# CCR2004-16G-2S+

This powerful and affordable router crushes all previous CCR models in single-core performance.

**Luxury you deserve for the price you can afford.**



MikroTik
CCR2004-16G-2S+

*Best single-core performance in the CCR family*
*Built-in dual redundant power supplies*

16x Gigabit Ethernet ports

2x 10G SFP+ cages

RJ-45 console port

Like the other models in CCR2004 series, this CCR also features the Amazon Annapurna Labs Alpine v2 CPU with 4x 64-bit ARMv8-A Cortex-A57 cores running at 1,7GHz. But here's the difference. This powerful router crushes all previous CCR models in single-core performance, and that is the most important aspect when it comes to heavy operations based on per-connection processing. Like queues, for example.

But that's not all! It also has the best single-core performance per watt and best overall performance per watt among all the CCR devices. **Better for the planet, better for the bills, it's a win-win!**

The new router has 18 wired ports, including 16x Gigabit Ethernet ports and two 10G SFP+ cages. It also has a RJ-45 console port on the front panel.

Like all CCR devices, it comes in a classic white 1U rackmount case. Built-in dual redundant power supplies are included, so you have one less thing to worry about. And, of course, there is active cooling to keep things nice and cool.

Each group of 8 Gigabit Ethernet ports is connected to a separate Marvell Amethyst family switch-chip. Each switch chip has a 10 Gbps full-duplex line connected to the CPU. The same goes for each SFP+ cage - a separate 10 Gbps full-duplex line. Boards come with 4GB of DDR4 RAM and 128MB of NAND storage.

So as you can see - no bottlenecks. As long as the CPU can handle the processing, all ports can reach wire speed. And this CPU is a beast that can handle a lot. If we look at the performance, you can see that it is trading blows with our CCR1009. Even surpassing it in CPU-heavy configurations! And if that wasn't enough — it can even reach the performance of CCR1016.

### CCR1009-7G-1C-S+

**Bridging**

| Configuration | 64 byte | | 512 byte | | 1518 byte | |
|---|---|---|---|---|---|---|
| | kpps | Mbps | kpps | Mbps | kpps | Mbps |
| none (fast path) | 9816.7 | 5340.3 | 3759.4 | 15398.5 | 1300.4 | 15791.9 |
| 25 bridge filter rules | 1868.4 | 1016.4 | 1817.6 | 7445.1 | 1300.4 | 15791.9 |

**Routing**

| Configuration | 64 byte | | 512 byte | | 1518 byte | |
|---|---|---|---|---|---|---|
| | kpps | Mbps | kpps | Mbps | kpps | Mbps |
| none (fast path) | 11627.7 | 6325.5 | 3759.4 | 15398.5 | 1300.4 | 15791.9 |
| 25 simple queues | 960.2 | 522.4 | 964.1 | 3948.8 | 917.5 | 11142.1 |
| 25 ip filter rules | 638 | 347 | 639.2 | 2618 | 615.8 | 7477.9 |

### CCR2004-16G-2S+

**Bridging**

| Configuration | 64 byte | | 512 byte | | 1518 byte | |
|---|---|---|---|---|---|---|
| | kpps | Mbps | kpps | Mbps | kpps | Mbps |
| none (fast path) | 9697.9 | 5275.7 | 5648.4 | 23136 | 2591.6 | 31472 |
| 25 bridge filter rules | 2424.2 | 1318.8 | 2451.7 | 10042.1 | 2249.5 | 27318.5 |

**Routing**

| Configuration | 64 byte | | 512 byte | | 1518 byte | |
|---|---|---|---|---|---|---|
| | kpps | Mbps | kpps | Mbps | kpps | Mbps |
| none (fast path) | 8664.2 | 4713.3 | 5239.6 | 21461.2 | 2532.4 | 30753.8 |
| 25 simple queues | 1316.8 | 716.3 | 1217.6 | 4987.2 | 1174.6 | 14264.6 |
| 25 ip filter rules | 842.1 | 458.1 | 860.7 | 3525.5 | 866 | 10517.1 |

The best part? This brand new CCR is among the most affordable options out there - not only within the CCR series, but on the market in general.

One of the most common ways to use this device would be: Gigabit Ethernet ports for the internal network; SFP+ ports for downlink and uplink. The perfect all-in-one solution for small and medium-sized businesses. Easy and efficient.

With the new CCR2004, you can take your office network to the next level. Without breaking the bank.
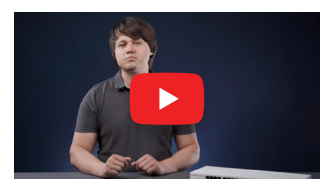
## Specifications

| | |
|---|---|
| Product code | CCR2004-16G-2S+ |
| CPU | AL32400 1.7 GHz |
| CPU architecture | ARM 64bit |
| CPU core count | 4 |
| Size of RAM | 4 GB |
| RAM type | DDR4 |
| Storage | 128 MB, NAND |
| Number of 1G Ethernet ports | 16 |
| Number of 10G SFP+ ports | 2 |
| Operating system | RouterOS v7 only |
| Switch chip model | 88E6191X, 88E619X |
| Dimensions | 443 x 210 x 44 mm |
| Operating temperature | -20°C to +60°C |

## Powering

| | |
|---|---|
| Number of AC inputs | 2 |
| AC input range | 100-240 V |
| Max power consumption (without attachments) | 35 W |
| Max power consumption | 48 W |

## Certification & Approvals

| | |
|---|---|
| Certification | CE, FCC, IC |

## Included parts

| 2 Power cords | Rackmount bracket white | Fastening set |
|---|---|---|

# CRS328-24P-4S+RM

CRS328-24P-4S+RM is a 28 independent port switch, it has 24 Gigabit Ethernet ports, which offer different power output options: Passive PoE, low voltage PoE, 802.3af/at (Type 1 "PoE" / Type 2 "PoE+") with auto-sensing. The four SFP+ ports provide up to 10 Gbps connectivity options via either optical fiber or Ethernet modules (not included).

CRS328-24P-4S+RM comes in a 1U rackmount case with 100-240 V AC 500 W power supply built-in. The device consumes up to 44 W leaving guaranteed 450 W (3x150 W per every 8 Ethernet ports) to power your PoE devices. Each port can provide up to 30 W with high voltage, and 26 W with low voltage power output.

The device has a "Dual boot" feature that allows you to choose between two operating systems - RouterOS or SwOS. If you prefer to have a simplified operating system with only switch specific features, use SwOS. If you would like the ability to use routing and other Layer 3 features in your CRS, use RouterOS. You can select the desired operating system from RouterOS, from SwOS or from the RouterBOOT loader settings. All the feature set comes with our disruptive price, providing best price/performance on the market.

## Switching features

- Non-blocking Layer 2 switching capacity
- 16K host table
- IEEE 802.1Q VLAN
- Supports up to 4K simultaneous VLANs
- Port isolation
- Port security
- Broadcast storm control
- Port mirroring of ingress/egress traffic
- STP / RSTP / MSTP
- Access Control List
- MikroTik neighbor discovery
- SNMP
- 10218-byte jumbo frames support
- IGMP snooping
- IEEE 802.3ad and static link aggregation

## Quick specifications

- 24 Gigabit Ethernet ports
- 4 SFP+ ports
- RJ45 serial console port
- Non-Blocking throughput: 64 Gbps
- Switching capacity: 128 Gbps
- Forwarding rate: 95.2 Mpps
- Maximum power consumption: 44 W (without PoE devices connected)
- Supports PoE+ IEEE 802.3at/af and 26 V Passive PoE)
- Temperature based fan control
- 1U rackmount
- Selectable power output per port (26 / 53 V)

# Specifications

| | |
|---|---|
| Product code | CRS328-24P-4S+RM |
| CPU | 98DX3236A1 800 MHz |
| RAM | 512 MB |
| Storage type | Flash |
| Storage size | 16 MB |
| Switch chip model | 98DX3236A1 |
| 10/100/1000 Ethernet ports | 24 |
| SFP+ cages | 4 |
| Operating system | SwOS / RouterOS (Dual boot) |
| Supported input voltage | 100 - 240 V |
| Dimensions | 443 x 300 x 44 mm |
| Operating temperature | -20°C .. +60°C tested |
| Max power consumption | 44 W |
| Serial port | RJ45 |
| License level | 5 |



IEC power cord        Rack ears        K-54 kit

# CRS326-24G-2S+RM

We are announcing a special version of the CSS326-24G-2S+RM switch, with added RouterOS as a second boot option, the new CRS326-24G-2S+RM.

This is a SwOS/RouterOS powered 24 port Gigabit Ethernet switch with two SFP+ ports, wire speed connectivity with several new switching features!

The "Dual boot" feature that allows you to choose which operating system you prefer to use, RouterOS or SwOS. If you prefer to have a simplified switch only OS with more switch specific features, use SwOS. If you are used to Winbox and would like the ability to use routing and other Layer 3 features on some ports in your CRS, boot and use RouterOS. You can select the desired operating system from RouterOS, from SwOS or from the RouterBOOT loader settings.

It gives you all the basic functionality for a managed switch, plus more: allows to manage port-to-port forwarding, apply MAC filter, configure VLANs, mirror traffic, apply bandwidth limitation and even adjust some MAC and IP header fields. SFP cage supports both 1.25 Gb SFP and 10 Gb SFP+ modules.

## Specifications

| | |
|---|---|
| Product code | CRS326-24G-2S+RM |
| CPU | 98DX3236A1 800 MHz |
| RAM | 512 MB |
| Storage type | Flash, 16 MB |
| Switch chip model | 98DX3236A1 |
| 10/100/1000 Ethernet ports | 24 |
| SFP+ cages | 2 |
| Operating system | SwOS /RouterOS (Dual boot) |
| Supported input voltage | 9 - 30 V (jack or passive PoE) |
| Dimensions | 443 x 144 x 44 mm |
| Operating temperature | -40°C .. +60°C tested |
| Max power consumption | 24 W |
| Serial port | RJ45 |

## Features

- Non-blocking Layer 2 switching capacity
- 16K host table
- IEEE 802.1Q VLAN
- Supports up to 4K VLANs
- Port isolation
- Port security
- Broadcast storm control
- Port mirroring of ingress/egress traffic
- Rapid Spanning Tree Protocol
- Access Control List
- MikroTik neighbor discovery
- SNMP v1
- Web-based GUI

## Included



24 V 1.2 A power adapter

Rack ears

Screw set

# CSS610-8P-2S+IN

Your compact, affordable PoE powerhouse



**56 GIGABIT SWITCHING CAPACITY**

**2X 10 GIGABIT SFP+ PORTS**

**8X GIGABIT POE-OUT ETHERNET PORTS**

**CAN BE CONFIGURED FROM YOUR WEB BROWSER**

**PORT-TO-PORT FORWARDING**

**MAC FILTERING & VLANS**

**TRAFFIC MIRRORING**

CSS610-8P-2S+IN is one of the most well-rounded switches on the market. It is a perfect fit for the most diverse setups: from home networks and small offices to hotels, call centers and so on. The unique combination of size, features, and price offers unbelievable scalability potential.



*There are two SFP+ ports for 10 Gigabit fiber connectivity and eight Gigabit Ethernet ports with 802.3af/at PoE-out.*

This switch is all about nice and easy setups. The compact form-factor means easier shipping and handling, while the lightweight SwOS means easier configuration. You can even configure this switch from your web browser!  It gives you all the core functionality of a managed switch, and even more: you can manage **port-to-port forwarding**, **broadcast storm control**, apply **MAC filters**, configure **VLANs, mirror traffic, apply bandwidth limitations**, and even **adjust some MAC and IP header fields**.

