

**WISeNeT**

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# WISeNeT Z Product Line-up

India Only Marketed by Compuage

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# ZNE-8020RV/ZNO-8020RV

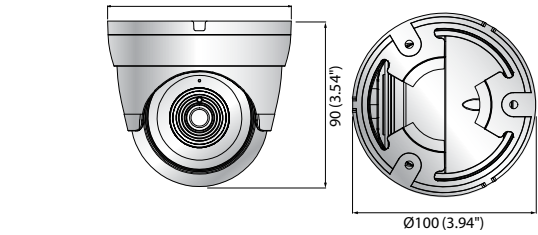
5M Network IR Dome/Bullet Camera



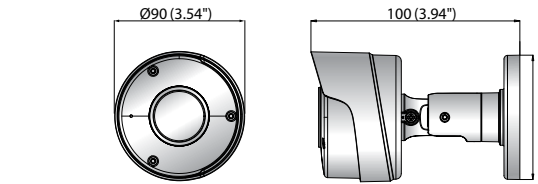
## Key Features

- Max. 5Megapixel (2592 x 1944) resolution
- 4mm fixed lens
- 0 Lux (B/W : IR LED ON)
- Max. 15fps@5MP, 25fps@2MP
- H.265, H.264 codec support
- Day & Night (ICR), D-WDR, BLC
- Motion detection, Privacy masking
- IR viewable length 25m
- IP66

## Dimensions



ZNE-8020RV



ZNO-8020RV

|                                   | ZNE-8020RV                                                                                                                                                            | ZNO-8020RV                     |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| VIDEO                             |                                                                                                                                                                       |                                |
| Imaging Device                    | 1/2.7" CMOS                                                                                                                                                           |                                |
| Effective Pixels                  | 2592(H) x 1944(V)                                                                                                                                                     |                                |
| Scanning System                   | Progressive                                                                                                                                                           |                                |
| Min. Illumination                 | 0Lux (IR LED ON)                                                                                                                                                      |                                |
| LENS TYPE                         |                                                                                                                                                                       |                                |
| Focal Length (Zoom Ratio)         | Fixed 4mm                                                                                                                                                             |                                |
| Max. Aperture Ratio               | F2.0                                                                                                                                                                  |                                |
| Angular Field of View             | D : 100 H: 76° V: 57°                                                                                                                                                 |                                |
| Min. Object Distance              | 0.2mm                                                                                                                                                                 |                                |
| Lens Type                         | Fixed                                                                                                                                                                 |                                |
| OPERATIONAL                       |                                                                                                                                                                       |                                |
| IR Viewable Length                | 25m (82.02ft)                                                                                                                                                         |                                |
| Camera Title                      | Off / On                                                                                                                                                              |                                |
| Day & Night                       | Auto / Color / B/W                                                                                                                                                    |                                |
| Backlight Compensation            | Off / BLC                                                                                                                                                             |                                |
| Wide Dynamic Range                | DWDR                                                                                                                                                                  |                                |
| Digital Noise Reduction           | 3D DNR                                                                                                                                                                |                                |
| Motion Detection                  | Off / On                                                                                                                                                              |                                |
| Privacy Masking                   | Off / On (4 Zone , Rectanngle)                                                                                                                                        |                                |
| Gain Control                      | Low / Middle / High                                                                                                                                                   |                                |
| White Balance                     | ATW / Manual                                                                                                                                                          |                                |
| Electronic Shutter Speed          | Auto / Manual                                                                                                                                                         |                                |
| Flip / Mirror                     | Support                                                                                                                                                               |                                |
| NETWORK                           |                                                                                                                                                                       |                                |
| Ethernet                          | RJ-45 (10 / 100 BASE-T)                                                                                                                                               |                                |
| Video Compression Format          | H.264 / H.265                                                                                                                                                         |                                |
| Resolution                        | 5MP (2592x1944), 4MP (2592x1520), 3MP(2048x1536), 1080P(1920x1080), 960P(1280x960), 720P(1280x720), VGA(640x480)                                                      |                                |
| Max. Framerate                    | MP mode : 5MP / 4MP / 3MP / 2MP / VGA (1 ~ 15fps)<br>2MP mode : 2MP / VGA (1~25fps)                                                                                   |                                |
| Video Quality Ajustment           | H.264/H.265 : Target Bitrate Level Control                                                                                                                            |                                |
| Bitrate control method            | H.264/H.265 : CBR or VBR                                                                                                                                              |                                |
| Streaming Capability              | 2 Streams                                                                                                                                                             |                                |
| IP                                | IPv4                                                                                                                                                                  |                                |
| Protocol                          | TCP/IP, HTTP, DHCP, DNS, DDNS, RTP/RTSP, SMTP, NTP, UPnP, FTP                                                                                                         |                                |
| Security                          | Digest login authentication, IP address filtering, User access Log                                                                                                    |                                |
| Streaming Method                  | Unicast                                                                                                                                                               |                                |
| Max. User Access                  | Max7 (admin+user)                                                                                                                                                     |                                |
| Application Programming Interface | ONVIF Profile S, CGI                                                                                                                                                  |                                |
| Web Viewer                        | Supported Browser :<br>Microsoft Internet Explorer (Ver. 11,10,9,8),<br>Mozilla Firefox Ver 51.x or lower,<br>Google Chrome Ver 44.x or lower, Safari 11.1.1 or lower |                                |
| ENVIRONMENTAL                     |                                                                                                                                                                       |                                |
| Operating Temperature / Humidity  | -10°C ~ +55°C / Less than 90% RH                                                                                                                                      |                                |
| Ingress Protection                | IP66                                                                                                                                                                  |                                |
| ELECTRICAL                        |                                                                                                                                                                       |                                |
| Input Voltage / Current           | DC12V, PoE(IEEE802.3af, Class0)                                                                                                                                       |                                |
| Power Consumption                 | 2.3W(IR off), 5.08W(IR on)                                                                                                                                            |                                |
| MECHANICAL                        |                                                                                                                                                                       |                                |
| Color / Material                  | White / Metal                                                                                                                                                         | Black / Metal                  |
| Dimension (WxHxD)                 | Ø100 x 90mm (Ø3.94" x 3.54")                                                                                                                                          | Ø68 x 114.3mm ((Ø2.68" x 4.5") |
| Weight                            | 420g (0.93 lb)                                                                                                                                                        | 180g (0.40 lb)                 |

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# ZRN-E1610

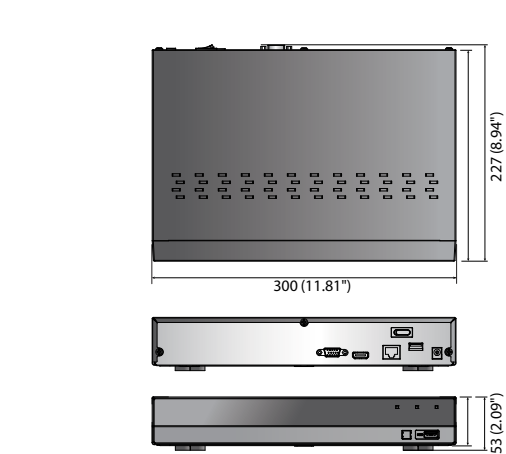
16CH Network Video Recorder



## Key Features

- 80Mbps network camera recording
- H.265, H.264 codec supported
- Hanwha Security DDNS
- HDMI /VGA video out

