 100-channel videos in D1@25 fps at a time. In this mode, the decoding windows                                                      |

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Decoding Capability     | cannot span multiple screens, and intelligent rules for displaying performance data must be disabled.                                                                                                                                                                                                                                                                                                                                                                   |
| Decoding Resolution     | Decodes videos in 32 MP, 16 MP, 12 MP, 8 MP, 5 MP, 3 MP, 1080p, UXGA, 720p, D1, HD1, 2CIF, CIF and QCIF. Only H.265 supports decoding videos in 32 MP, 16 MP and 12 MP.                                                                                                                                                                                                                                                                                                 |
| Video Output Resolution | Outputs to the following resolutions through the first 2 HDMI ports: 4096 × 2160@60 Hz, 3840 × 2160@60 Hz, 4096 × 2160@24 Hz, 3840 × 2160@30 Hz, 2080 × 1560 @60 Hz, 2048 × 1152@60 Hz, 1920 × 1200@60 Hz. Additionally, it supports outputting videos in 1920 × 1080@60 Hz, 1280 × 1024@60 Hz, 1280 × 720@60 Hz, 1024 × 768 @60 Hz.<br>You can customize the output resolution, but the width and height must not exceed the highest default resolution of the system. |
| Multi-screen Display    | Supports 1, 4, 6, 8, 9, 16, 25, and 36 splits, and M × N custom split.                                                                                                                                                                                                                                                                                                                                                                                                  |

DH-VDC0400EH-N70

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|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
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|                          |                                                                                                                                                                                                      |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Function                 |                                                                                                                                                                                                      |
| Multi-screen Display     | Supports 1, 4, 6, 8, 9, 16, 25, and 36 splits, and M × N custom split.                                                                                                                               |
| Interoperability         | GB28181; ONVIF; RTSP; Dahua Private; Hikvision Private ONVIF; RTSP; Dahua Private; Hikvision Private                                                                                                 |
| Transmission Protocol    | TCP; UDP; RTP; RTSP; RTCP                                                                                                                                                                            |
| Max System Configuration | Supports installation of up to 8 audio and video cards. The maximum output resolution is 18-ch 4K@60 fps and 18-ch 1080p@60 fps. The maximum input resolution is 8-ch 4K@60 Hz or 8-ch 1080p@60 fps. |

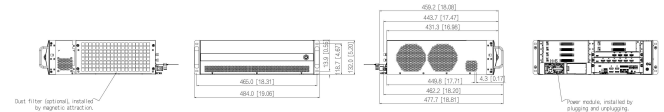
## Video Matrix Platform | DHI-N70

|                         |                                                                                                              |
|-------------------------|--------------------------------------------------------------------------------------------------------------|
| Network Signal Access   | Supports accessing up to 1,024 network channels.                                                             |
| Screen Splicing         | Supports splicing up to 36 screens.                                                                          |
| Spliced Screen Function | Features splicing, scaling, video integration, roaming, window opening, and layering.                        |
| Equipment Management    | Supports local and network signals, and custom signal groups.                                                |
| SDK                     | Supports secondary development, and provides platform SDK.                                                   |
| Control Mode            | Supports local GUI operations and connecting to the webpage, PC client, mobile client, and network keyboard. |

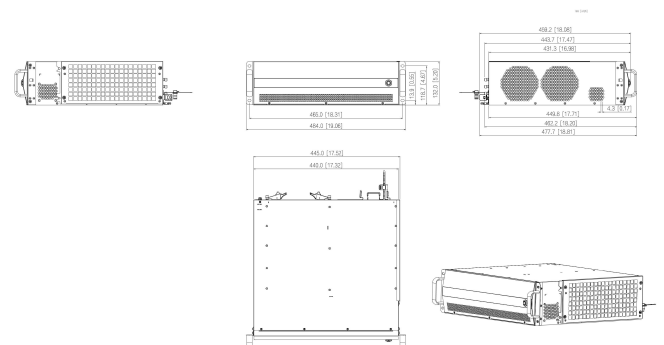
## General

|                       |                                                                                                                                           |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Power Supply          | 100–127 VAC/200–240 VAC; 50–60 Hz; 10 A/5 A; hot swapping<br>100–240 VAC; 50–60 Hz; 8 A; hot swapping                                     |
| Power Redundancy      | Dual<br>Supports redundant dual power supplies.<br>Included: Single power supply<br>Optional: Dual power supply                           |
| Power Consumption     | ≤ 140 W                                                                                                                                   |
| Operating Humidity    | 10%–90% (RH), non-condensing                                                                                                              |
| Storage Humidity      | 10%–90% (RH), non-condensing                                                                                                              |
| Product Dimensions    | 484 mm × 782 mm × 134 mm (19.06" × 30.79" × 5.28")<br>(L × W × H)<br>484.0 mm × 477.7 mm × 132.0 mm (19.06" × 18.81" × 5.20") (L × W × H) |
| Packaging Dimensions  | 573 mm × 553 mm × 256 mm (22.56" × 21.77" × 10.08") (L × W × H)<br>580.0 mm × 560.0 mm × 267.0 mm (22.83" × 22.05" × 10.51") (L × W × H)  |
| Gross Weight          | 15 kg (33.07 lb)<br>13.9 kg (30.64 lb)                                                                                                    |
| Net Weight            | 13 kg (28.66 lb)<br>12.29 kg (27.09 lb)                                                                                                   |
| Series                | N70                                                                                                                                       |
| Type                  | Server                                                                                                                                    |
| Operating Temperature | –10 °C to +50 °C (+14 °F to +122 °F)<br>–10 °C to +50 °C (+14 °F to +122 °F)                                                              |
| Storage Temperature   | –10 °C to +50 °C (+14 °F to +122 °F)<br>–10 °C to +50 °C (+14 °F to +122 °F)                                                              |

## Installation



Dimensions (mm[inch])



## Ordering Information

| Type                  | Model   | Description                    |
|-----------------------|---------|--------------------------------|
| VIDEO MATRIX PLATFORM | DHI-N70 | Dahua 3U VIDEO MATRIX PLATFORM |

Panels



- 1 Power
- 2 Reset
- 3 Type-c port
- 4 Indicator light
- 5 USB 3.0 port
- 6 HDMI output
- 7 Alarm input, alarm output, standard RS-485 port
- 8 Network port (10/100/1000 Mbps Ethernet port)
- 9 RS-232 port of screen control
- 10 Audio out
- 11 Alarm clear
- 12 Ground

Application