But the real blessing is the combination of **SFP+** and **PoE-out Ethernet** ports. With this setup, you can do all kinds of things on a tight budget. CSS610 has an impressive total **PoE-out budget of 140 W**, so you can use even in the most intense scenarios – like hotels, conference halls, or call centers! Use the PoE-out ports to connect the IP-phones while the SFP+ ports connect your primary server to the ISP. Or power a bunch of network cameras and instantly upload the footage to the cloud. And manage a cluster of wireless access points at the same time. Also, scalability is no longer a problem. With our pricing, you can afford a switch on every floor!
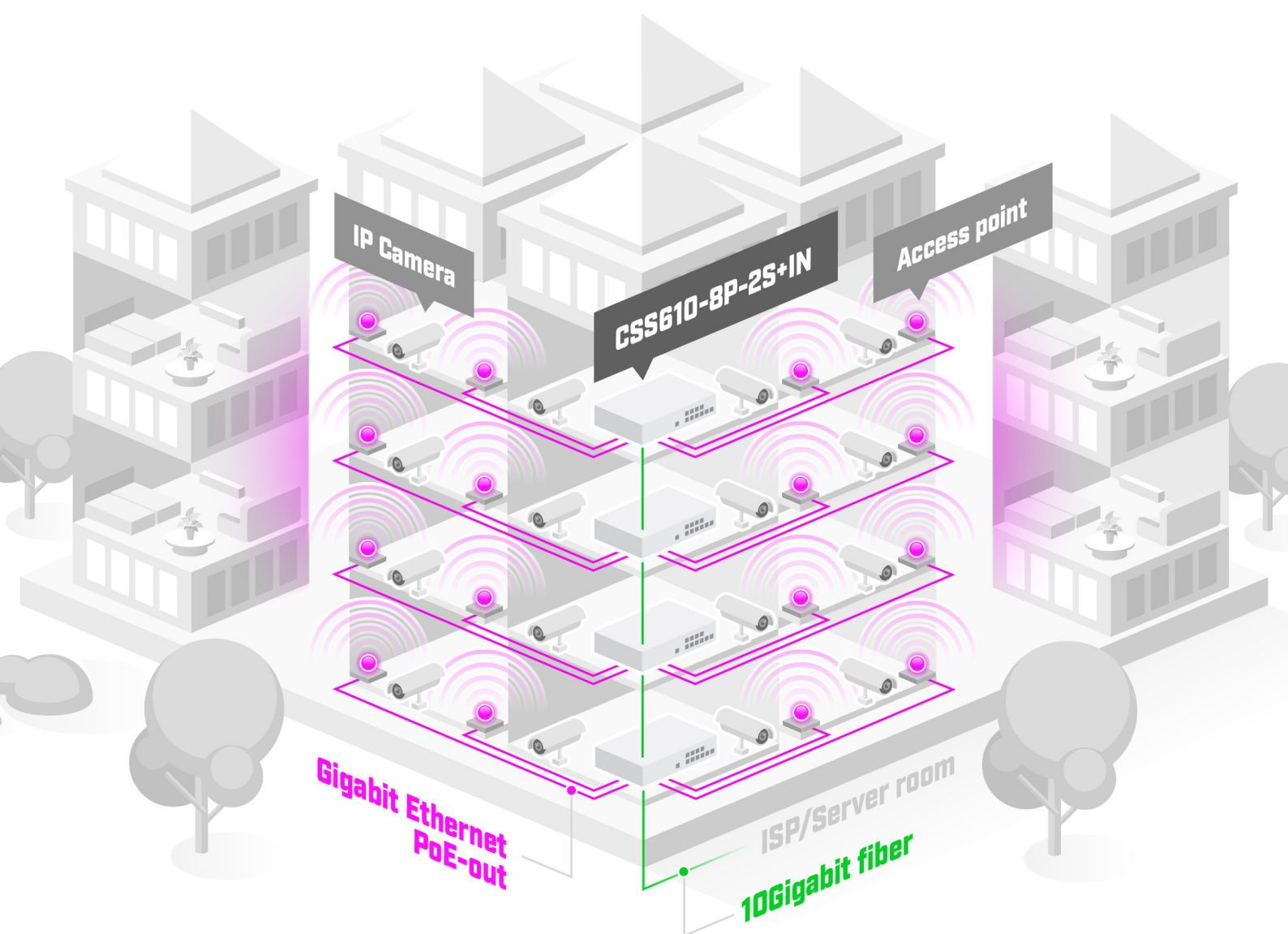


Like every toolbox needs screwdrivers and pliers,
every network can use a solid PoE switch.

**CSS610-8P-2S+IN – a solid choice!**

# ● Specifications

| | |
|---|---|
| Product code | CSS610-8P-2S+IN |
| Number of 1G Ethernet ports | 8 |
| Number of 10G SFP+ ports | 2 |
| Switch chip model | 88E6193X |
| Dimensions | 272 x 216 x 50 mm |
| Operating temperature | -40°C to +70°C |

# ● Powering

| | |
|---|---|
| Number of DC inputs | 1 |
| DC jack input Voltage | 48-57 V |
| Number of AC inputs | 1 |
| Nominal voltage | 54 V |
| Nominal current | 2.8 A |
| AC input range | 100-240 V |
| Max power consumption (without attachments) | 12 W |
| Max power consumption | 162 W |
| PoE-out | 802.3af/at & Passive PoE |
| Smart PoE | Controller |
| PoE-out ports | Ether1-Ether8, max out per port output (input < 30 V): 1000 mA, max out per port output (input > 30 V): 625 mA |
| Total output power | 140 W |

# ● Included parts



Power cord



Fastening set



Rack ears

# DS-7608NI-K1/8P (D) NVR

## Key Feature

- Up to 8-ch IP camera inputs
- H.265+/H.265/H.264+/H.264 video formats
- Up to 1-ch@8 MP/3-ch@4 MP/6-ch@1080p decoding capacity
- Up to 80 Mbps incoming bandwidth

## Professional and Reliability

- H.265+ compression effectively reduces the storage space by up to 75%

## HD Video Output

- Provide simultaneous HDMI and VGA outputs
- HDMI video output at up to 4K resolution

## Storage and Playback

- 1 SATA interface for HDD connection (up to 8 TB capacity per HDD)
- Smart search/smart playback to improve the playback efficiency

## Smart Function

- 4-ch Motion Detection 2.0
- Support multiple VCA (Video Content Analytics) events
- Configurable special camera smart functions, such as VCA detection (motion, line crossing, intrusion, etc.)

## Network & Ethernet Access

- 8 independent PoE network interfaces
- 1 self-adaptive 10/100 Mbps Ethernet interface
- Hik-Connect for easy network management

## ▪ Specification

| Motion Detection 2.0 | |
|---|---|
| Human/Vehicle Analysis | 4-ch |
| **Video and Audio** | |
| IP Video Input | 8-ch |
| Incoming Bandwidth | 80 Mbps |
| Outgoing Bandwidth | 80 Mbps |
| HDMI Output | 1-ch, 4K (4096 x 2160)/30 Hz, 4K (3840 x 2160)/30 Hz, 2K (2560 x 1440)/60 Hz, 1920 x 1080/60 Hz, 1600 x 1200/60 Hz, 1280 x 1024/60 Hz, 1280 x 720/60 Hz |
| VGA Output | 1-ch, 1920 × 1080/60 Hz, 1280 × 1024/60 Hz, 1280 × 720/60 Hz |
| Video Output Mode | HDMI/VGA simultaneous output |
| Audio Output | 1-ch, RCA (Linear, 1 KΩ) |
| Two-Way Audio | 1-ch, RCA (2.0 Vp-p, 1kΩ) |
| **Decoding** | |
| Decoding Format | H.265+/H.265/H.264+/H.264 |
| Recording Resolution | 8 MP/6 MP/5 MP/4 MP/3 MP/1080p/UXGA/ 720p/VGA/4CIF/DCIF/2CIF/CIF/QCIF |
| Synchronous playback | 8-ch |
| Decoding Capability | 1-ch@8 MP (30 fps)/3-ch@4 MP (30 fps)/6-ch@1080p (30 fps) <br> *: The length or width of camera resolution (each track) cannot exceed 4096 pixels. |
| Stream Type | Video, Video & Audio |
| Audio Compression | G.711ulaw/G.711alaw/G.722/G.726 |
| **Network** | |
| Remote Connection | 32 |
| Network Protocol | TCP/IP, DHCP, IPv4, IPv6, DNS, DDNS, NTP, RTSP, SADP, SMTP, SNMP, NFS, iSCSI, ISUP, UPnP™, HTTP, HTTPS |
| Network Interface | 1 RJ-45 10 /100 Mbps self-adaptive Ethernet interface |
| **PoE** | |
| Interface | 8-ch, RJ-45 10/100 Mbps self-adaptive Ethernet interface |
| Power | ≤ 75 W |
| Standard | IEEE 802.3 af/at |
| **Auxiliary Interface** | |
| SATA | 1 SATA interface |
| Capacity | Up to 8 TB capacity for each disk |
| USB Interface | 2 × USB 2.0 |
| Alarm In/Out | N/A (4/1 is optional) |

| General | |
|---|---|
| Power Supply | 48 VDC, 1.88 A |
| Consumption | ≤ 10 W (without HDD and PoE off) |
| Working Temperature | -10 °C to 55 °C (14 °F to 131 °F) |
| Working Humidity | 10% to 90% |
| Dimension (W × D × H) | 320 × 240 × 48 mm (12.4" × 9.4" × 1.9") |
| Weight | ≤ 1 kg (without HDD, 2.2 lb.) |
| **Certification** | |
| FCC | Part 15 Subpart B, ANSI C63.4-2014 |
| CE | EN 55032: 2015, EN 61000-3-2, EN 61000-3-3, EN 50130-4, EN 55035: 2017 |

**Note:**

Alarm in/out can be optional for certain models. If you select a device model with "/ALARM", then the device will have 4 alarm inputs and 1 alarm output.

## Dimension
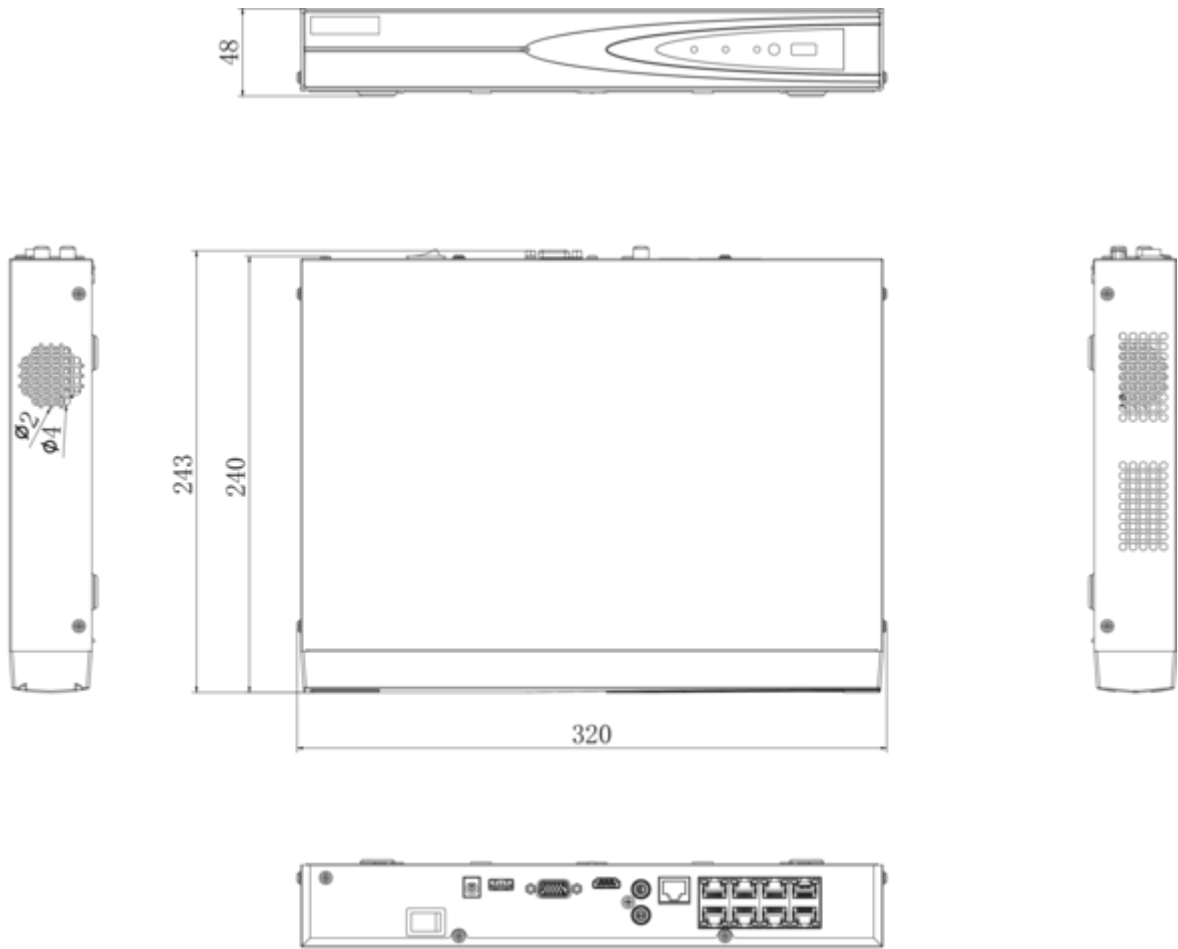


scale/1:1;Unit/mm

# Physical Interface
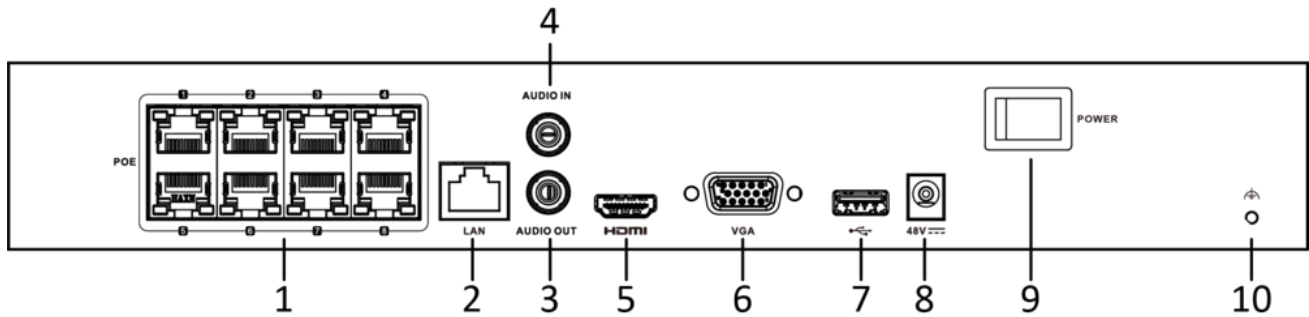


| No. | Description | No. | Description |
|---|---|---|---|
| 1 | Network interfaces with PoE function | 6 | VGA output (DB9 connector) |
| 2 | LAN interface | 7 | USB interface |
| 3 | AUDIO OUT | 8 | Power supply |
| 4 | AUDIO IN | 9 | Power switch |
| 5 | HDMI interface | 10 | GND |