## Dimensions



|                     |                                             | ZRN-E1610                                                                                                |  |
|---------------------|---------------------------------------------|----------------------------------------------------------------------------------------------------------|--|
| DISPLAY             |                                             |                                                                                                          |  |
| Network Camera      | Input                                       | 16 Channel                                                                                               |  |
|                     | Compatible Cameras                          | ZNE-8020RV / ZNO-8020RV                                                                                  |  |
| Display             | Local Display                               | 1 HDMI, 1 VGA                                                                                            |  |
|                     | Resolution                                  | 1024x768, 1280x720, 1280x1024, 1440x900, 1920x1080, 2560x1440, 3840x2160                                 |  |
|                     | Multi Screen Display                        | 1 / 4 / 9 / 16 / Auto Seq.                                                                               |  |
|                     | OSD                                         | Camera title, Time, Video loss, MD, Recording                                                            |  |
| PERFORMANCE         |                                             |                                                                                                          |  |
| Operating System    |                                             | Embedded Linux                                                                                           |  |
| Record              | Compression                                 | H.265 / H.264                                                                                            |  |
|                     | Resolution                                  | 5MP@40fps Max 2ch live / 4MP@60fps Max 2ch live<br>1080P@120fps Max 4ch live / 720P@120fps Max 10ch live |  |
|                     | Recording Bandwidth                         | 80Mbps                                                                                                   |  |
|                     | Bitrate                                     | 512Kbps ~ 8Mbps per channel                                                                              |  |
|                     | Mode                                        | Manual, Schedule (Continuous/Event), MD, Video-Loss                                                      |  |
|                     | Record Interval                             | Pre-record : Min 1sec, Post-record : 30 ~ 300 sec                                                        |  |
| Event Trigger       | Event Types                                 | Video Loss, Camera event (MD)                                                                            |  |
|                     | Event Actions                               | E-Mail, PTZ Preset, Buzzer, Monitor Out                                                                  |  |
| Search and Playback | Search Mode                                 | Time / Date (Calendar), Event List (Alarm, MD, Video-Loss)                                               |  |
|                     | Sync. Playback Channels                     | 5MP@Max 2ch / 4MP@Max 2ch<br>1080P@Max 4ch / 720P@Max 10ch                                               |  |
|                     | Resolution                                  | 5MP / 4MP / 1080P / 720P                                                                                 |  |
|                     | Playback Control                            | Play, Pause, Stop, Rewind, Fast play, Slow Play, Backup play, Digital zoom                               |  |
|                     | Backup Device                               | USB memory / Network viewer / Webviewer                                                                  |  |
| Backup              | File Format                                 | Proprietary / MP4 / AVI                                                                                  |  |
|                     | Function                                    | 1) Multi channel Play<br>2) Date-Time/Title display                                                      |  |
| Storage             | Internal HDD                                | 1 SATA (Up to 6TB for each HDD)                                                                          |  |
| NETWORK             |                                             |                                                                                                          |  |
| Network             | Interface                                   | 1 RJ-45 Port (10/100Mbps)                                                                                |  |
|                     | Ethernet Port                               | 1 Independent 100Mbps Ethernet Port                                                                      |  |
|                     | Network Protocols                           | HTTP, TCP/IP, IPv4, UPnP, RTSP, UDP, SMTP, NTP, DHCP, DNS, PPPoE, DDNS, P2P                              |  |
|                     | DDNS                                        | Hanwha Security DDNS                                                                                     |  |
|                     | Max. User Access                            | Total: 16ch                                                                                              |  |
|                     | Transmission Bandwidth                      | 64Mbps                                                                                                   |  |
|                     | Security                                    | User access password                                                                                     |  |
|                     |                                             | Access log lists                                                                                         |  |
|                     |                                             | Encryption (ID/Password, Video/Audio)                                                                    |  |
| Viewer Software     |                                             | Web Viewer, PC Viewer, Smartphone Viewer (iPhone, Android)                                               |  |
| GENERAL             |                                             |                                                                                                          |  |
| Mechanical          | Dimensions (WxHxD)                          | 1U W300 (11.81")X227 (8.94")X53 (2.09") mm                                                               |  |
|                     | Weight (With hard disks)                    | 0.9kg (1.984 LB)                                                                                         |  |
| Other Interface     | USB                                         | 2 PORTS (1 FRONT FOR MOUSE, 1 REAR FOR BACKUP)                                                           |  |
| Languages           | GUI (OSD, Web)                              | ENGLISH, FRENCH, GERMAN, SPANISH, PORTUGUESE                                                             |  |
| Electrical          | Power Supply                                | DC12V/2A                                                                                                 |  |
|                     | Power Consumption (NVR excluding hard disk) | MAX. 3.0W                                                                                                |  |
| Environmental       | Operating Conditions                        | 0°C~+40°C (32°F ~ 104°F) / 20% ~ 85%RH                                                                   |  |
|                     | Storage Conditions                          | -10°C ~ +50°C (-50°F ~ 122°F) / 0 ~ 90% RH                                                               |  |

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# ZRN-E810

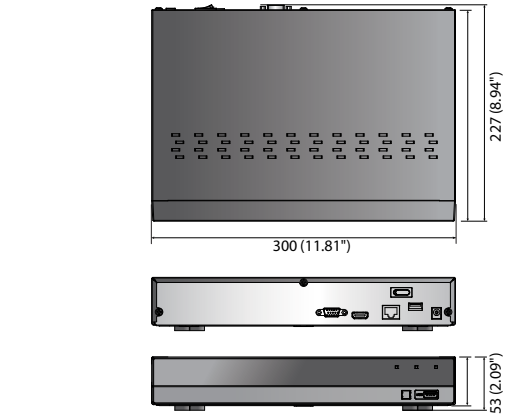
8CH Network Video Recorder



## Key Features

- 60Mbps network camera recording
- H.265, H.264 codec supported
- Hanwha Security DDNS
- HDMI /VGA video out

