

# ARD-1610

A series DVR

## Key Features

- AHD/TVI/CVI 16ch, Up to 5MP Camera Input
- IP up to 5MP Input
- H.265, H.264, MJPEG
- 100Mbps IP camera recording
- 1RJ-45(WAN, 1Gbps)
- 2 SATA HDD(1 SATA up to 6TB)
- 4K HDMI Monitor output
- P2P service(QR code connect) support

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## Specifications

### Display

| | | |
|---|---|---|
| **Analog camera** | Inputs | 16CH(1Vp-p 75ohm, BNC) |
| | Signal Type | AHD(5MP Half, 4MP Half, 1080p)<br>HD TVI(5MP Half, 4MP Half, 1080p)<br>HD CVI(5MP Half, 4MP Half, 1080p)<br>CVBS(NTSC/PAL) |
| **Network camera** | Inputs | Additional 2CH (Up to 18CH) |
| | Resolution | 5MP ~ CIF |
| | Protocols | SUNAPI(Wisenet), ONVIF |
| **Live** | Local Display | 1x HDMI, 1x VGA<br>[Single Mode]<br>- HDMI: 3840 x 2160, 2560x1440, 1920x1080, 1280x1024, 1280x720<br>[Dual Mode] Clone<br>- HDMI: 1920x1080, 1280x1024, 1280x720<br>- VGA: 1920x1080, 1280x1024, 1280x720 |
| | Multi Screen Display | [Local monitor]<br>- Dynamic layout, Virtual channel view<br>- up to 20 division<br>[Web] 1 / 2 / 3 / 4 / 6 / 1+5 / 1+ 7 / 9 |
| | Resolution | [Analog Camera(NTSC/PAL)]<br>5MP(Half ), 4MP(Half), 2MP [Network Camera]<br>- Typ. 2MP(240fps) |

### Performance

| | | |
|---|---|---|
| **Operating System** | Embedded | Linux |

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## Performance

| | | |
|---|---|---|
| **Record** | Compression | H.265, H.264, MJPEG |
| | Record Rate(Analog) | [Analog Camera(NTSC/PAL)]<br>5MP(5M Half 12fps/12fps)<br>4MP(4M Half 15fps/12fps)<br>2MP(2M 15fps/12fps)<br>* Half : Horizontal resolution 1/2<br>* Resolution higher than 2MP will only record half of the resolution,<br>4MP will only record 2MP, and 5MP will only record 2.5M |
| | Recording Bandwidth | Max. 100Mbps |
| | Resolution | 5MP ~ CIF |
| | Mode | Manual, Schedule (Continuous/Event), Event(Pre/Post), Dual Track |
| | Event Trigger | Alarm Input<br>Analog Camera : Video Loss, Motion Detection,Tampering, Network Camera : Camera Event (Sensor, MD, Video analytics), VA event (Tampering, Enter / Exit, Passing, Virtual-line, (Dis)Appear, Face Detection, Audio detection), Defocus camera event, Dynamic camera event |
| | Event Action | e-Mail, Event Push, PTZ Preset, Alarm Out, Buzzer, Monitor Out, FTP, SUNAPI Command, Shutdown |
| **Search & Play** | User | Max. 4 Users (Local 1, Remote 3) |
| | Simultaneous playback | 18CH(Local Monitor),18Ch (CMS),<br>4Ch (Wisenet Mobile), 1Ch(Web) |
| | Fisheye Dewarping | WEB/CMS |
| | Mode | Date & Time (Calendar) / Event log list / Text search (POS), Back up, Motion, Smart search (Virtual Line w/ direction, Enter / Exit) * All Search Included Preview Function<br>ARB search |
| | Resolution | 5MP ~ CIF |
| | Playback Control | Fast Forward/Backward (x2,x4,x8,x16,x32,x64, x128, x256)<br>Slow Forward/Backward (x1/2,x1/4,x1/8)<br>* Move one step up/down |
| **Storage** | Supported HDD | Up to 6TB |
| | HDD Slot | SATA 2ea(Max 12TB) |
| **Backup** | File backup | BU, EXE(Include Player), AVI |
| | Function | Max. 18 CH play, Date-time/title display |