# Available Model

DS-7608NI-K1/8P (D)

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# HIKVISION®

## DS-7616NI-K2/16P NVR

### Key Feature

- Up to 16-ch IP camera inputs
- H.265+/H.265/H.264+/H.264 video formats
- Up to 2-ch@8 MP or 4-ch@4 MP or 8-ch@1080p decoding capacity
- 1 HDMI and 1 VGA interfaces, both interfaces support independent video output
- 2 SATA interfaces for HDD connection (up to 10 TB capacity per HDD)
- Up to 160 Mbps incoming bandwidth
- Plug-and-play with 16 power over Ethernet (PoE) interfaces

### Professional and Reliability

- H.265+ compression effectively reduces the storage space by up to 75%
- Adopt stream over TLS encryption technology which provides more secure stream transmission service

### HD Video Output

- Provide independent HDMI and VGA outputs
- HDMI video output at up to 4K resolution

### Storage and Playback

- 2 SATA interfaces for HDD connection (up to 10 TB capacity per HDD)
- 16-ch synchronous playback

### Smart Function

- Support multiple VCA (Video Content Analytics) events
- Configurable special camera smart functions, such as VCA detection (motion, line crossing, intrusion, etc.) and ANPR

### Network & Ethernet Access

- 1 self-adaptive 10/100/1000 Mbps Ethernet interface
- 16 independent PoE network interfaces
- Hik-Connect for easy network management

## ▪ Specification

| Video and Audio | |
|---|---|
| IP Video Input | 16-ch |
| Incoming Bandwidth | 160 Mbps |
| Outgoing Bandwidth | 160 Mbps |
| HDMI Output | 4K (3840 × 2160)/30 Hz, 2K (2560 × 1440)/60 Hz, 1920 × 1080/60 Hz, 1600 × 1200/60 Hz, 1280 × 1024/60 Hz, 1280 × 720/60 Hz |
| VGA Output | 1920 × 1080/60 Hz, 1280 × 1024/60 Hz, 1280 × 720/60 Hz |
| Video Output Mode | HDMI/VGA independent output |
| Audio Input | 1-ch, RCA (2.0 Vp-p, 1 KΩ) |
| Audio Output | 1-ch, RCA (Linear, 1 KΩ) |
| Two-Way Audio | 1-ch, RCA (2.0 Vp-p, 1 KΩ, using the audio input) |
| **Decoding** | |
| Decoding Format | H.265/H.265+/H.264/H.264+ |
| Recording Resolution | 8 MP/6 MP/5 MP/4 MP/3 MP/1080p/UXGA/720p/VGA/4CIF/DCIF/2CIF/CIF/QCIF |
| Synchronous Playback | 16-ch |
| Decoding Capability | 2-ch@8 MP (30 fps)/4-ch@4 MP (30 fps)/8-ch@1080p (30 fps) |
| Stream Type | Video, Video & Audio |
| Audio Compression | G.711ulaw/G.711alaw/G.722/G.726 |
| **Network** | |
| Remote Connection | 128-ch |
| Network Protocol | TCP/IP, DHCP, IPv4, IPv6, DNS, DDNS, NTP, RTSP, SADP, SMTP, SNMP, NFS, iSCSI, ISUP, UPnP™, HTTP, HTTPS |
| Network Interface | 1 RJ-45 10/100/1000 Mbps self-adaptive Ethernet interface |
| **PoE** | |
| Interface | 16, RJ-45 10/100 Mbps self-adaptive Ethernet interface |
| Power | ≤ 200 W |
| Standard | IEEE 802.3 af/at |
| **Auxiliary Interface** | |
| SATA | 2 SATA interfaces |
| Capacity | Up to 10 TB capacity for each HDD |
| USB Interface | Front panel: 1 × USB 2.0; Rear panel: 1 × USB 2.0 |
| Alarm In/Out | 4/1 |
| **General** | |
| Power Supply | 100 to 240 VAC, 50 to 60Hz |
| Consumption | ≤ 15 W (without HDD and PoE off) |

| Working Temperature | -10 °C to 55 °C (14 °F to 131 °F) |
|---|---|
| Working Humidity | 10 to 90 % |
| Dimension (W × D × H) | 385 × 315× 52 mm (15.2" × 12.4" × 2.0") |
| Weight | ≤ 3 kg (without HDD, 6.6 lb.) |
| **Certification** | |
| FCC | Part 15 Subpart B, ANSI C63.4-2014 |
| CE | EN 55032: 2015, EN 61000-3-2, EN 61000-3-3, EN 50130-4, EN 55035: 2017 |

## Dimension
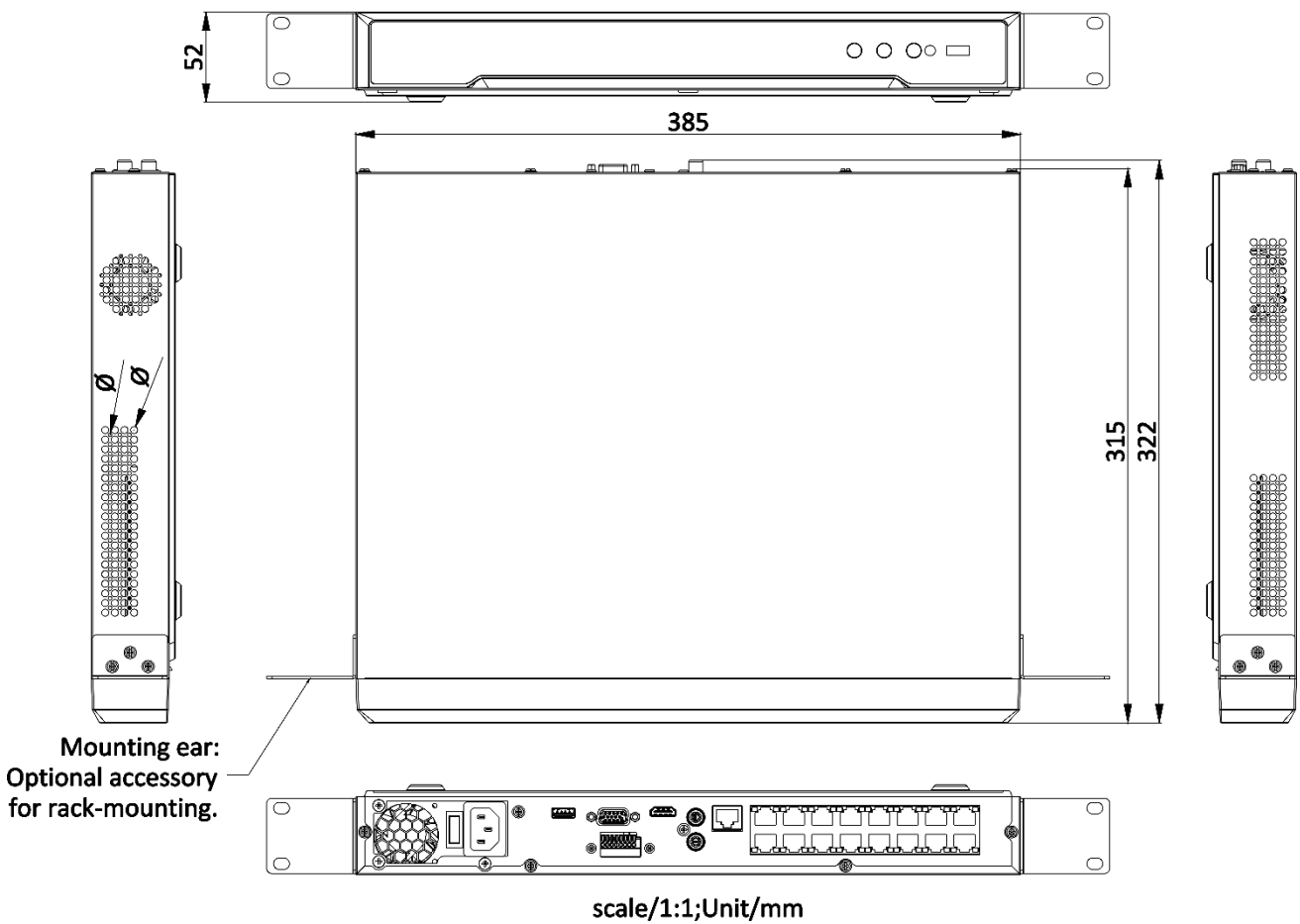


Mounting ear:
Optional accessory
for rack-mounting.

scale/1:1;Unit/mm

# Physical Interface
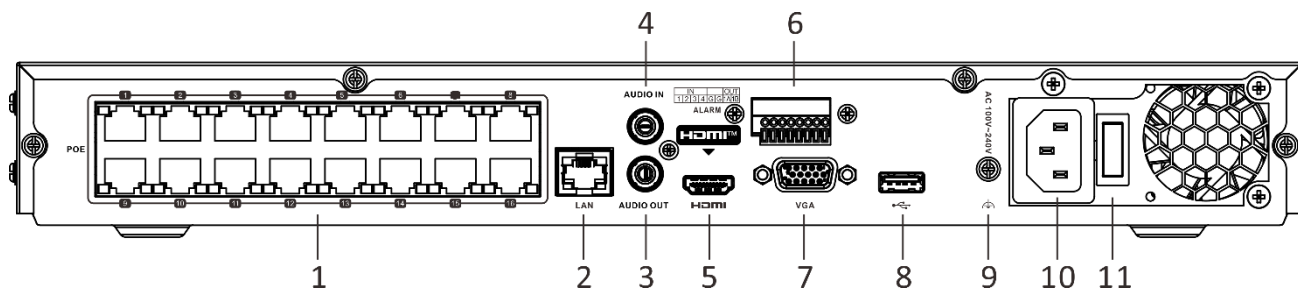


| No. | Description | No. | Description |
|-----|-------------|-----|-------------|
| 1 | Network interfaces with PoE function | 7 | VGA interface |
| 2 | LAN network interface | 8 | USB interface |
| 3 | AUDIO OUT | 9 | GND |
| 4 | AUDIO IN | 10 | 100 to 240 VAC power supply |
| 5 | HDMI interface | 11 | Power switch |
| 6 | Alarm in/alarm out | | |

## Available Model

DS-7616NI-K2/16P

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# HIKVISION®

## DS-7700NI-K4 Series NVR

### Key Feature

- H.265+/H.265/H.264+/H.264 video formats
- Up to 8/16/32-ch IP camera inputs
- Up to 2-ch @ 8MP or 4-ch @ 4MP or 8-ch @ 1080P decoding capacity
- 1 HDMI and 1 VGA interfaces: both interfaces support independent video output
- 4 HDDs for continuous video recording
- Up to 80/160/256 Mbps incoming bandwidth

### Professional and Reliability

- H.265+ compression effectively reduces the storage space by up to 75%
- Adopt stream over TLS encryption technology which provides more secure stream transmission service

### HD Video Output

- Provide independent HDMI and VGA outputs
- HDMI video output at up to 4K resolution

### Storage and Playback

- 4 SATA interfaces for HDD connection (up to 10 TB capacity per HDD)
- 8/16-ch synchronous playback

### Smart Function

- Support multiple VCA (Video Content Analytics) events
- Configurable special camera smart functions, such as VCA detection (motion, line crossing, intrusion, etc.), heat map, ANPR, and people counting