## Dimensions



| ZRN-E810            |                                             |                                                                                                        |
|---------------------|---------------------------------------------|--------------------------------------------------------------------------------------------------------|
| DISPLAY             |                                             |                                                                                                        |
| Network Camera      | Input                                       | 8 Channel                                                                                              |
|                     | Compatible Cameras                          | ZNE-8020RV / ZNO-8020RV                                                                                |
| Display             | Local Display                               | 1 HDMI, 1 VGA                                                                                          |
|                     | Resolution                                  | 1920x1080, 1280x1024, 1280x720, 1024x768                                                               |
|                     | Multi Screen Display                        | 1 / 4 / 9 / Auto Seq                                                                                   |
|                     | OSD                                         | Camera title, Time, Video loss, MD, Recording                                                          |
| PERFORMANCE         |                                             |                                                                                                        |
| Operating System    |                                             | Embedded Linux                                                                                         |
| Record              | Compression                                 | H.265 / H.264                                                                                          |
|                     | Resolution                                  | 5MP@30fps Max 2ch live / 4MP@40fps Max 4ch live<br>1080P@80fps Max 6ch live / 720P@120fps Max 8ch live |
|                     | Recording Bandwidth                         | 60Mbps                                                                                                 |
|                     | Bitrate                                     | 512Kbps ~ 8Mbps per channel                                                                            |
|                     | Mode                                        | Manual, Schedule (Continuous/Event), MD, Video-Loss                                                    |
|                     | Record Interval                             | Pre-record : Min 1sec / Post-record : 30 ~ 300 sec                                                     |
|                     | Event Types                                 | Video Loss, Camera event (MD)                                                                          |
| Event Trigger       | Event Actions                               | E-Mail, PTZ Preset, Buzzer, Monitor Out                                                                |
|                     | Search Mode                                 | Time/Date (Calendar), Event List (Alarm, MD, Video-Loss)                                               |
| Search and Playback | Sync. Playback Channels                     | 5MP@Max 2ch / 4MP@Max 4ch<br>1080P@Max 6ch / 720P@Max 8ch                                              |
|                     | Resolution                                  | 5MP / 4MP / 1080P / 720P                                                                               |
|                     | Playback Control                            | Play, Pause, Stop, Rewind, Fast play, Slow Play, Backup play, Digital zoom                             |
|                     | Backup Device                               | USB memory / Network viewer / Webviewer                                                                |
| Backup              | File Format                                 | Proprietary / MP4 / AVI                                                                                |
|                     | Function                                    | 1) Multi channel Play<br>2) Date-Time/Title display                                                    |
| Storage             | Internal HDD                                | 1 SATA (Up to 6TB for each HDD)                                                                        |
| NETWORK             |                                             |                                                                                                        |
| Network             | Interface                                   | 1 RJ-45 Port (10/100Mbps)                                                                              |
|                     | Ethernet Port                               | 1 Independent 100Mbps Ethernet Port                                                                    |
|                     | Network Protocols                           | HTTP, TCP/IP, IPv4,UPnP, RTSP, UDP, SMTP, NTP, DHCP, DNS, PPPoE,DDNS, P2P                              |
|                     | DDNS                                        | Hanwha Security DDNS                                                                                   |
|                     | Max. User Access                            | Total : 16ch                                                                                           |
|                     | Transmission Bandwidth                      | 60Mbps                                                                                                 |
|                     | Security                                    | User access password<br>Access log lists<br>Encryption (ID/Password, Video/Audio)                      |
|                     | Viewer Software                             | Web Viewer, PC Viewer, Smartphone Viewer (iPhone, Android )                                            |
|                     |                                             |                                                                                                        |
| GENERAL             |                                             |                                                                                                        |
| Mechanical          | Dimensions (WxHxD)                          | 1U W300 (11.81")X227 (8.94")X53 (2.09") mm                                                             |
|                     | Weight (With hard disks)                    | 0.9kg (1.984 LB)                                                                                       |
| Other Interface     | USB                                         | 2 ports (1 Front for Mouse, 1 Rear for Backup)                                                         |
| Languages           | GUI (OSD, Web)                              | English, French, German, Spanish, Portuguese                                                           |
| Electrical          | Power Supply                                | DC12V/2A                                                                                               |
|                     | Power Consumption (NVR excluding hard disk) | Max. 2.5W                                                                                              |
| Environmental       | Operating Conditions                        | 0°C~+40°C (32°F ~ 104°F) / 20% ~ 85%RH                                                                 |
|                     | Storage Conditions                          | -10°C ~ +50°C (-50°F ~ 122°F) / 0 ~ 90% RH                                                             |

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# ZRN-E410

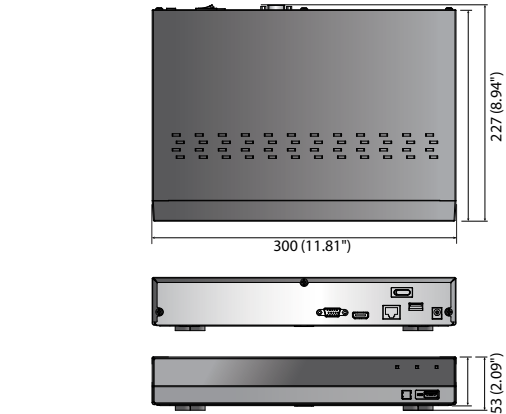
4CH Network Video Recorder



## Key Features

- 30Mbps network camera recording
- H.265, H.264 codec supported
- Hanwha Security DDNS
- HDMI /VGA video out

## Dimensions



| ZRN-E410            |                                             |                                                                                   |
|---------------------|---------------------------------------------|-----------------------------------------------------------------------------------|
| DISPLAY             |                                             |                                                                                   |
| Network Camera      | Input                                       | 4 Channel                                                                         |
|                     | Compatible Cameras                          | ZNE-8020RV / ZNO-8020RV                                                           |
| Display             | Local Display                               | 1 HDMI, 1 VGA                                                                     |
|                     | Resolution                                  | 1920x1080, 1280x1024, 1280x720, 1024x768                                          |
|                     | Multi Screen Display                        | 1 / 4 / Auto Seq.                                                                 |
|                     | OSD                                         | Camera title, Time, Video loss, MD, Recording                                     |
| PERFORMANCE         |                                             |                                                                                   |
| Operating System    |                                             | Embedded Linux                                                                    |
| Record              | Compression                                 | H.265 / H.264                                                                     |
|                     | Resolution                                  | 5MP@30fps Max 2ch live / 4MP@40fps<br>1080P@80fps / 720P@120fps                   |
|                     | Recording Bandwidth                         | 30Mbps                                                                            |
|                     | Bitrate                                     | 512Kbps ~ 4Mbps per channel                                                       |
|                     | Mode                                        | Manual, Schedule (Continuous/Event), MD, Video-Loss                               |
|                     | Record Interval                             | Pre-record : Min 1sec / Post-record : 30 ~ 300 sec                                |
|                     | Event Types                                 | Video Loss, Camera event (MD)                                                     |
| Event Trigger       | Event Actions                               | E-Mail, PTZ Preset, Buzzer, Monitor Out                                           |
|                     | Search Mode                                 | Time / Date (Calendar), Event List (Alarm, MD, Video-Loss)                        |
| Search and Playback | Sync. Playback Channels                     | 5MP@Max 2ch<br>4MP@Max 4ch                                                        |
|                     | Resolution                                  | 5MP / 4MP / 1080P / 720P                                                          |
|                     | Playback Control                            | Play, Pause, Stop, Rewind, Fast play, Slow Play, Backup play, Digital zoom        |
|                     | Backup Device                               | USB memory / Network viewer / Webviewer                                           |
| Backup              | File Format                                 | Proprietary / MP4 / AVI                                                           |
|                     | Function                                    | 1) Multi channel play<br>2) Date-Time/Title display                               |
| Storage             | Internal HDD                                | 1 SATA (Up to 6TB for each HDD)                                                   |
| NETWORK             |                                             |                                                                                   |
| Network             | Interface                                   | 1 RJ-45 Port (10/100Mbps)                                                         |
|                     | Ethernet Port                               | 1 Independent 100Mbps Ethernet Port                                               |
|                     | Network Protocols                           | HTTP, TCP/IP, IPv4,UPnP, RTSP, UDP, SMTP, NTP, DHCP, DNS, PPPoE,DDNS, P2P         |
|                     | DDNS                                        | Hanwha Security DDNS                                                              |
|                     | Max. User Access                            | Total : 8ch                                                                       |
|                     | Transmission Bandwidth                      | 30Mbps                                                                            |
|                     | Security                                    | User access password<br>Access log lists<br>Encryption (ID/Password, Video/Audio) |
|                     | Viewer Software                             | Web Viewer, PC Viewer, Smartphone Viewer (iPhone, Android )                       |
|                     |                                             |                                                                                   |
| GENERAL             |                                             |                                                                                   |
| Mechanical          | Dimensions (WxHxD)                          | 1U W300 (11.81")X227(8.94")X53 (2.09") mm                                         |
|                     | Weight (With hard disks)                    | 0.9kg (1.984 LB)                                                                  |
| Other Interface     | USB                                         | 2 ports (1 Front for Mouse, 1 Rear for Backup)                                    |
| Languages           | GUI (OSD, Web)                              | English, French, German, Spanish, Portuguese                                      |
| Electrical          | Power Supply                                | DC12V/2A                                                                          |
|                     | Power Consumption (NVR excluding hard disk) | Max. 2.0W                                                                         |
| Environmental       | Operating Conditions                        | 0°C~+40°C (32°F ~ 104°F) / 20% ~ 85%RH                                            |
|                     | Storage Conditions                          | -10°C ~ +50°C (-50°F ~ 122°F) / 0 ~ 90% RH                                        |