## Function

| | | |
|---|---|---|
| **Camera Setup** | Register | Auto, Manual |
| **PTZ** | Control | Via GUI, Webviewer, SSM, Wisenet Viewer, Wisenet Mobile Viewer, System Controller |
| | Preset | 300 presets |
| **Smart phone** | Support Model | iOS, Android |
| | Protocol Support | RTP, RTSP, HTTP, CGI(SUNAPI) |
| | Control | Live(16ch): Multi-Profile Support<br>Playback(4Ch Multi Playback, Max 2MP)<br>Event push |
| | Max, Remote Users | Search(3), Live Unicast(10) |
| **Redundancy** | ARB | Support |

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## Function

| | | |
|---|---|---|
| Easy configuration | | Install wizard support |
| Coaxial Control | | CVBS(Pelco-C)/AHD/CVI/TVI |

## Interface

| | | |
|---|---|---|
| Front | Indicator | LED(Status indicator) :<br>Power(1), Record(1), Network(1), HDD(1), Backup(1), Alarm(1) |
| Reset | | Switch(1EA) |
| HDMI | | 1 EA |
| VGA | | 1 EA |
| BNC | | 16CH In / 1CH Out(Spot Output) |
| Audio | | Out(1EA, RCA, Line) |
| Ethernet | | RJ-45(10/100/1000BASE-T) |
| Alarm | | In 4EA, Out 1EA<br>- Relay Out1(NO/NC/COM) |
| USB | | 3EA(Front/Rear USB2.0) |
| Serial(Protocols) | | RS-485 (Samsung-T/Pelco-D/Pelco-p) * for PTZ |
| Power inlet | | 1EA DC Input Jack |

## System

| | | |
|---|---|---|
| Log | Log List | Max. 100,000 (System Log, Event Log each) |
| System Control | | Mouse, Webviewer, System Controller(SPC-7000, SPC-6000, SPC-2000) |
| Language | | English, French, German, Italian, Spanish, Russian, Turkish, Polish, Dutch, Czech, Portuguese, Danish, Rumanian, Serbian, Croatian, Hungarian, Greek, Norwegian, Finnish, Korean, Chinese, Japanese, Thai, Vietnamese |

## Environmental

| | |
|---|---|
| Operating Temperature | 0°C to +40°C(+32°F to +104°F) |
| Operating Humidity | 20% ~ 85% RH |
| Certification | UL, CE, FCC, KC |

## Electrical

| | |
|---|---|
| Power Input | DC12V |
| Power Consumption | Max. 40.8W (6TB HDD 2ea) |

## Mechanical

| | |
|---|---|
| Color / Material | Black / Metal |
| Dimension | 370.0 x 44.0 x 320.0 mm (14.57 x 1.73 x 12.6 inch) |
| Weight | Approx. 2.4Kg (5.3 lb, without HDD) |

## Network

| | |
|---|---|
| Protocol | TCP/IP, UDP/IP, RTP (UDP), RTP (TCP), RTSP, NTP, HTTP, DHCP (Server, Client), PPPoE, SMTP, ICMP, IGMP, ARP, DNS, DDNS, uPnP, HTTPS, SNMP, ONVIF (Profile-S), SUNAPI(Server, Client) |

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## Network

| | | |
|---|---|---|
| **DDNS** | | Hanwha DDNS |
| **Transmission Bandwidth** | | Max. 100Mbps |
| **Audio** | Input/Output | 4 Lline in / 1 Line out |
| | Compression | G.711 (N/W Camera G.711, 726) |
| | Audio Communication | 2-Way |
| **Max Remote Users** | | Search(3), Live Unicast(10), Multicast(20) |
| **Security** | | IP address filtering,<br>User access log,<br>802.1x Authentication,<br>Encryption (ID/PW, Recording, Transmission, Backup)<br>Device Certificate(Hanwha Vision Root CA) |
| **Web viewer** | Supported OS | Windows 10, Mac OS 11 Big Sur and later |
| | Supported browser | Chrome, Edge , Safari |
| **Viewer Software** | | SSM, Webviewer, Wisenet Viewer, Wisenet mobile<br>Support CGI(SUNAPI) for integration to 3'rd party VMS |

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