### Network & Ethernet Access

- 2 self-adaptive 10/100/1000 Mbps Ethernet interfaces
- Hik-Connect for easy network management

www.hikvision.com

## Specification

| Model | DS-7708NI-K4 | DS-7716NI-K4 | DS-7732NI-K4 |
|---|---|---|---|
| **Video and Audio** | | | |
| **IP video input** | 8-ch | 16-ch | 32-ch |
| | Up to 12 MP resolution | | |
| **Incoming bandwidth** | 80 Mbps | 160 Mbps | 256 Mbps |
| **Outgoing bandwidth** | 160 Mbps | | |
| **HDMI output** | 1-ch, 4K (3840 x 2160)/30 Hz, 2K (2560 x 1440)/60 Hz, 1920 x 1080/60 Hz, 1600 x 1200/60 Hz, 1280 x 1024/60 Hz, 1280 x 720/60 Hz, 1024 x 768/60Hz | | |
| **VGA output** | 1-ch, 1920 × 1080/60 Hz, 1280 × 1024/60 Hz, 1280 × 720/60 Hz, 1024 x 768/60Hz | | |
| **Video output mode** | HDMI/VGA independent output | | |
| **CVBS output** | N/A | | |
| **Audio output** | 1-ch, RCA (Linear, 1 KΩ) | | |
| **Two-way audio input** | 1-ch, RCA (2.0 Vp-p, 1 KΩ, using the audio input) | | |
| **Decoding** | | | |
| **Decoding format** | H.265/H.265+/H.264/H.264+ | | |
| **Recording resolution** | 12 MP/8 MP/6 MP/5 MP/4 MP/3 MP/1080p/UXGA/ 720p/VGA/4CIF/DCIF/2CIF/CIF/QCIF | | |
| **Synchronous playback** | 8-ch | 16-ch | |
| **Capability** | 1-ch@12MP (30fps)/2-ch@8 MP (30 fps)/4-ch@4 MP (30 fps)/8-ch@1080p(30 fps) | | |
| **Stream type** | Video, Video & Audio | | |
| **Audio compression** | G.711ulaw/G.711alaw/G.722/G.726 | | |
| **Network** | | | |
| **Remote connection** | 64-ch | | 128-ch |
| **Network protocol** | TCP/IP, DHCP, IPv4, Hik-Connect, DNS, DDNS, NTP, RTSP, SADP, SMTP, SNMP, NFS, iSCSI, ISUP, UPnP™, HTTP, HTTPS | | |
| **Network interface** | 2, RJ-45 10/100/1000 Mbps self-adaptive Ethernet interfaces | | |
| **Auxiliary Interface** | | | |
| **Serial interface** | 2 RS-485 (half-duplex), 1 RS-232 | | |
| **SATA** | 4 SATA interfaces | | |
| **Capacity** | Up to 10TB capacity for each disk | | |
| **Alarm in/out[1]** | 16/4 | 16/4（16/9 is optional） | |
| **USB interface** | Front panel: 2 × USB 2.0; Rear panel: 1 × USB 3.0 | | |
| **General** | | | |
| **Power supply** | 100 to 240 VAC, 50 to 60Hz | | |

| Consumption (without HDD) | ≤ 20 W |
|---|---|
| Working temperature | -10 °C to 55 °C (14 °F to 131 °F) |
| Working humidity | 10% to 90% |
| Dimension (W × D × H) | 445 × 400 ×71 mm ( 17.5"× 15.7" × 2.8") |
| Weight (without HDD) | ≤ 5 kg (11 lb.) |
| **Certification** | |
| FCC | Part 15 Subpart B, ANSI C63.4-2014 |
| CE | EN 55032: 2015, EN 61000-3-2, EN 61000-3-3, EN 50130-4, EN 55035: 2017 |

*Note:*

1: Alarm in/out can be optional for certain models. If you select a device model with "/ALARM 16+9", the device will have 16 alarm inputs and 9 alarm outputs. The 9th alarm output supports control 12V.

## Dimension
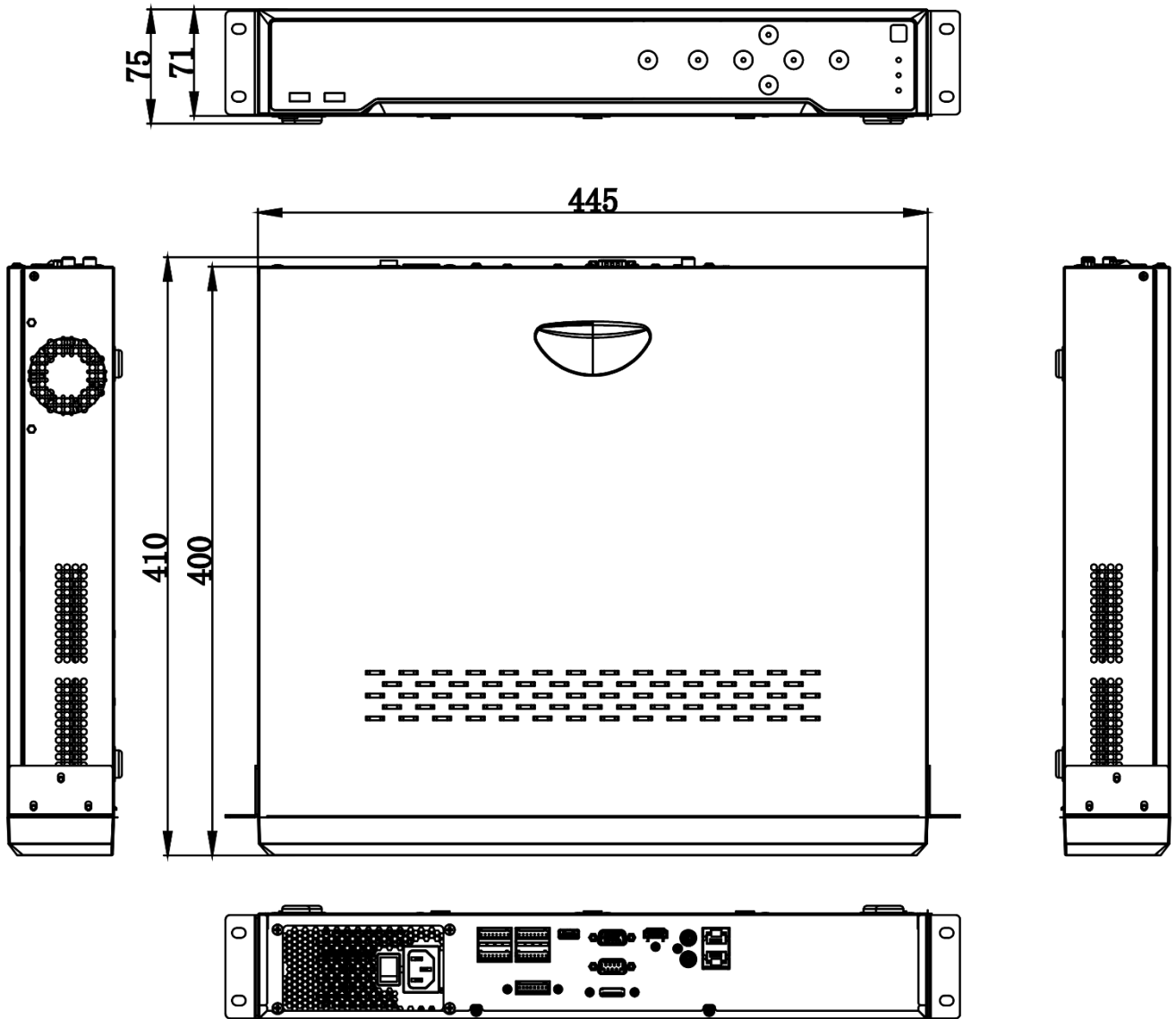


scale/1:1; Unit/mm

# Physical Interface
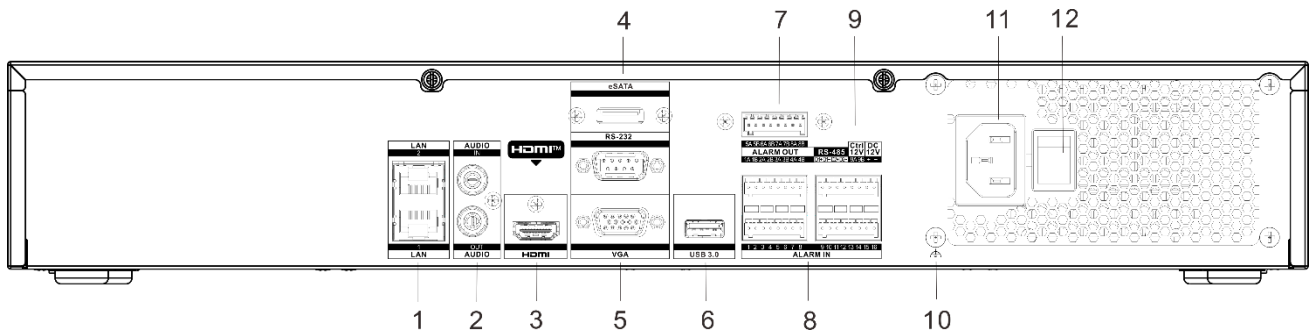
| No. | Description | No. | Description |
|-----|-------------|-----|-------------|
| 1 | LAN1 and LAN2 Network Interfaces | 7 | ALARM OUT |
| 2 | AUDIO IN and AUDIO OUT | 8 | ALARM IN |
| 3 | HDMI Interface | 9 | RS-485 Serial Interface |
| 4 | eSATA and RS-232 Serial Interface | 10 | GND |
| 5 | VGA Interface | 11 | 100 to 240 VAC Power Input |
| 6 | USB 3.0 Interface | 12 | Power Switch |

## Available Model

DS-7708NI-K4, DS-7716NI-K4, DS-7732NI-K4

Distributed by

**HIKVISION**

**Headquarters**
No.555 Qianmo Road, Binjiang District,
Hangzhou 310051, China
T +86-571-8807-5998
overseasbusiness@hikvision.com

04311052010811

# DS-2CD2T45G0P-I
## 4MP IR Bullet Network Camera

- 1/2.7" Progressive Scan CMOS
- 2688 × 1520 @ 25fps
- 1.68 mm ultra wide angle fixed lens
- 120dB WDR

- H.265+, H.265, H.264+, H.264
- Built-in micro SD/SDHC/SDXC card slot, up to 256 GB
- IP67

**DORI**

The DORI (detect, observe, recognize, identify) distance gives the general idea of the camera ability to distinguish persons or objects within its field of view.

It is calculated based on the camera sensor specification and the criteria given by EN 62676-4: 2015.

| DORI | Detect | Observe | Recognize | Identify |
|---|---|---|---|---|
| Distance | 3.6 m | 1.4 m | 0.8 m | 0.4 m |

## Specifications

| Camera | |
| --- | --- |
| Image Sensor | 1/2.7" Progressive Scan CMOS |
| Min. Illumination | 0.028 Lux @ (F2.0, AGC ON), 0 Lux with IR |
| Shutter Speed | 1/3 s to 1/100,000 s |
| Slow Shutter | Yes |
| Day & Night | ICR Cut |
| WDR | 120 dB |
| Angle Adjustment | Pan: 0° to 360°, tilt: 0° to 90°, rotate: 0° to 360° |
| **Lens** | |
| Lens Type | 1.68 mm |
| Focus | Fixed |
| Aperture | F2.0 |
| FOV | Horizontal: 180°, vertical: 101°, diagonal: 180° |
| Lens Mount | M12 |
| **Illuminator** | |
| IR Range | 20 m |
| Wavelength | 850 nm |
| Smart Supplement Light | Yes |
| **Video** | |
| Max. Resolution | 2688 × 1520 |
| Main Stream | 50Hz: 25fps (2688 × 1520, 2304 × 1296, 1920 × 1080, 1280 × 720)<br>60Hz: 24fps (2688 × 1520), 30fps (2304 × 1296, 1920 × 1080, 1280 × 720) |
| Sub-Stream | 50Hz: 25fps (640 × 480, 640 × 360, 320 × 240)<br>60Hz: 30fps (640 × 480, 640 × 360, 320 × 240) |
| Video Compression | Main stream: H.265+/H.265/H.264+/H.264<br>Sub-stream: H.265/H.264 /MJPEG |
| H.264 Type | Main Profile/High Profile |
| H.265 Type | Main Profile |
| Video Bit Rate | 32 Kbps to 16 Mbps |
| Bit Rate Control | CBR/VBR |
| Stream Type | Main stream, sub-stream |
| Scalable Video Coding (SVC) | H.264 and H.265 |
| **Smart Feature-Set** | |
| Smart Event | Line crossing detection, intrusion detection, unattended baggage detection, object removal detection, face detection, scene change detection |