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# ZCO-6020R/ZCO-6020RV

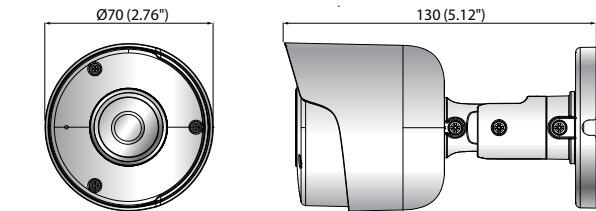
1080p Analog HD IR Bullet Camera



### Key Features

- Full HD resolution
- 0 Lux (B/W : IR LED on)
- 3.6mm fixed lens
- D-WDR, BLC
- Smart IR (IR viewable length 20m)
- Transmission distance max.300m
- IP66 (ZCO-6020RV)

### Dimensions



|                                  | ZCO-6020R                                                  | ZCO-6020RV                                        |
|----------------------------------|------------------------------------------------------------|---------------------------------------------------|
| VIDEO                            |                                                            |                                                   |
| Imaging Device                   | 2 Megapixel, SC2232H, 1/2.9" CMOS                          |                                                   |
| Total Pixels                     | 1920 (H) x 1080 (V)                                        |                                                   |
| Effective Pixels                 | 1920 (H) x 1080 (V)                                        |                                                   |
| Scanning System                  | Progressive Scan                                           |                                                   |
| Min. Illumination                | B/W : 0Lux (IR LED on)                                     |                                                   |
| S / N Ratio                      | 52dB (AGC off, Weight on)                                  |                                                   |
| Video Output                     | BNC                                                        |                                                   |
| Resolution                       | 1080p                                                      |                                                   |
| Max, Framerate                   | 30fps / 25fps@1080p                                        |                                                   |
| LENS TYPE                        |                                                            |                                                   |
| Focal Length (Zoom Ratio)        | 3.6mm fixed                                                |                                                   |
| Max. Aperture Ratio              | F2.4                                                       |                                                   |
| Angular Field of View            | D: 109° H: 92° V: 50°                                      |                                                   |
| Min. Object Distance             | 0.2m                                                       |                                                   |
| Lens Type                        | Fixed lens                                                 |                                                   |
| Mount Type                       | Board-in type                                              |                                                   |
| OPERATIONAL                      |                                                            |                                                   |
| Viewable Length                  | 20m, Smart IR                                              |                                                   |
| On Screen Display                | English                                                    |                                                   |
| Day & Night                      | Auto / Ext / Color / B/W                                   |                                                   |
| Backlight Compensation           | Off / BLC                                                  |                                                   |
| Wide Dynamic Range               | D-WDR (Off / On)                                           |                                                   |
| Digital Noise Reduction          | 2D DNR                                                     |                                                   |
| Gain Control                     | Level 0~15                                                 |                                                   |
| White Balance                    | ATW / Outdoor / Indoor / Manual / AWC (1,800K° ~ 10,500K°) |                                                   |
| Electronic Shutter Speed         | 1/30sec, 1/25sec~ 1/50,000sec                              |                                                   |
| Reverse                          | Off / V-Flip / Mirror / Rotate                             |                                                   |
| Remote Control Interface         | Coaxial                                                    |                                                   |
| Protocol                         | Coaxial                                                    |                                                   |
| Video Transmission Distance      | MAX 300M (75-5 Cable)                                      |                                                   |
| ENVIRONMENTAL                    |                                                            |                                                   |
| Operating Temperature / Humidity | -30°C ~ +45°C (-22°F ~ +113°F) / Less than 90% RH          | -30°C ~ +55°C (-22°F ~ +131°F) / Less than 90% RH |
| Ingress Protection               | -                                                          | IP66                                              |
| Vandal Resistance                | -                                                          |                                                   |
| ELECTRICAL                       |                                                            |                                                   |
| Input Voltage / Current          | 12V DC ± 10%                                               |                                                   |
| Power Consumption                | 3W                                                         |                                                   |
| MECHANICAL                       |                                                            |                                                   |
| Color / Material                 | Plastic                                                    | Metal                                             |
| B/W : 0Lux (IR LED on)           | Ø70*130mm (Ø2.76" x 5.12")                                 |                                                   |
| Weight                           | 170g (0.375 lb)                                            | 180g (0.397 lb)                                   |

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# ZCE-6020R/ZCE-6020RV

1080p Analog HD IR Dome Camera



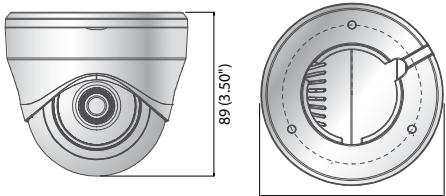
ZCE-6020R

ZCE-6020RV

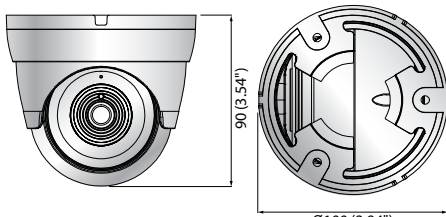
### Key Features

- Full HD resolution
- 0 Lux (B/W : IR LED on)
- 3.6mm fixed lens
- D-WDR, BLC
- Smart IR (IR viewable length 20m)
- Transmission distance max.300m
- IP66 (ZCE-6020RV)