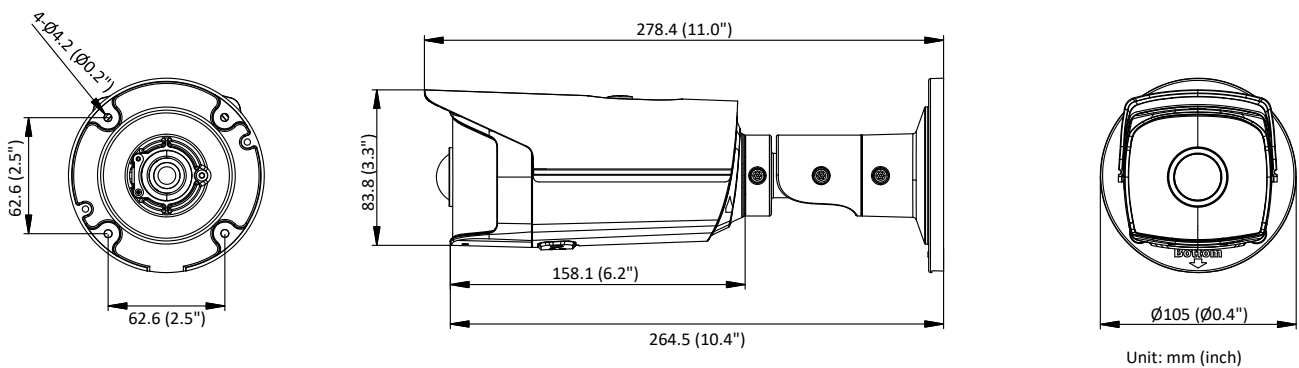| Linkage Method | Upload to FTP/NAS/memory card, notify surveillance center, send email, trigger alarm output, trigger recording, trigger capture.<br>Trigger recording: memory card, network storage, pre-record and post-record.<br>Trigger captured pictures uploading: FTP, SFTP, HTTP, NAS, Email. Trigger notification: HTTP, ISAPI, alarm output, Email |
|---|---|
| Region of Interest (ROI) | 1 fixed region for main stream and sub-stream |
| **Image** | |
| Image Enhancement | BLC, HLC, EIS, Lens distortion,3D DNR |
| Image Setting | Saturation, brightness, contrast, sharpness, rotate mode, white balance, AGC |
| Day/Night Switch | Day/Night/Auto/Schedule |
| SNR | ≥ 50 dB |
| Privacy Mask | 4 regions of privacy mask |
| **Network** | |
| Network Storage | micro SD/SDHC /SDXC (256 G) local storage, and NAS (NFS, SMB/CIFS), auto network replenishment (ANR) |
| Protocols | TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, PPPoE, NTP, UPnP, SMTP, SNMP, IGMP, 802.1X, QoS, IPv6, UDP, Bonjour, SSL/TLS, WebSocket, WebSockets |
| API | ONVIF (PROFILE S, PROFILE G), ISAPI, SDK |
| Security | Password protection, complicated password, HTTPS encryption, 802.1X authentication (EAP-TLS 1.2, EAP-LEAP, EAP-MD5), watermark, IP address filter, basic and digest authentication for HTTP/HTTPS, WSSE and digest authentication for ONVIF, TLS1.2 |
| Simultaneous Live View | Up to 6 channels |
| User/Host | Up to 32 users, 3 levels: administrator, operator and user |
| Client | iVMS-4200, Hik-Connect, Hik-Central |
| Web Browser | Plug-in required live view: Chrome 45.0+, Firefox 52.0+<br>Plug-in free live view: Chrome 41.0+, Firefox 30.0+ |
| **Interface** | |
| Communication Interface | 1 RJ45 10M/100M self-adaptive Ethernet port |
| On-board storage | Built-in micro SD/SDHC/SDXC slot, up to 256 GB |
| Hardware Reset | Yes |
| **General** | |
| Web Client Language | 32 languages<br>English, Russian, Estonian, Bulgarian, Hungarian, Greek, German, Italian, Czech, Slovak, French, Polish, Dutch, Portuguese, Spanish, Romanian, Danish, Swedish, Norwegian, Finnish, Croatian, Slovenian, Serbian, Turkish, Korean, Traditional Chinese, Thai, Vietnamese, Japanese, Latvian, Lithuanian, Portuguese (Brazil) |
| General Function | Privacy mask, heartbeat, mirror, flash log, password reset via e-mail, pixel counter |
| Startup and Operating Conditions | -30 °C to 60 °C (-22 °F to 140 °F), humidity 95% or less (non-condensing) |
| Storage Conditions | -30 °C to 60 °C (-22 °F to 140 °F), humidity 95% or less (non-condensing) |
| Power Supply | 12 VDC ± 25%; PoE (802.3at, class 4) |

| Power Consumption and Current | 12 VDC, 0.6 A, max. 7.2W PoE: (802.3af, 36 V-57 V), 0.3 A to 0.2 A, max. 8.7W |
|---|---|
| Power Interface | Φ5.5 mm coaxial power plug |
| Material | Metal |
| Dimensions | Camera: Φ105 × 278 mm (Φ4.1" × 10.9")<br>With package: 386 × 156 × 155 mm (15.20" × 6.14" × 6.10") |
| Weight | Camera: 570 g (1.26 lb.)<br>With package: 760 g (1.68 lb.) |
| **Approval** | |
| Class | Class B |
| Protection | IP67 |
| EMC | FCC (47 CFR Part 15, Subpart B); CE-EMC (EN 55032: 2015, EN 61000-3-2: 2014, EN 61000-3-3: 2013, EN 50130-4: 2011 +A1: 2014); RCM (AS/NZS CISPR 32: 2015); IC (ICES-003: Issue 6, 2016); KC (KN 32: 2015, KN 35: 2015) |
| Safety | UL (UL 60950-1); CB (IEC 60950-1:2005 + Am 1:2009 + Am 2:2013); CE-LVD (EN 60950-1:2005 + Am 1:2009 + Am 2:2013); BIS (IS 13252(Part 1):2010+A1:2013+A2:2015); LOA (IEC/EN 60950-1) |
| Environment | CE-RoHS (2011/65/EU); WEEE (2012/19/EU); Reach (Regulation (EC) No 1907/2006) |

*\* Listed resolutions are only selectable options. It does not mean that all streams can work at their maximum resolution at the same time.*

## Available Model

DS-2CD2T45G0P-I(1.68 mm)

## Dimension



Unit: mm (inch)

# Accessory



**DS-1275ZJ-SUS**

**Vertical Pole Mount**



**DS-1260ZJ**

**Junction Box**



**DS-1276ZJ-SUS**

**Corner Mount**



**DS-1280ZJ-S**

**Junction Box**



**DS-1275ZJ-S-SUS**

**Vertical Pole Mount**

Distributed by

# HIKVISION®

ColorVu

Hikvision ColorVu technology provides 24/7 vivid colorful images with F1.0 advanced lenses and high performance sensors. F1.0 super-aperture collects more light to produce brighter images. Advanced sensor technology can vastly improve the utilization of available light.

- High quality imaging with 5 MP resolution
- 24/7 colorful imaging
- Excellent low-light performance
- Water and dust resistant (IP67)
- Efficient H.265+ compression technology

## ▪ Specification

| Camera | |
|---|---|
| Image Sensor | 1/2.7" Progressive Scan CMOS |
| Max. Resolution | 2560 × 1920 |
| Min. Illumination | Color: 0.001 Lux @ (F1.0, AGC ON), 0 Lux with light |
| Shutter Time | 1/3 s to 1/100, 000 s |
| Day & Night | 24/7 color imaging |
| Angle Adjustment | Pan: 0° to 360°, tilt: 0° to 90°, rotate: 0° to 360° |
| **Lens** | |
| Lens Type | Fixed focal lens, 2.8 and 4 mm optional |
| Focal Length & FOV | 2.8 mm, horizontal FOV 95°, vertical FOV 70°, diagonal FOV 125° |
| | 4 mm, horizontal FOV 76°, vertical FOV 57°, diagonal FOV 98° |
| Lens Mount | M12 |
| Iris Type | Fixed |
| Aperture | F1.0 |
| Depth of Field | 2.8 mm: 2 m to ∞ |
| | 4 mm: 2.7 m to ∞ |
| **DORI** | |
| DORI | 2.8 mm, D: 64 m, O: 25 m, R: 12 m, I: 6 m |
| | 4 mm, D: 82 m, O: 32 m, R: 16 m, I: 8 m |
| **Illuminator** | |
| Supplement Light Type | White Light |
| Supplement Light Range | Up to 30 m |
| Smart Supplement Light | Yes |
| **Video** | |
| Main Stream | 50 Hz: |
| | 20 fps (2560 x 1920) |
| | 25 fps (2560 × 1440, 1920 × 1080, 1280 × 720) |
| | 60 Hz: |
| | 20 fps (2560 x 1920) |
| | 30 fps (2560 × 1440, 1920 × 1080, 1280 × 720) |
| Sub-Stream | 50 Hz: 25 fps (1280 × 720, 640 × 480, 640 × 360) |
| | 60 Hz: 30 fps (1280 × 720, 640 × 480, 640 × 360) |
| Video Compression | Main stream: H.265+/H.265/H.264+/H.264, |
| | Sub-stream: H.265/H.264/MJPEG |
| Video Bit Rate | 32 Kbps to 16 Mbps |
| H.264 Type | Baseline Profile, Main Profile, High Profile |
| H.265 Type | Main Profile |
| Bit Rate Control | CBR |
| Region of Interest (ROI) | 1 fixed region(s) for main stream |
| **Audio** | |
| Audio Type | -U: Mono sound |
| Environment Noise Filtering | -U: Yes |
| Audio Sampling Rate | -U: 8 kHz/16 kHz |
| Audio Compression | -U: G.711ulaw/G.711alaw/G.722.1/G.726/MP2L2/PCM/AAC-LC |

| Audio Bit Rate | -U: 64 Kbps (G.711 ulaw)/64 Kbps (G.711 alaw)/16 Kbps (G.722.1)/16 Kbps (G.726)/32 to 160 Kbps (MP2L2)/16 to 64 Kbps (AAC-LC) |
|---|---|
| **Network** | |
| Protocols | TCP/IP, ICMP, DHCP, DNS, DDNS, HTTP, HTTPS, RTP, RTSP, NTP, UPnP, IGMP, IPv6, UDP, QoS, Bonjour, FTP, 802.1x, SMTP |
| Simultaneous Live View | Up to 6 channels |
| API | Open Network Video Interface (Profile S, Profile G ((only -U model supports)), ISAPI, SDK |
| User/Host | Up to 32 users<br>3 user levels: administrator, operator, and user |
| Security | Password protection, complicated password, HTTPS encryption, 802.1X authentication (EAP-MD5), watermark, IP address filter, basic and digest authentication for HTTP/HTTPS, WSSE and digest authentication for Open Network Video Interface, RTP/RTSP over HTTPS, security audit log, TLS 1.2, host authentication (MAC address) |
| Client | iVMS-4200, Hik-Connect |
| Web Browser | Plug-in required live view: IE 10, IE 11,<br>Local service: Chrome 57.0+, Firefox 52.0+ |
| **Image** | |
| Wide Dynamic Range (WDR) | 120 dB |
| SNR | ≥ 52 dB |
| Day/Night Switch | Day, Night, Auto, Schedule |
| Image Enhancement | BLC, HLC, 3D DNR |
| Image Settings | Rotate mode, saturation, brightness, contrast, sharpness, gain, white balance, adjustable by client software or web browser |
| Privacy Mask | 4 programmable polygon privacy masks |
| **Interface** | |
| Ethernet Interface | 1 RJ45 10 M/100 M self-adaptive Ethernet port |
| On-Board Storage | -F: Built-in memory card slot, support MicroSD/SDHC/SDXC card, up to 256 GB |
| Built-in Microphone | -U: Yes |
| Reset Key | -F: Yes |
| **Event** | |
| Basic Event | Motion detection, video tampering alarm, exception |
| Linkage | Upload to FTP/memory card (-F), notify surveillance center, send email, trigger recording (-F), trigger capture |
| **General** | |
| Power | 12 VDC ± 25%, 0.4 A, max. 5 W, Ø5.5 mm coaxial power plug,<br>PoE: 802.3af, Class 3, 36 V to 57 V, 0.2 A to 0.15 A, max. 6.5 W |
| Material | Aluminum alloy body |
| Dimension | Ø76.6 mm × 164.4 mm (Ø3" × 6.5") |
| Package Dimension | 234 mm × 120 mm × 117 mm (9.2" × 4.7" × 4.6") |
| Weight | Approx. 430 g (0.95 lb.) |
| With Package Weight | Approx. 648 g (1.42 lb.) |
| Storage Conditions | -30 °C to 60 °C (-22 °F to 140 °F). Humidity 95% or less (non-condensing) |
| Startup and Operating Conditions | -30 °C to 60 °C (-22 °F to 140 °F). Humidity 95% or less (non-condensing) |

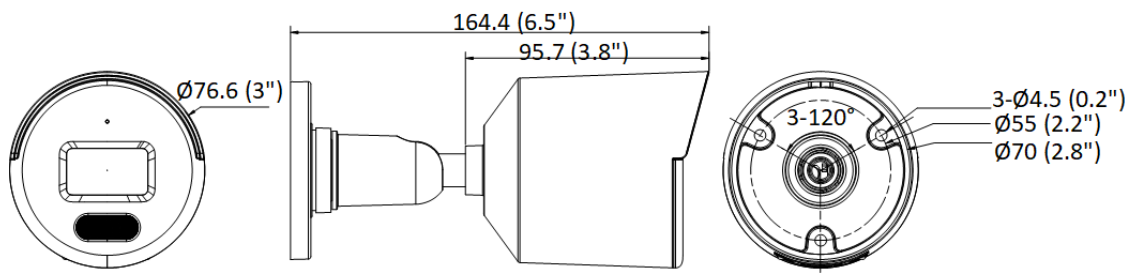| Language | English, Ukranian |
|---|---|
| General Function | Heartbeat, anti-flicker, mirror, password protection, password reset via email |
| **Approval** | |
| EMC | FCC: 47 CFR Part 15, Subpart B, <br> CE-EMC: EN 55032: 2015, EN 61000-3-2:2019, EN 61000-3-3: 2013+A1:2019, EN 50130-4: 2011 +A1: 2014, <br> RCM: AS/NZS CISPR 32: 2015, <br> KC: KN32: 2015, KN35: 2015 |
| Safety | UL: UL 62368-1, <br> CB: IEC 62368-1: 2014+A11, <br> CE-LVD: EN 62368-1: 2014/A11: 2017, <br> BIS: IS 13252 (Part 1): 2010/IEC 60950-1: 2005 |
| Environment | CE-RoHS: 2011/65/EU, <br> WEEE: 2012/19/EU, <br> Reach: Regulation (EC) No 1907/2006 |
| Protection | IP67: IEC 60529-2013 |

## ▪ Available Model

DS-2CD1057G0-L (2.8/4 mm)
DS-2CD1057G0-LUF (2.8/4 mm)

## ▪ Typical Application

Hikvision products are classified into three levels according to their anti-corrosion performance. Refer to the following description to choose for your using environment.