### Dimensions



ZCE-6020R



ZCE-6020RV

|                                  | ZCE-6020R                                                  | ZCE-6020RV                                        |
|----------------------------------|------------------------------------------------------------|---------------------------------------------------|
| VIDEO                            |                                                            |                                                   |
| Imaging Device                   | 2 Megapixel, SC2232H, 1/2.9" CMOS                          |                                                   |
| Total Pixels                     | 1920(H) x 1080(V)                                          |                                                   |
| Effective Pixels                 | 1920(H) x 1080(V)                                          |                                                   |
| Scanning System                  | Progressive Scan                                           |                                                   |
| Min. Illumination                | B/W : 0Lux (IR LED on)                                     |                                                   |
| S / N Ratio                      | 52dB (AGC off, Weight on)                                  |                                                   |
| Video Output                     | BNC                                                        |                                                   |
| Resolution                       | 1080p                                                      |                                                   |
| Max, Framerate                   | 30fps / 25fps@1080p                                        |                                                   |
| LENS TYPE                        |                                                            |                                                   |
| Focal Length (Zoom Ratio)        | 3.6mm fixed                                                |                                                   |
| Max. Aperture Ratio              | F2.4                                                       |                                                   |
| Angular Field of View            | D : 109° H : 92° V : 50°                                   |                                                   |
| Min. Object Distance             | 0.2m                                                       |                                                   |
| Lens Type                        | Fixed lens                                                 |                                                   |
| Mount Type                       | Board-in type                                              |                                                   |
| OPERATIONAL                      |                                                            |                                                   |
| Viewable Length                  | 20m, Smart IR                                              |                                                   |
| On Screen Display                | English                                                    |                                                   |
| Day & Night                      | Auto / Ext / Color / B/W                                   |                                                   |
| Backlight Compensation           | Off / BLC                                                  |                                                   |
| Wide Dynamic Range               | D-WDR (Off / On)                                           |                                                   |
| Digital Noise Reduction          | 2D DNR                                                     |                                                   |
| Gain Control                     | Level 0~15                                                 |                                                   |
| White Balance                    | ATW / Outdoor / Indoor / Manual / AWC (1,800K° ~ 10,500K°) |                                                   |
| Electronic Shutter Speed         | 1/30sec, 1/25sec~ 1/50,000sec                              |                                                   |
| Reverse                          | Off / V-Flip / Mirror / Rotate                             |                                                   |
| Remote Control Interface         | Coaxial                                                    |                                                   |
| Protocol                         | Coaxial                                                    |                                                   |
| Video Transmission Distance      | MAX 300M (75-5 Cable)                                      |                                                   |
| ENVIRONMENTAL                    |                                                            |                                                   |
| Operating Temperature / Humidity | -30°C ~ +45°C (-22°F ~ +113°F) / Less than 90% RH          | -30°C ~ +55°C (-22°F ~ +131°F) / Less than 90% RH |
| Vandal Resistance                | -                                                          | IP66                                              |
| Vandal Resistance                | -                                                          |                                                   |
| ELECTRICAL                       |                                                            |                                                   |
| Input Voltage / Current          | 12V DC ± 10%                                               |                                                   |
| Power Consumption                | 3W                                                         |                                                   |
| MECHANICAL                       |                                                            |                                                   |
| Color / Material                 | Plastic                                                    | Metal                                             |
| B/W : 0Lux(IR LED on)            | Ø100*89mm (Ø3.94" x 3.50")                                 | Ø100*90mm (Ø3.94" x 3.54")                        |
| Weight                           | 190g (0.42 lb)                                             | 420g (0.93 lb)                                    |

\* Design and specifications are subject to change without notice.  
\* Wisenet is the proprietary brand of Hanwha Techwin.

# ZRD-E1620L

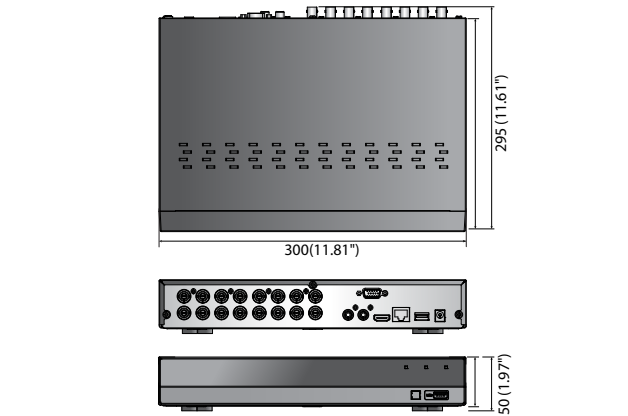
16CH 1080p Analog HD DVR



## Key Features

- 16CH 1080p analog
- + 2CH IP camera recording
- AHD, TVI, CVI, CVBS analog input
- H.264 supported
- Coaxial control
- HDMI /VGA video output
- Max. 2 internal HDDs

## Dimensions



| ZRD-E1620L          |                                 |                                                                                                                                                                        |
|---------------------|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DISPLAY             |                                 |                                                                                                                                                                        |
| Video Input         | Analog Camera                   | 16CH BNC, PAL type<br>AHD (720P, 1080P), TVI (720P, 1080P), CVI (720P, 1080P), 960H (960x576)                                                                          |
|                     | Network Camera                  | Max. 2CH (up to 2MP)                                                                                                                                                   |
| Live                | Frame Rate                      | Analog Camera : 400fps@960x1080 ,1280x720, 960x576<br>Total IP Camera : 15fps@1920x1080                                                                                |
|                     | Resolution                      | 960x1080 (1080P-Lite)/ 1280x720 (HD) / 960x480 (960H)                                                                                                                  |
|                     | Multi Screen Display            | 1/4/8/9/10/12/13/14/16/17/19/20/Auto Sequence                                                                                                                          |
| PERFORMANCE         |                                 |                                                                                                                                                                        |
| Operating System    |                                 | Embedded Linux                                                                                                                                                         |
| Installation Wizard |                                 | Support                                                                                                                                                                |
| Recording           | Compression                     | H.264                                                                                                                                                                  |
|                     | Resolution                      | 960x1080 (1080P-Lite) / 1280x720 (HD) / 960x480 (960H)                                                                                                                 |
|                     | Record Rate                     | - Analog Camera<br>Main stream : 1080P Lite (10fps) / 720P (10fps) / 960H (1~25fps)<br>Sub steram : CIF / (1~10fps)                                                    |
|                     |                                 | - IP Camera : max. 15fps@19020x1080                                                                                                                                    |
|                     |                                 | * Simultaneous Recording of Main and Sub stream is not supported                                                                                                       |
|                     |                                 |                                                                                                                                                                        |
|                     | Bandwidth (IP Camera)           | Total 6Mbps, Max. 54Mbps                                                                                                                                               |
|                     | Mode                            | Manual, Schedule (Continuous / Event), Event (Pre / Post)                                                                                                              |
|                     | Event                           | Video Loss, Motion (Sensitivity Level 1~8)                                                                                                                             |
|                     | Overwrite Modes                 | Off / On (Auto)                                                                                                                                                        |
|                     | Pre-alarm                       | 1 ~ 10sec                                                                                                                                                              |
|                     | Post-alarm                      | Up to 5min (10 ~ 300 sec)                                                                                                                                              |
|                     | Search Mode                     | Date / time, Event, Motion                                                                                                                                             |
| Search & Playback   | Playback Function               | Fast forward / backward (2x, 4x, 8x)<br>Slow forward (1/2x, 1/4x, 1/8x)<br>Step Forward                                                                                |
|                     |                                 | Synchronous                                                                                                                                                            |
|                     |                                 | Toatal Performance                                                                                                                                                     |
| Network             | IP                              | IPv4                                                                                                                                                                   |
|                     | Stream                          | Dual Stream<br>- Main stream : 960x1080 10fps<br>- Sub stream : CIF 10fps                                                                                              |
|                     |                                 |                                                                                                                                                                        |
|                     | Transmission Speed              | Max 160fps@960x1080                                                                                                                                                    |
|                     | Transmission Bandwidth          | IP Camera : 15fps@1920*1080                                                                                                                                            |
|                     | Max. Remote Users               | Max 7 (admin+user)                                                                                                                                                     |
|                     | Protocol Support                | TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTSP, NTP, HTTP, DHCP(Server, Client),<br>PPPoE, SMTP, DNS, DDNS, uPnP, HTTPS<br>* DDNS : including HANWHA DDNS                    |
|                     | Monitoring interoperability     | HD E-Viewer II (Client & Mobile Viewer)<br>ONVIF profile S ver2.6                                                                                                      |
|                     | Web Viewer                      | Supported OS - PC : Windows* 7, Windows* 8 / Mac OS X* 10.13.5 or lower<br>- Mobile : Android Ver 4.4 or above / iOS 8.0 or above                                      |
|                     |                                 | Supported Browser :<br>Microsoft Internet Explorer (Ver. 11,10,9,8),<br>Mozilla Firefox Ver 51.x or lower, Google Chrome Ver 44.x or lower,<br>Safari* 11.1.1 or lower |
| Remote Monitoring   | Protocol Support                | TCP/IP, UDP/IP, UDP                                                                                                                                                    |
|                     | Transmission Speed              | Max.10fps @CIF (per Channel)                                                                                                                                           |
|                     | Max. Remote Users               | Max 7 (admin+user)                                                                                                                                                     |
|                     | Internal HDD                    | 2 SATA HDDs * Support max. 6T/HDD                                                                                                                                      |
| Storage             | File Format (Back-up)           | RF, AVI, MP4                                                                                                                                                           |
|                     | Easy Connection                 | P2P (using QR Code)                                                                                                                                                    |
| Security            |                                 | User access password, Access log lists, Encryption(ID/Password)                                                                                                        |
| INTERFACE           |                                 |                                                                                                                                                                        |
| Video Input         | BNC                             | 16 BNC                                                                                                                                                                 |
|                     | VGA                             | 1080P ( source : 960 x 1080), 720P, 1024x768                                                                                                                           |
| Monitors            | HDMI                            | 1 HDMI<br>1080P ( source : 960 x 1080). 720P, 1024x768                                                                                                                 |
|                     | Simulatneous Output             | VGA and HDMI                                                                                                                                                           |
| Audio               | Inputs / Output                 | 1/1                                                                                                                                                                    |
|                     | Compression                     | G.711a                                                                                                                                                                 |
| Alarm               | Remote Notification             | Notification via e-mail                                                                                                                                                |
|                     | Ethernet                        | 1 RJ45 10 / 100Base-T                                                                                                                                                  |
| Connections         | USB                             | 2 x USB 2.0                                                                                                                                                            |
|                     | Application Support             | Mouse                                                                                                                                                                  |
|                     | Protocol support(Coaxial)       | Coax Protocol (ACP, CCP, TCP)                                                                                                                                          |
| GENERAL             |                                 |                                                                                                                                                                        |
| Color / Material    | Black / Metal                   |                                                                                                                                                                        |
|                     |                                 |                                                                                                                                                                        |
| Electrical          | Input Voltage / Current         | 12V/24A DC Adaptor                                                                                                                                                     |
|                     | Power Consumption               | 8.5W                                                                                                                                                                   |
| Environmental       | Operating Temperature/ Humidity | 0°C~+40°C (32°F ~ 104°F) / 20% ~ 85%RH                                                                                                                                 |
|                     | Storage Conditions              | -10°C ~ +50°C, 0 ~ 90% RH                                                                                                                                              |
| Mechanical          | Dimensions (WxHxD)              | 300x295x50mm (11.81"x11.61"x1.97")                                                                                                                                     |
|                     | Weight (With hard disks)        | 1.2Kg (2.65 lb)                                                                                                                                                        |

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# ZRD-E820L

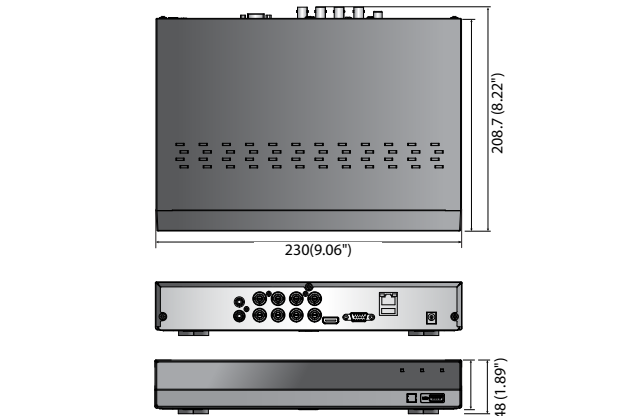
8CH 1080p Analog HD DVR



## Key Features

- 8CH 1080p analog
- + 2CH network camera recording
- AHD, TVI, CVI, CVBS analog input
- H.264 supported
- Coaxial control
- HDMI /VGA video output
- Max. 1 internal HDDs