This model has NO SPECIFIC PROTECTION.

| Level | Description |
|---|---|
| Top-level protection | Hikvision products at this level are equipped for use in areas where professional anti-corrosion protection is a must. Typical application scenarios include coastlines, docks, chemical plants, and more. |
| Moderate protection | Hikvision products at this level are equipped for use in areas with moderate anti-corrosion demands. Typical application scenarios include coastal areas about 2 kilometers (1.24 miles) away from coastlines, as well as areas affected by acid rain. |
| No specific protection | Hikvision products at this level are equipped for use in areas where no specific anti-corrosion protection is needed. |

**▪ Dimension**

164.4 (6.5")

95.7 (3.8")

Ø76.6 (3")

3-Ø4.5 (0.2")
3-120°
Ø55 (2.2")
Ø70 (2.8")

Unit: mm (inch)

**▪ Accessory**

**▪ Optional**

**DS-1280ZJ-XS**

**Junction Box**

**HIKVISION**

Distributed by

**HIKVISION**®

**05070220220125**

# DS-2CD1357G0-L(UF)
## 5 MP ColorVu Fixed Turret Network Camera

ColorVu

Hikvision ColorVu technology provides 24/7 vivid colorful images with F1.0 advanced lenses and high performance sensors. F1.0 super-aperture collects more light to produce brighter images. Advanced sensor technology can vastly improve the utilization of available light.

- High quality imaging with 5 MP resolution
- 24/7 colorful imaging
- Excellent low-light performance
- Water and dust resistant (IP67)
- Efficient H.265+ compression technology

▪ **Specification**

| Camera | |
|---|---|
| Image Sensor | 1/2.7" Progressive Scan CMOS |
| Max. Resolution | 2560 × 1920 |
| Shutter Time | 1/3 s to 1/100, 000 s |
| Min. Illumination | Color: 0.001 Lux @ (F1.0, AGC ON), 0 Lux with light |
| Day & Night | 24/7 color imaging |
| Angle Adjustment | Pan: 0° to 360°, tilt: 0° to 75°, rotate: 0° to 360° |
| **Lens** | |
| Lens Type | Fixed focal lens, 2.8 and 4 mm optional |
| Focal Length & FOV | 2.8 mm, horizontal FOV 95°, vertical FOV 70°, diagonal FOV 125° |
| | 4 mm, horizontal FOV 76°, vertical FOV 57°, diagonal FOV 98° |
| Lens Mount | M12 |
| Iris Type | Fixed |
| Aperture | F1.0 |
| Depth of Field | 2.8 mm: 2 m to ∞ |
| | 4 mm: 2.7 m to ∞ |
| **DORI** | |
| DORI | 2.8 mm, D: 64 m, O: 25 m, R: 12 m, I: 6 m |
| | 4 mm, D: 82 m, O: 32 m, R: 16 m, I: 8 m |
| **Illuminator** | |
| Supplement Light Type | White Light |
| Supplement Light Range | Up to 30 m |
| Smart Supplement Light | Yes |
| **Video** | |
| Main Stream | 50 Hz: |
| | 20 fps (2560 x 1920) |
| | 25 fps (2560 × 1440, 1920 × 1080, 1280 × 720) |
| | 60 Hz: |
| | 20 fps (2560 x 1920) |
| | 30 fps (2560 × 1440, 1920 × 1080, 1280 × 720) |
| Sub-Stream | 50 Hz: 25 fps (1280 × 720, 640 × 480, 640 × 360) |
| | 60 Hz: 30 fps (1280 × 720, 640 × 480, 640 × 360) |
| Video Compression | Main stream: H.265+/H.265/H.264+/H.264, |
| | Sub-stream: H.265/H.264/MJPEG |
| Video Bit Rate | 32 Kbps to 16 Mbps |
| H.264 Type | Baseline Profile, Main Profile, High Profile |
| H.265 Type | Main Profile |
| Bit Rate Control | CBR, VBR |
| Region of Interest (ROI) | 1 fixed region(s) for main stream |
| **Audio** | |
| Audio Type | -U: Mono sound |
| Environment Noise Filtering | -U: Yes |
| Audio Sampling Rate | -U: 8 kHz/16 kHz |
| Audio Compression | -U: G.711ulaw/G.711alaw/G.722.1/G.726/MP2L2/PCM/AAC-LC |

| Audio Bit Rate | -U: 64 Kbps (G.711 ulaw)/64 Kbps (G.711 alaw)/16 Kbps (G.722.1)/16 Kbps (G.726)/32 to 160 Kbps (MP2L2)/16 to 64 Kbps (AAC-LC) |
|---|---|
| **Network** | |
| Protocols | TCP/IP, ICMP, DHCP, DNS, DDNS, HTTP, HTTPS, RTP, RTSP, NTP, UPnP, IGMP, IPv6, UDP, QoS, Bonjour, FTP, 802.1x, SMTP |
| Simultaneous Live View | Up to 6 channels |
| API | Open Network Video Interface (Profile S, Profile G ((only -U model supports)), ISAPI, SDK |
| User/Host | Up to 32 users<br>3 user levels: administrator, operator, and user |
| Security | Password protection, complicated password, HTTPS encryption, 802.1X authentication (EAP-MD5), watermark, IP address filter, basic and digest authentication for HTTP/HTTPS, WSSE and digest authentication for Open Network Video Interface, RTP/RTSP over HTTPS, security audit log, TLS 1.2, host authentication (MAC address) |
| Client | iVMS-4200, Hik-Connect |
| Web Browser | Plug-in required live view: IE 10, IE 11,<br>Local service: Chrome 57.0+, Firefox 52.0+ |
| **Image** | |
| Wide Dynamic Range (WDR) | 120 dB |
| SNR | ≥ 52 dB |
| Day/Night Switch | Day, Night, Auto, Schedule |
| Image Enhancement | BLC, HLC, 3D DNR |
| Image Settings | Rotate mode, saturation, brightness, contrast, sharpness, gain, white balance, adjustable by client software or web browser |
| Privacy Mask | 4 programmable polygon privacy masks |
| **Interface** | |
| Ethernet Interface | 1 RJ45 10 M/100 M self-adaptive Ethernet port |
| On-Board Storage | -F: Built-in memory card slot, support MicroSD/SDHC/SDXC card, up to 256 GB |
| Built-in Microphone | -U: Yes |
| Reset Key | -F: Yes |
| **Event** | |
| Basic Event | Motion detection, video tampering alarm, exception |
| Linkage | Upload to FTP/memory card (-F), notify surveillance center, send email, trigger recording (-F), trigger capture |
| **General** | |
| Power | 12 VDC ± 25%, 0.4 A, max. 5 W, Ø5.5 mm coaxial power plug,<br>PoE: 802.3af, Class 3, 36 V to 57 V, 0.2 A to 0.15 A, max. 6.5 W |
| Material | Metal & Plastic |
| Dimension | Ø109.9 mm × 103.6 mm (Ø4.3" × 4.1") |
| Package Dimension | 150 mm × 150 mm × 141 mm (5.9" × 5.9" × 5.6") |
| Weight | -L: Approx. 390 g (0.9 lb)<br>-LUF: Approx. 410 g (0.9 lb) |
| With Package Weight | -L: Approx. 630 g (1.4 lb)<br>-LUF: Approx. 650 g (1.4 lb) |
| Storage Conditions | -30 °C to 60 °C (-22 °F to 140 °F). Humidity 95% or less (non-condensing) |

| Startup and Operating Conditions | -30 °C to 60 °C (-22 °F to 140 °F). Humidity 95% or less (non-condensing) |
|---|---|
| Language | English, Ukranian |
| General Function | Heartbeat, anti-flicker, mirror, password protection, password reset via email |
| **Approval** | |
| EMC | FCC: 47 CFR Part 15, Subpart B, CE-EMC: EN 55032: 2015, EN 61000-3-2:2019, EN 61000-3-3: 2013+A1:2019, EN 50130-4: 2011 +A1: 2014, RCM: AS/NZS CISPR 32: 2015, KC: KN32: 2015, KN35: 2015 |
| Safety | UL: UL 62368-1, CB: IEC 62368-1: 2014+A11, CE-LVD: EN 62368-1: 2014/A11: 2017, BIS: IS 13252 (Part 1): 2010/IEC 60950-1: 2005 |
| Environment | CE-RoHS: 2011/65/EU, WEEE: 2012/19/EU, Reach: Regulation (EC) No 1907/2006 |
| Protection | IP67: IEC 60529-2013 |

### ▪ Available Model
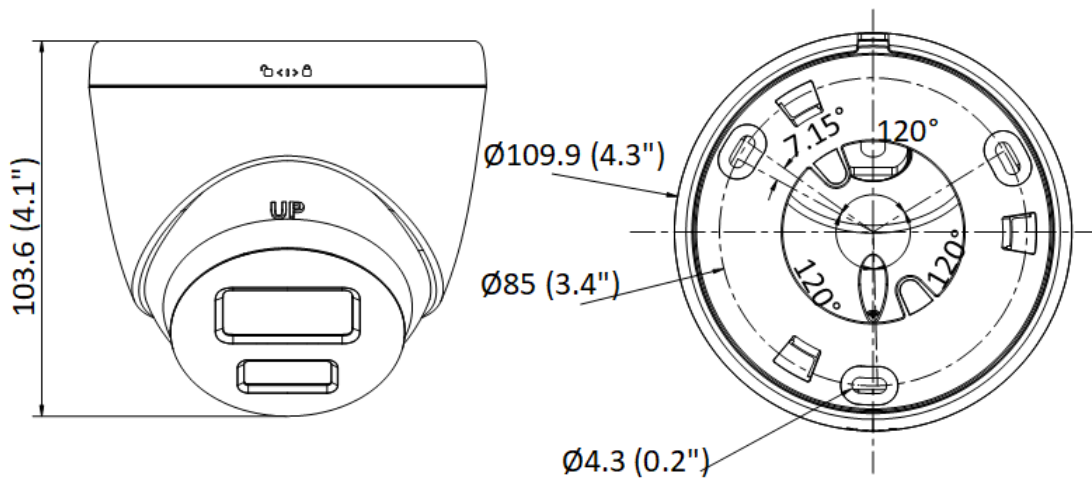DS-2CD1357G0-L (2.8/4 mm)
DS-2CD1357G0-LU F(2.8/4 mm)

### ▪ Typical Application
Hikvision products are classified into three levels according to their anti-corrosion performance. Refer to the following description to choose for your using environment.

This model has NO SPECIFIC PROTECTION.

| Level | Description |
|---|---|
| Top-level protection | Hikvision products at this level are equipped for use in areas where professional anti-corrosion protection is a must. Typical application scenarios include coastlines, docks, chemical plants, and more. |
| Moderate protection | Hikvision products at this level are equipped for use in areas with moderate anti-corrosion demands. Typical application scenarios include coastal areas about 2 kilometers (1.24 miles) away from coastlines, as well as areas affected by acid rain. |
| No specific protection | Hikvision products at this level are equipped for use in areas where no specific anti-corrosion protection is needed. |

▪**Dimension**



Ø109.9 (4.3")

Ø85 (3.4")

Ø4.3 (0.2")

7.15°  120°

120°  120°

Unit: mm (inch)

▪ **Accessory**

▪**Optional**

| DS-1275ZJ-SUS Vertical Pole Mount | DS-1272ZJ-110-TRS Wall Mount | DS-1276ZJ-SUS Corner Mount | DS-1280ZJ-S Junction Box | DS-1281ZJ-S Inclined Ceiling Mount |
|---|---|---|---|---|
|  |  |  |  |  |

# HIKVISION®

Distributed by

# *HIK*VISION®

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### Overview:

The HDMI 4x4 Matrix, 4K/60 (4:4:4) connects four HDMI sources to four displays. This matrix provide four HDMI outputs supporting up to 4K/60 (4:4:4) plus all 3D formats, and supporting independent EDID control. It works with Blu-Ray players, Media Players/Streamers, Cameras, Set-Top boxes, Home Theater systems, and game consoles that connect to an HDMI display. Any source is accessible at all times by any display by selecting it via the supplied IR Remote Control, RS-232, TCP/IP or by using the selection buttons on the front panel.

### Applications:

- Commercial and residential AV systems
- Classroom training systems
- Digital signage
- Boardroom systems
- Collaborative PC systems
- Medical information systems

### Key Features:

- Supports HDMI 2.0 (4K/60, 4:4:4)
- Supports 4K/60 (4:2:0) for compatibility with HDBT extenders
- HDCP 2.2 compliant
- Full HDR support
- Powerful EDID management
- Supports LPCM 7.1CH, Dolby TrueHD, Dolby Digital Plus, Dolby Atmos, DTS-HD Master Audio & DTS:X
- Supports a Coax digital audio out (S/PDIF)
- Available Window's GUI control software
- Controllable via front panel, IR, RS232 and Telnet
- Fits on a standard 19" rack

### Typical Application

_____
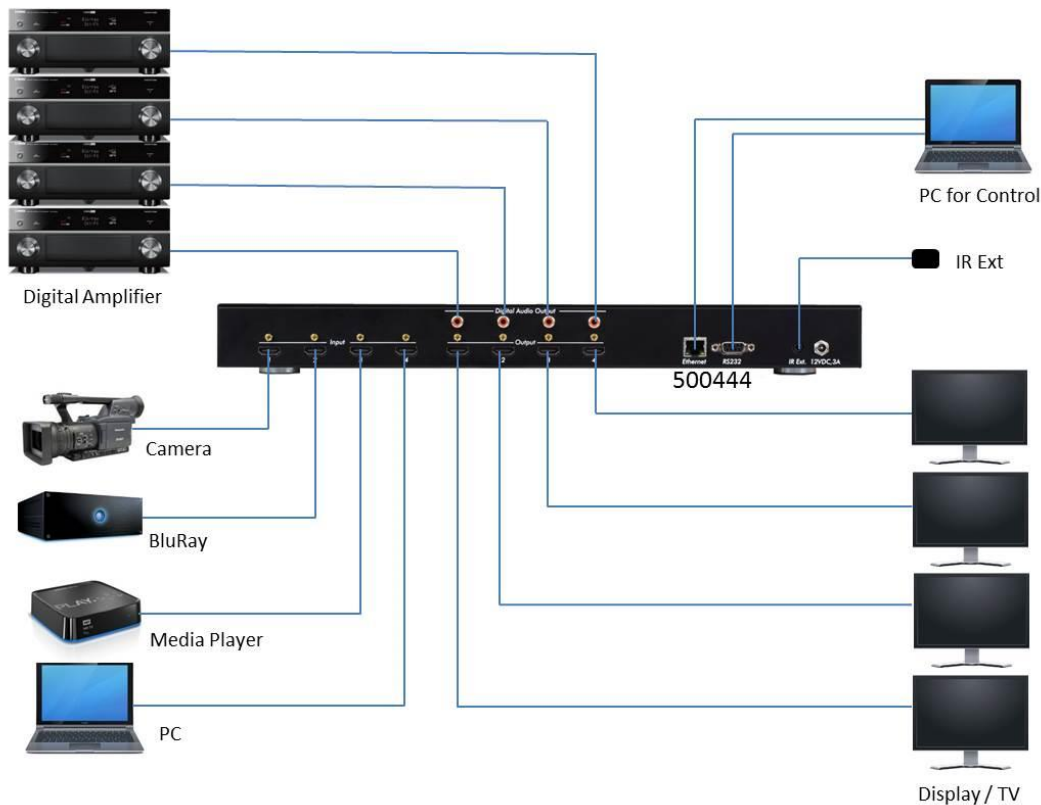


| Specifications | |
|---|---|
| **Environment** | HDMI 2.0a |
| **Devices** | 4K Blu-Ray, media players/streamers, projectors, monitors, TV, PC, laptops. |
| **Transmission** | Transparent to the user. |
| **Video Bandwidth** | 18Gbps |
| **Maximum Pixel Clock** | 594Mhz |
| **Signals** | HDMI 2.0a (4K/60 4:4:4) protocol and HDCP 1.4 & 2.2 |
| **Video Resolution** | VESA and SMPTE 480p to 2160p (4K) With 3D<br>Bit depth: 8, 10, 12 |
| **Connectors** | Four (4) HDMI connectors, for HDMI Input<br>Four (4) HDMI connectors, for HDMI Output<br>One (1) 3.5mm Jack, for IR Sensor<br>One (1) DB9 connector for RS232 management<br>One (1) RJ45 Shielded connector for Ethernet<br>Four (4) Coax Digital Audio Outputs<br>One (1) 2.1mm barrel locking connector for Power |
| **Audio** | Supports LPCM 7.1CH, Dolby TrueHD, Dolby Digital Plus, Dolby Atmos, DTS-HD Master Audio & DTS:X |
| **Cable** | Eight (8) HDMI cables of appropriate length for video resolution selected<br>Cat 5e/6 or better twisted pair cable for Ethernet<br>One DB9 serial cable for RS232 |
| **Maximum Distance**<br>*Cables not included.* | 10m for HDMI cable |
| **Power Supply** | One (1) 110-240VAC to 12VDC/5.0A power supply |
| **Temperature** | Operating: 0° to 40°C          Storage: -20° to 85°C<br>Humidity: Up to 95% non-condensing |
| **Enclosure** | Metal enclosure |
| **Bracket** | Included |
| **Dimensions** | 17.20" x 1.69" x 8.86" (437mm x 43mm x 225mm) |
| **Weight** | 9.69lbs (4.40kg) |
| **Compliance** | Regulatory: FCC, CE, RoHS |
| **Warranty** | 2 years |
| **Order Information** | 500444-US HDMI 4x4 Matrix Switch, 4K/60, US  (UPC: 627699014448)<br>500444-UK HDMI 4x4 Matrix Switch, 4K/60, UK  (UPC: 627699914441)<br>500444-EU HDMI 4x4 Matrix Switch, 4K/60, EU  (UPC: 627699814444) |

## DS-K1T341CM
## Face Recognition Terminal

Face recognition terminal adopts deep learning algorithm, which helps to recognize the face faster with higher accuracy. It also supports multiple authentication modes: face/card/PIN authentication, etc. It can be applied in multiple scenarios, such as buildings, enterprises, financial industries, and other important areas.

- Deep learning algorithm
- 4.3-inch capacitive touch screen, 2 MP wide-angle dual-lens
- 3,000 face capacity, 3,000 card capacity, and 150,000 event capacity
- Multiple authentication modes, including face, and card, etc.
- Face recognition duration < 0.2 s/User
- Supports mask wearing detection
- Connects to external access controller or Wiegand card reader via Wiegand protocol
- Connects to secure door control unit via RS-485 protocol to avoid the door opening when the terminal is destroyed
- Two-way audio with client software, door station, indoor station, and main station
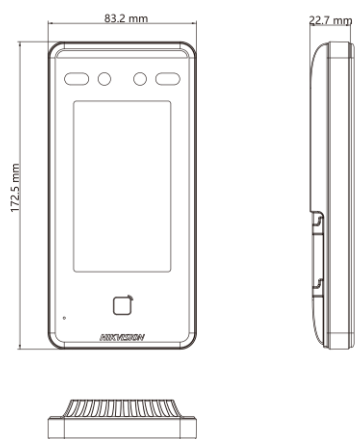
## ▪ Specification

| System | |
|---|---|
| Operating system | Linux |
| **Display** | |
| Screen size | 4.3 inch |
| Operation method | Capacitive touch screen |
| Resolution | 272 × 480 |
| **Video** | |
| Lens | 2 |
| Resolution | 2 MP (video stream: 720P) |
| Video standard | PAL (Default) and NTSC |
| **Network** | |
| Wired network | 10 M/100 M self-adaptive |
| **Interface** | |
| Network interface | 1 |
| Lock control | 1 |
| Exit button | 1 |
| Door contact input | 1 |
| TAMPER | 1 |
| RS-485 | 1 |
| Wiegand | 1 |
| USB | 1 |
| **Capacity** | |
| Face capacity | 3,000 |
| Card capacity | 3,000 |
| Event capacity | 150,000 |
| **Authentication** | |
| Face recognition distance | > 2 m |
| Face recognition duration | < 0.2 s |
| Card type | M1 card |
| **Function** | |
| Live view | Support |
| Face anti-spoofing | Support |
| Hik-Connect | Support |
| Audio prompt | Support |
| **General** | |
| Built-in access controller | Yes |
| Power supply | 12 VDC to 24 VDC, 2 A |
| Power consumption | ≤ 10 W |
| Working temperature | -30 ℃ to 60 ℃ (-22 °F to 140 °F ) |
| Protective level | IP65 |
| Language | English, Spanish (South America), Arabic, Thai, Indonesian, Russian, Vietnamese, Portuguese (Brazil), Korean |

▪ **Available Model**

DS-K1T341CM

▪**Dimension**

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# SXTsq Lite5

The SXTsq Lite5 is a compact and lightweight outdoor wireless device with an integrated antenna. Perfect for point-to-point links of up to 12 kilometers or as a CPE unit. It is compact, weatherproof and easy to mount. The SXTsq Lite5 retains a 16 dBi antenna like the SXT Lite5, our previous model, yet the antenna design has been improved and the physical size has been dramatically reduced - the SXTsq is two times thinner.
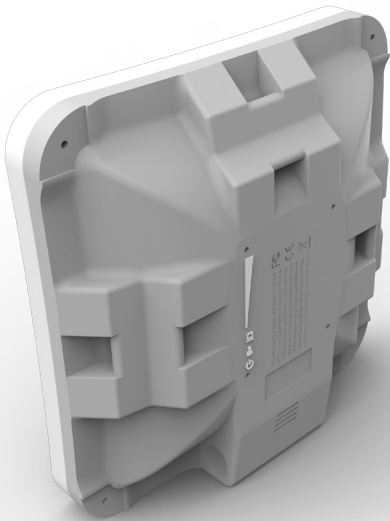
The enclosure includes slots for directly attaching a hose clamp mount in three different mounting places, with ability to be mounted on horizontal railings. The device includes one 10/100 Mbit ethernet port. There is also an easily accessilble grounding connection to protect it against lightning.

Comparison to previous SXTs
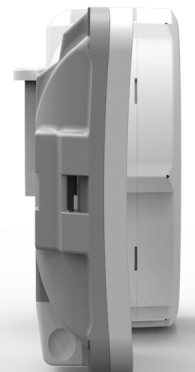
24 V 0.38 A power adapter

Metal ring

PoE injector

# Specifications

| | |
|---|---|
| Product code | RBSXTsq5nD (International), RBSXTsq5nD-US (USA) |
| CPU | AR9344 |
| CPU nominal frequency | 600 MHz |
| CPU core count | 1 |
| Size of RAM | 64 MB |
| Storage | 16 MB Flash |
| 10/100 Ethernet ports | 1 |
| Wireless bands | 5 GHz radio |
| Wireless regulations | Specific frequency range may be limited by country regulations |
| Operating frequency | International     5150 - 5875 MHz |
| | USA     5170 - 5250 MHz   5725 - 5835 MHz |
| Protocols | 802.11a/n |
| Chains | 2 |
| Antenna gain | 16 dBi |
| Antenna beam width | 23° |
| Wireless chip model | AR9344 |
| PoE in | Yes |
| Supported input voltage | 10 V - 30 V, passive PoE |
| Dimensions | 129x129x34 mm; package: 255x180x45 mm |
| Weight | Unit: 295 g; package: 492 g |
| Operating temperature | -40 to 70° C |
| License level | 3 |
| Operating System | RouterOS |
| Max Power consumption | 6 W |

# Wireless specifications

| RATE (5 GHz) | Tx (dBm) | Rx (dBm) |
|---|---|---|
| 6MBit/s | 25 | -96 |
| 54MBit/s | 20 | -80 |
| MCS0 | 25 | -96 |
| MCS7 | 19 | -75 |

QuickMount Pro adjustable mount available separately.

# Datasheet
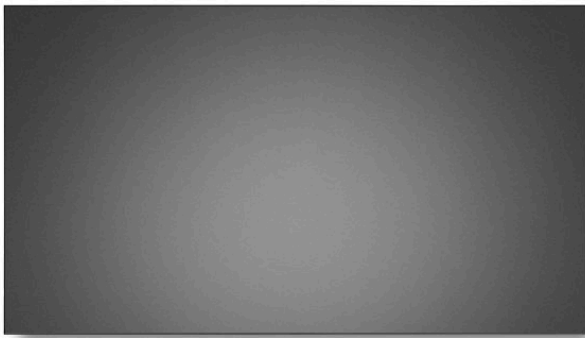
**Video Walls you can rely on**

The MultiSync® UN552V sets the standard for video wall technology. Featuring a minimal 3.5 mm bezel these display modules create impressive high resolution video walls with barely visible image gaps. With perfect picture quality and high product reliability, these displays are designed for the rigors of 24/7 operation. At a high brightness level of 500 cd/m² your message will be well received with effortless readability even in the brightest ambient light conditions. An advanced set of intelligent features make the displays easy to install and operate and support significantly reduced maintenance requirements. The 55" display is ideally suited to create huge screen surfaces for fixed installations and for mid and longer viewing distances.

NEC's vast experience in the video wall market is evident in the design with features that reduce costs, ease installation and enhance the visual impact of content in control rooms, broadcast studios, transport installations and the rental market.

## Benefits

**Easy installation** – effortlessly set up you wall display with Auto TileMatrix and out-of-the-box calibrations. Save time by plugging in ready-to-use image presets for predefined application scenarios.