## Dimensions



| ZRD-E820L           |                                 |                                                                                                                                                                        |
|---------------------|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DISPLAY             |                                 |                                                                                                                                                                        |
| Video Input         | Analog Camera                   | 8CH BNC, PAL type<br>AHD (720P, 1080P), TVI (720P, 1080P), CVI (720P, 1080P), 960H(960x576)                                                                            |
|                     | Network Camera                  | Max. 2CH (up to 2MP)                                                                                                                                                   |
| Live                | Frame Rate                      | Analog Camera : 200fps@960x1080 ,1280x720, 960x576<br>Total IP Camera : 15fps@1920*1080                                                                                |
|                     | Resolution                      | 960x1080(1080P-Lite)/ 1280x720 (HD) / 960 x 480 (960H)                                                                                                                 |
|                     | Multi Screen Display            | 1/4/6/8/9/10/12/Auto Seq                                                                                                                                               |
| PERFORMANCE         |                                 |                                                                                                                                                                        |
| Operating System    |                                 | Embedded Linux                                                                                                                                                         |
| Installation Wizard |                                 | Support                                                                                                                                                                |
| Recording           | Compression                     | H.264                                                                                                                                                                  |
|                     | Resolution                      | 960x1080 (1080P-Lite) / 1280x720 (HD) / 960x480 (960H)                                                                                                                 |
|                     | Record Rate                     | - Analog Camera<br>Main stream : 1080PLite(12fps)/720P(12fps)/960H(1~25fps)<br>Sub steram : CIF/(1~12fps)                                                              |
|                     |                                 | - IP Camera : max. 15fps@19020x1080                                                                                                                                    |
|                     |                                 | * Simultaneous Recording of Main and Sub stream is not supported                                                                                                       |
|                     |                                 |                                                                                                                                                                        |
|                     | Bandwidth (IP Camera)           | Total 6Mbps, Max. 30Mbps                                                                                                                                               |
|                     | Mode                            | Manual, Schedule (Continuous / Event), Event (Pre / Post)                                                                                                              |
|                     | Event                           | Video Loss, Motion (Sensitivity Level 1~8)                                                                                                                             |
|                     | Overwrite Modes                 | Off / On (Auto)                                                                                                                                                        |
|                     | Pre-alarm                       | 1 ~ 10sec                                                                                                                                                              |
|                     | Post-alarm                      | Up to 5min (10 ~ 300 sec)                                                                                                                                              |
|                     | Search Mode                     | Date / time, Event, Motion                                                                                                                                             |
| Search & Playback   | Playback Function               | Fast forward / backward (2x, 4x, 8x)<br>Slow forward (1/2x, 1/4x, 1/8x)<br>Step Forward                                                                                |
|                     |                                 | Synchronous                                                                                                                                                            |
|                     |                                 | Toatal Performance                                                                                                                                                     |
| Network             | IP                              | IPv4                                                                                                                                                                   |
|                     | Stream                          | Dual Stream<br>- Main stream : 960*1080 12fps<br>- Sub stream : CIF 12fps                                                                                              |
|                     |                                 |                                                                                                                                                                        |
|                     | Transmission Speed              | Analog Camera : 96fps@960x1080                                                                                                                                         |
|                     | Transmission Bandwidth          | IP Camera : 15fps@1920*1080                                                                                                                                            |
|                     | Max. Remote Users               | Max 7 (admin+user)                                                                                                                                                     |
|                     | Protocol Support                | TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTSP, NTP, HTTP, DHCP(Server, Client),<br>PPPoE, SMTP, DNS, DDNS, uPnP, HTTPS<br>* DDNS : including HANWHA DDNS                    |
|                     | Monitoring interoperability     | HD E-Viewer II (Client & Mobile Viewer)<br>ONVIF profile S ver2.6                                                                                                      |
|                     | Web Viewer                      | Supported OS - PC : Windows* 7, Windows* 8 / Mac OS X* 10.13.5 or lower<br>- Mobile : Android Ver 4.4 or above / iOS 8.0 or above                                      |
|                     |                                 | Supported Browser :<br>Microsoft Internet Explorer (Ver. 11,10,9,8),<br>Mozilla Firefox Ver 51.x or lower, Google Chrome Ver 44.x or lower,<br>Safari* 11.1.1 or lower |
| Remote Monitoring   | Protocol Support                | TCP/IP, UDP/IP, UDP                                                                                                                                                    |
|                     | Transmission Speed              | Max.12fps @CIF (per Channel)                                                                                                                                           |
|                     | Max. Remote Users               | Max 7 (admin+user)                                                                                                                                                     |
|                     | Internal HDD                    | 1 SATA HDD * Support max. 6T/HDD                                                                                                                                       |
| Storage             | File Format (Back-up)           | RF, AVI, MP4                                                                                                                                                           |
|                     | Easy Connection                 | P2P (using QR Code)                                                                                                                                                    |
| Security            |                                 | User access password, Access log lists, Encryption(ID/Password)                                                                                                        |
| INTERFACE           |                                 |                                                                                                                                                                        |
| Video Input         | BNC                             | 8 BNC                                                                                                                                                                  |
|                     | VGA                             | 1080P ( source : 960 x 1080), 720P, 1024x768                                                                                                                           |
| Monitors            | HDMI                            | 1 HDMI<br>1080P ( source : 960 x 1080). 720P, 1024x768                                                                                                                 |
|                     | Simulatneous Output             | VGA and HDMI                                                                                                                                                           |
| Audio               | Inputs / Output                 | 1/1                                                                                                                                                                    |
|                     | Compression                     | G.711a                                                                                                                                                                 |
| Alarm               | Remote Notification             | Notification via e-mail                                                                                                                                                |
|                     | Ethernet                        | 1 RJ45 10/100Base-T                                                                                                                                                    |
| Connections         | USB                             | 2 x USB 2.0                                                                                                                                                            |
|                     | Application Support             | Mouse                                                                                                                                                                  |
|                     | Protocol support(Coaxial)       | Coax Protocol (ACP, CCP, TCP)                                                                                                                                          |
| GENERAL             |                                 |                                                                                                                                                                        |
| Color / Material    | Black / Metal                   |                                                                                                                                                                        |
|                     |                                 |                                                                                                                                                                        |
| Electrical          | Input Voltage / Current         | 12V/2A DC Adaptor                                                                                                                                                      |
|                     | Power Consumption               | 6W                                                                                                                                                                     |
| Environmental       | Operating Temperature/ Humidity | 0°C~+40°C (32°F ~ 104°F) / 20% ~ 85%RH                                                                                                                                 |
|                     | Storage Conditions              | -10°C ~ +50°C, 0 ~ 90% RH                                                                                                                                              |
| Mechanical          | Dimensions (WxHxD)              | 230x208.7x48 mm (9.06"x8.22"x1.89")                                                                                                                                    |
|                     | Weight (With hard disks)        | 0.7kg (1.54 lb)                                                                                                                                                        |

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ZRD-E420L

4CH 1080p Analog HD DVR

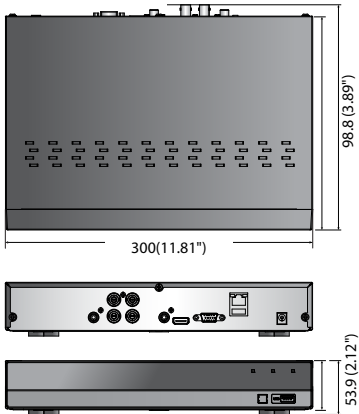


Key Features

- 4CH 1080p analog
- + 1CH network camera recording
- AHD, TVI, CVI, CVBS analog input
- H.264 supported
- Coaxial control
- HDMI /VGA video output
- Max. 1 internal HDDs