**Enhanced imaging performance** – advanced settings of all relevant visual parameters allow full control of brightness, colour, gamma and uniformity via the SpectraView Engine for precise, natural images.

**Lifelike and consistent colour** – expect colour reproduction that feels true to life with IPS panel technology, the top choice when it comes to colour consistency. The S-IPS panel ensures that perfect visibility is maintained in landscape and portrait mode and at extreme viewing angles as viewers pass by.

**Secure Reliability and Longevity of Video Walls** – unique NEC heat management system enables the user to monitor and control the heat inside the display.

**Cost Saving Device Management** – save effort whilst managing all connected NEC devices from a centralised location by using the NaViSet Administrator 2 software tool.

## Product Information

| | |
|---|---|
| Product Name | NEC MultiSync® UN552V |
| Product Group | LCD 55" Video Wall Display |
| Order Code | 60004882 |

## Display

| | |
|---|---|
| Panel Technology | S-IPS with Direct LED backlights |
| Active Screen Area (W x H) [mm] | 1,209.6 x 680.3 |
| Screen Size [inch/cm] | 55 / 138.8 |
| Aspect Ratio | 16:9 |
| Pixel Pitch [mm] | 0.630 |
| Brightness [cd/m²] | 500 |
| Contrast Ratio (default) | > 1700:1 |
| Viewing Angle [°] | 178 horizontal / 178 vertical (typ. at contrast ratio 10:1) |
| Colour Gamut | 72% of NTSC |
| Response Time (typ.) [ms] | 8 |
| Panel Refresh Rate [Hz] | 60 |
| Haze Level [%] | Pro (28) |
| Supported Orientation | Landscape; Portrait |

## Resolution

| | | | | |
|---|---|---|---|---|
| Native Resolution | 1920 x 1080 | | | |
| Supported on DisplayPort and HDMI | 1024 x 768; 1080i; 1080p; | 1280 x 1024; 1280 x 768; 1360 x 768; | 1600 x 1200; 1920 x 1080; 3840 x 2160; | 640 x 480; 720p (50/60 Hz); 800 x 600 |
| Supported on HDMI only | 4096 x 2160 | | | |

## Synchronisation Rate

| | |
|---|---|
| Horizontal Frequency [kHz] | 26 - 134 |
| Vertical Frequency [Hz] | 23 - 86 |

## Connectivity

| | |
|---|---|
| Input Video Analogue | 1 x VGA; Composite (RCA) |
| Input Video Digital | 1 x DVI-D (with HDCP); 1 x OPS Slot; 2 x DisplayPort (with HDCP); 2 x HDMI 1.3 (with HDCP) |
| Input Audio Analogue | 2 x 3,5 mm jack |
| Input Audio Digital | 2 x DisplayPort; 2 x HDMI |
| Input Control | 1 x Remote Control (3.5 mm jack); 1 x RS232; 2 x LAN 100Mbit |
| Input Data | 1 x microSD (MediaPlayer); 1 x USB 1.0 (Downstream); 1 x USB 1.0 (MediaPlayer); 1 x USB 2.0 (Upstream); 2 x USB 1.0 (Compute Module, 1 x 5V/2A powered) |
| Output Video Digital | 1 x DisplayPort (loop through: DisplayPort, OPS slot-in PC); 1 x HDMI (loop through: HDMI, OPS slot-in PC, Mediaplayer) |
| Output Audio Analogue | 1 x 3,5 mm jack |
| Output Control | LAN 100Mbit |

## Calibration

| | |
|---|---|
| Factory Calibration | Gamma; Intensity; RGB; Uniformity; White Point |
| Sensor Calibration (through USB) | PC-less Calibration with USB Sensor MDSVSensor3; White Copy (post self-calibration) |

| Calibration with Software | Corner Uniformity; Gamma; Intensity; RGB; Update Factory Calibration; Update Uniformity Correction; White Point |
|---|---|
| Calibration Software | NEC Display Wall Calibrator |

## Open Modular Intelligence

| OPS Slot | Slot Technology: Open pluggable specification (NEC / Intel OPS standard) |
|---|---|
| OPS Max. Current / Power Consumption [A / W] | 3.6 / 58 |
| Compute Module Slot | Slot Technology: Compute Module 3 Slot (NEC proprietary standard) |

## Sensors

| Human Sensor | Optional, external, 4-5m range, triggered actions programmable |
|---|---|
| NFC Sensor | Integrated, 2cm range, free NEC Android App required |

## Electrical

| Power Consumption Eco/max. [W] | 110 shipping; 315 (max.) |
|---|---|
| Power Savings Mode [W] | < 0.5; < 2 (Networked Standby) |

## Environmental Conditions

| Operating Temperature [°C] | +0 to +40 |
|---|---|
| Operating Humidity [%] | 20 to 80 |
| Storage Humidity [%] | 10 to 90 |
| Storage Temperature [°C] | -20 to 60 |

## Mechanical

| Dimensions (W x H x D) [mm] | Without stand: 1,213.4 x 684.2 x 103.8 |
|---|---|
| Weight [kg] | Without stand: 25.5 |
| Bezel Width [mm] | 1.2 bottom/right; 2.3 top/left; 3.5 |
| VESA Mounting [mm] | 4 holes; 400 x 400 (FDMI); M6 |

## MediaPlayer

| Supported Image Formats | JPG (baseline, progressive, RGB, CMYK); max. resolution 5000 x 5000; PNG (interlace, alpha channel); max. resolution 4000 x 4000 |
|---|---|
| Supported Video Formats | MP4 / MOV / FLV (video H.264, audio MP3, AAC); max. resolution 1080p at 30 Hz, 1080i at 60 Hz; MPG (video mpeg1/2, audio mpeg audio layer2/3, AAC-LC); MP @ ML, MP @ HL; WMV (video H.264, wmv advanced L3, wmv simple / main, audio mp3 wmv std); max. resolution 1080p at 30 Hz, 1080i at 60 Hz |
| Supported Audio Formats | MP3 (MP3); max. bit-rate 320 kBit/s; WAV (LPCM); max. 48 kHz sampling |

## Available Options

| Accessories | Calibration kit (KT-LFD-CC2); Feet (ST-5220); Overframe kit (KT-55UN-OF5); Remote control kit (KT-RC3); Speaker (SP-TF1); Wall mount (PD02VWM MFS 46-55 L/P; PD02VW QR 46-55 L/P; CK02XUN MFS 55 L/P) |
|---|---|
| Compute Module Slot | Raspberry Pi Compute Module 1 and 3 |
| OPS Slot | Intel® Atom, Celeron and Core i3, i5, i7 Slot-in PCs |

## Green Features

| Energy Efficiency | Carbon savings meter; Energy consumption: 106 kWh/1000 h; Energy efficiency class: G; Human Sensor; LED backlight |
|---|---|
| Ecological Standards | EnergyStar 8.0 |

## Additional Features

| | |
|---|---|
| Special Characteristics | Auto ID assignment; Auto tiling function; Automatic Alarm E-Mails; DICOM Simulation; Frame Comp; HTTP Server; Image flip; Intelligent Wireless Data (based on NFC); NaViSet Administrator 2; TileMatrix; USB Media Player; User input priority definition; User readable log function |
| Colour Versions | Black Front Bezel, Black Back Cabinet |
| Safety and Ergonomics | BSMI; CE; EAC; FCC; PSB; RCM; REACH; RoHS; SASO; TÜV GS; TÜV S; UL/C-UL; VCCI |
| Pixel Failure Class | ISO 9241-307, Class 2 |
| Audio | Optional Speakers (15 W + 15 W) |
| Plug and Play | VESA DDC/CI |
| Shipping Content | Display; DisplayPort Cable; HDMI Cable; LAN cable (RJ45); Power Cable |
| Warranty | 3 years warranty incl. backlight; additional services available; optional 4. + 5. year warranty extension [1] |
| Operating Hours | 24/7 |

[1] please refer to terms and conditions of warranty extensions

| VCCI | CE | RCM | RoHS | TÜV GS |
|---|---|---|---|---|

# Daker DK Plus 3000

**3 101 72 – 3 100 75**

## 1. GENERAL FEATURES

The Legrand UPS model Daker DK Plus 3000 is an uninterruptible power source with high frequency PWM technology, Double Conversion On-Line, solid neutral, Rated Power 3,000 VA – 2700 W, equipped with valve-regulated, hermetically-sealed accumulator batteries, contained in a specific compartment inside the UPS or in one or more external cabinets, sized to guarantee a minimum uptime of 8 minutes at 80% of the load.
The electronics and batteries are contained in just two rack units.

The architecture of this UPS means it can be installed in either a Tower configuration or inside Rack cabinets.
The rectifier of the UPS is comprised of a control and regulating circuit (PFC), which, in addition to normal rectifier functions also:
- automatically corrects the power factor of the load to restore it to a value of > 0.99 with a load applied at the output at 20% of the rated load;
- power the inverter without requiring energy from the batteries, even when there is very low voltage from the mains;
- ensures a total harmonic distortion of the input current $THD_{lin}$ < 3% without the addition of filters or supplementary parts.

The bypass circuit is designed and built in compliance with the following:
− Electromechanical switch
− Command and control logic managed by a microprocessor that:
  - automatically transfers the load directly onto the primary mains line without interrupting the power supply if any conditions of overload, over temperature, continuous voltage outside of the tolerances and inverter anomaly arise;
  - automatically re-transfers the primary mains line load to an inverter line, without interrupting the power supply, once normal conditions of the load have been restored;
  - if the primary mains line and the inverter are not synchronized, the bypass must be disabled.

A diagnostic and shutdown software (UPS Communicator), if accordingly installed in a PC connected to the UPS, which allows you to access all of the DHEA's operational data, make adjustments and settings to the special functions and control Windows and Linux operating system shutdown.
An optional software (UPS management software) offers hierarchic multiserver shutdown and remote management of the UPS for any operating system in a heterogeneous network (Windows, Novell, Linux and the common Unix).

Daker DK Plus 3000 is managed by a microprocessor and is able to display, on a control panel and LCD screen, the alarms and operating modes described below:

- normal operation
- output frequency that is not synchronized with the input
- battery-powered operation
- operation in bypass mode
- faulty power module
- overloaded
- generic anomaly
- incorrect neutral connection
- back-up time
- end of uptime

The Daker DK Plus 3000 Static Uninterruptible Power Supply bears the CE marking pursuant to Directives 2014/35, 2104/30, and is designed and built in compliance with the following standards:
- EN 62040-1 "General and safety requirements for UPSs used in areas that are accessible to the operator"
- EN 62040-2 "Electromagnetic Compatibility requirements (EMC)"
- EN 62040-3 "Performance and test method requirements".

## 2. TECHNICAL FEATURES

| General Features | |
|---|---|
| Nominal power (VA) | 3000 |
| Active power (W) | 2700 |
| Technology | On-Line Double Conversion VFI-SS-111 |
| Waveform | Sinusoidal |
| UPS architecture | convertible tower and rack 19 |
| Surge Rating | 1530 |
| ECO Mode efficiency | %98 |

| Input | |
|---|---|
| Input voltage | 230 V |
| Input frequency | 50-60 Hz ±5% Autosensing |
| Input Voltage Range | 180-300 on full load 150-300 on 80%load 110-300 on 60% load |
| THD Input current | < 3% |
| Input power factor | > 0.99 |
| Input Plug | 3 101 72: Multi Standard 3 100 75: British Standard |

| Output | |
|---|---|
| Output voltage | 230V ± 1% |
| Output frequency (nominal) | 50/60 Hz (can be set from the LCD panel) +/- 0.1% |
| Crest Factor | 1:3 |
| THD Output voltage | Linear load 2% Nonlinear load 5% |
| Output Voltage Tolerance | ±1% |
| Bypass | Internal automatic Bypass (included) External maintenance Bypass (OPTIONAL) |

## 2. TECHNICAL FEATURES *(continued)*

| Batteries | |
|---|---|
| Uptime Expansion | yes |
| Number of batteries | 6 |
| Battery series Type/Voltage | 12V 9Ah |
| Uptime with 80% load (min) | 8 |
| Recharge time (to 100%) | 4 hours |
| Battery disconnector for safe transportation | yes |

| Communication and management | |
|---|---|
| Display and Signals | Four buttons and four LEDs to monitor the status of the UPS in real time |
| Communication Ports | RS232 serial ports, USB |
| Remote Management | available |
| Network interface slot | SNMP |

| Mechanical features | |
|---|---|
| Measurements H x L x D (mm) | 440x88 (2U) x600 |
| Battery Cabinet Measurements H x L x D (mm) | 440x88 (2U) x600 |
| Net Weight (kg) | 30 |

| Environmental conditions | |
|---|---|
| Operating temperature (°C) | 0 ÷ 40 °C |
| Degree of protection | IP20 |
| Relative humidity (%) | 0-95% non-condensing |
| Noise level at 1 m (dBA) | On-Line Mode < 50 Eco Mode < 40 |
| Heat Loss (BTU/h) | 818 |

| Certifications | |
|---|---|
| Standards | EN 62040-1, EN 62040-2, EN 62040-3 |