Dimensions

Unit : mm (inch)



| ZRD-E420L                |                           |                                                                                                                                                                        |
|--------------------------|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DISPLAY                  |                           |                                                                                                                                                                        |
| Video Input              | Analog Camera             | 4CH BNC, PAL type<br>AHD (720P, 1080P), TVI (720P, 1080P), CVI (720P, 1080P), 960H(960x576)                                                                            |
|                          | Network Camera            | Max. 1CH (up to 2MP)                                                                                                                                                   |
| Live                     | Frame Rate                | Analog Camera : 100fps@960x1080, 1280x720, 960x576<br>Total IP Camera : 15fps@1920*1080                                                                                |
|                          | Resolution                | 960x1080(1080P-Lite)/ 1280x720 (HD) / 960 x 480 (960H)                                                                                                                 |
|                          | Multi Screen Display      | 1/4/Auto Sequence                                                                                                                                                      |
| PERFORMANCE              |                           |                                                                                                                                                                        |
| Operating System         |                           | Embedded Linux                                                                                                                                                         |
| Installation Wizard      |                           | Support                                                                                                                                                                |
| Recording                | Compression               | H.264                                                                                                                                                                  |
|                          | Resolution                | 960x1080 (1080P-Lite) / 1280x720 (HD) / 960x480 (960H)                                                                                                                 |
|                          | Record Rate               | - Analog Camera<br>Main stream: 1080PLite(15fps)/720P(15fps)/960H(1~25fps))<br>Sub steram : CIF/(1~15fps)                                                              |
|                          |                           | - IP Camera : max. 15fps@19020x1080                                                                                                                                    |
|                          |                           | * Simultaneous Recording of Main and Sub stream is not supported                                                                                                       |
|                          |                           |                                                                                                                                                                        |
|                          | Bandwidth (IP Camera)     | Total 3Mbps, Max. 15Mbps                                                                                                                                               |
|                          | Mode                      | Manual, Schedule (Continuous / Event), Event (Pre / Post)                                                                                                              |
|                          | Event                     | Video Loss, Motion (Sensitivity Level 1~8)                                                                                                                             |
|                          | Overwrite Modes           | Off / On (Auto)                                                                                                                                                        |
| Search & Playback        | Pre-alarm                 | 1 ~ 10sec                                                                                                                                                              |
|                          | Post-alarm                | Up to 5min (10 ~ 300 sec)                                                                                                                                              |
|                          | Search Mode               | Date / time, Event, Motion                                                                                                                                             |
|                          | Playback Function         | Fast forward / backward (2x, 4x, 8x)                                                                                                                                   |
|                          |                           | Slow forward (1/2x, 1/4x, 1/8x)                                                                                                                                        |
|                          | Synchronous               | Step Forward                                                                                                                                                           |
|                          |                           | 2CH                                                                                                                                                                    |
|                          | Toatal Performance        | Max. 30fps(960x1080, 720P) * Playback                                                                                                                                  |
|                          | IP                        | IPv4                                                                                                                                                                   |
|                          | Stream                    | Dual Stream<br>- Main stream : 960*1080 15fps<br>- Sub stream : CIF 15fps                                                                                              |
| Network                  | Transmission Speed        | Analog Camera : 60fps@960x1080<br>IP Camera : 15fps@1920*1080                                                                                                          |
|                          | Transmission Bandwidth    | Up to 16Mbps                                                                                                                                                           |
|                          | Max. Remote Users         | Max 7 (admin+user)                                                                                                                                                     |
|                          | Protocol Support          | TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTSP, NTP, HTTP, DHCP(Server, Client),<br>PPPoE, SMTP, DNS, DDNS, uPnP, HTTPS<br>* DDNS : including HANWHA DDNS                    |
|                          | Monitoring                | HD E-Viewer II (Client & Mobile Viewer)                                                                                                                                |
|                          | interoperability          | ONVIF profile S ver2.6                                                                                                                                                 |
| Remote Monitoring        | Web Viewer                | Supported OS - PC : Windows* 7, Windows* 8 / Mac OS X* 10.13.5 or lower<br>- Mobile : Android Ver 4.4 or above / iOS 8.0 or above                                      |
|                          |                           | Supported Browser :<br>Microsoft Internet Explorer (Ver. 11,10,9,8),<br>Mozilla Firefox Ver 51.x or lower, Google Chrome Ver 44.x or lower,<br>Safari* 11.1.1 or lower |
|                          | Protocol Support          | TCP/IP, UDP/IP, UDP                                                                                                                                                    |
|                          | Transmission Speed        | Max.15fps @CIF (per Channel)                                                                                                                                           |
|                          | Max. Remote Users         | Max 7 (admin+user)                                                                                                                                                     |
| Storage                  | Internal HDD              | 2 SATA HDDs * Support max. 6T/HDD                                                                                                                                      |
|                          | File Format (Back-up)     | RF, AVI, MP4                                                                                                                                                           |
| Easy Connection          |                           | P2P (using QR Code)                                                                                                                                                    |
| Security                 |                           | User access password, Access log lists, Encryption(ID/Password)                                                                                                        |
| INTERFACE                |                           |                                                                                                                                                                        |
| Video Input              | BNC                       | 4 BNC                                                                                                                                                                  |
|                          | VGA                       | 1080P ( source : 960 x 1080), 720P, 1024x768                                                                                                                           |
| Monitors                 | HDMI                      | 1 HDMI<br>1080P ( source : 960 x 1080). 720P, 1024x768                                                                                                                 |
|                          | Simulatneous Output       | VGA and HDMI                                                                                                                                                           |
| Audio                    | Inputs / Output           | 1/1                                                                                                                                                                    |
|                          | Compression               | G.711a                                                                                                                                                                 |
| Alarm                    | Remote Notification       | Notification via e-mail                                                                                                                                                |
|                          | Ethernet                  | 1 RJ45 10/100Base-T                                                                                                                                                    |
| Connections              | USB                       | 2 x USB 2.0                                                                                                                                                            |
|                          | Application Support       | Mouse                                                                                                                                                                  |
|                          | Protocol support(Coaxial) | Coax Protocol (ACP, CCP, TCP)                                                                                                                                          |
| GENERAL                  |                           |                                                                                                                                                                        |
| Color / Material         |                           | Black / Metal                                                                                                                                                          |
| Electrical               | Input Voltage / Current   | 12V/24A DC Adaptor                                                                                                                                                     |
|                          | Power Consumption         | 5.5W                                                                                                                                                                   |
| Environmental            | Operating Temperature/    | 0°C~+40°C (32°F ~ 104°F) / 20% ~ 85%RH                                                                                                                                 |
|                          | Humidity                  |                                                                                                                                                                        |
| Mechanical               | Storage Conditions        | -10°C ~ +50°C, 0 ~ 90% RH                                                                                                                                              |
|                          | Dimensions (WxHxD)        | 230x208.7x48 mm (9.06"x8.22"x1.89")                                                                                                                                    |
| Weight (With hard disks) |                           | 0.65Kg (1.43 lb)                                                                                                                                                       |

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