

Hanwha Techwin is a leading supplier of advanced video surveillance solutions for IP-video, analog and hybrid systems. Building on the company's history of innovation, Hanwha Techwin is dedicated to providing systems solutions with the highest levels of performance, reliability and cost-efficiency. Hanwha Techwin is committed to the continued development of innovative systems products for professional security applications.

For additional information, visit <http://security.hanwhatechwin.com/>

1. **PRODUCTS**
   1. **EQUIPMENT**
      1. Manufacturer : Hanwha Techwin (http://security.hanwhatechwin.com/)
      2. Model : ANV-L6012R
      3. Alternates : None
   2. **GENERAL DESCRIPTION**
      1. Video Compression and Transmission – The camera shall have the following properties relating to the video signals it produces.
         1. H.265, H.264 and MJPEG compression, each derived from a dedicated encoder and capable of being streamed independently and simultaneously
            1. H.265 and H.264 – Max. 30fps/25fps(60Hz/50Hz)
            2. MJPEG – Max. 10fps
         2. The camera shall be able to configure up to 3 independent video stream profiles with differing encoding, quality, frame rate, resolution, and bit rate settings.
         3. Resolution selections

1920x1080, 1280x960, 1280x720, 800x600, 800x448, 720x576, 720x480, 640x480, 640x360

* + - 1. Simultaneous unicast access by up to 6 users
      2. Multicast or unicast capable
      3. Dynamic DNS (DDNS) support.
      4. WiseStream and Dynamic GOV to efficiently manage bitrate of the video stream.
    1. Camera – The camera device shall have the following physical and performance properties:
       1. IP66 and IK10 rated for protection against impacts
       2. Auto day/night operation with removable IR cut filter
       3. 2D and 3D digital noise reduction
       4. Integral IR illumination, providing effective visibility of 30m(98.43ft) at 0 Lux when activated in Black & White mode
       5. 6 privacy masking regions utilizing quadrangle
    2. Intelligence and Analytics – The camera shall have a suite of integral intelligent operations and analytic functions to include:
       1. Motion detection with 4 definable detection areas, minimum / maximum object size definition that ignores false alarms such as trees and waves on water.
       2. Detection of logical events of specified conditions from the camera’s video input
          1. Analytics events: Motion detection, Tampering, Virtual area(Intrusion/Enter/Exit), Virtual line(Crossing/Direction)
    3. Interoperability – The camera shall be ONVIF Profile S / G / T compliant.
    4. The camera shall possess the following further characteristics:
       1. Built-in web server, accessed via standard browsers including MS Edge, Firefox, Chrome and Safari
       2. Micro SD/SDHC memory card with configurable pre-alarm and post-alarm recording intervals
       3. Alarms and notifications
          1. alarm notification triggers:

video analytics

* + - * 1. available notification means upon trigger:

file upload via FTP and e-mail

notification via e-mail

record to local storage (SD/SDHC card)

* + - 1. Pixel Counter available in the plug-in web viewer.
      2. POE capable
  1. **DETAILED SPECIFICATIONS**
     1. Video
        1. Image
           1. Sensor : 1/2.8" 2M CMOS

pixels per sensor : 1920 (H) x 1080 (V)

scanning : progressive

* + - * 1. Minimum illumination

Color mode : 0.03Lux(F2.0, 1/30sec)

Black & white mode (IR LED off) : 0.003Lux(F2.0, 1/30sec)

Black & white mode (IR LED on) : 0Lux

* + - * 1. The following features with control settings shall be available:

Camera Title

Off / On (Displayed up to 15 characters)

Day/night : Auto (ICR)

Backlight compensation : BLC, WDR, SSDR

WDR : 120dB

Digital Noise Reduction (DNR) : SSNR

Motion Detection : Off / On (4ea, rectangular zones)

Privacy Masking : Off / On (6ea, rectangular zones)

Gain Control : Low / Middle / High

White Balance : ATW / AWC / Manual / Indoor / Outdoor

Lens Distortion Compensation(LDC) : Support

Electronic shutter speed : Minimum / Maximum / Anti flicker (2 ~ 1/12,000sec)

Image flip : Off / On

Image mirror : Off / On

Hallway view : Off / On (90° / 270°)

Analytics

Motion detection, Tampering, Virtual area(Intrusion/Enter/Exit), Virtual line(Crossing/Direction)

Alarm Triggers : Analytics

Alarm Events

File upload via FTP and e-mail

Notification via e-mail

SD/SDHC recording at Event Triggers

* + - * 1. Lens : 2.8mm fixed focal

Max. Aperture Ratio : F2.0

FoV

H: 113.7° / V: 61.5° / D: 134.4°

Min. Object Distance : 0.5m (1.64ft)

Focus Control : Fixed

* + - * 1. Pan/Tilt/Rotate

Pan/Tilt/Rotate Range: 0°~350° / 0°~67° / 0°~355°

* + - * 1. DORI (EN62676-4 standard)

Detect : 25.1m(82.28ft)

Observe : 10.0m(32.91ft)

Recognize : 5.0m(16.46ft)

Identify : 2.5m(8.23ft)

* + - 1. IR Viewable Length : 30m (98.43ft)
      2. Video Streams
         1. The camera shall be able to produce 3 video profiles, each of which may have the following properties:

Encoding type : H.265, H.264, MJPEG

Resolution:

1920x1080, 1280x960, 1280x720, 800x600, 800x448, 720x576, 720x480, 640x480, 640x360

Frame rate

H.265 and H.264: Max. 30fps/25fps(60Hz/50Hz)

MJPEG: Max. 10fps

Smart Codec: WiseStream Ⅱ

Bit rate control

H.265 and H.264 : target bitrate level control, constant bit rate (CBR) or variable bit rate (VBR)

MJPEG : quality level control, variable bit rate (VBR)

* + - 1. Number of multi-streaming profiles : 3 profiles
      2. Simultaneous users (total) : 6 maximum (unicast)
      3. Storage and Recording
         1. The camera shall have onboard SD card storage.

Card type : Micro SD/SDHC

Capacity : Up to 32GB (1 slot)

Image content on the card shall have the ability to be downloaded to a selected destination.

* + - 1. Interoperability - Video streams shall be capable of supporting ONVIF protocol, profiles S / G / T.
      2. Single Images - The camera shall support jpg file image screenshot and export.
      3. Memory : 512MB RAM, 256MB Flash
    1. Network
       1. Connectivity : RJ-45(10/100BASE-T)
       2. Protocols supported :
          1. Transmission Control Protocol (TCP), Internet Protocol (IP) v4 and v6, User Datagram Protocol (UDP)
          2. Configuration: Dynamic Host Configuration Protocol (DHCP)
          3. Web services: Hypertext Transfer Protocol (HTTP), Secure HTTP (HTTPS)
          4. Security: Secure Sockets Layer(SSL)/Transport Layer Security(TLS)
          5. Network services: Address Resolution Protocol (ARP), Bonjour, Domain Name System (DNS), Internet Control Message Protocol (ICMP), Network Time Protocol (NTP), Simple Network Management Protocol (SNMP v1/2c/3 – MIB-2), Universal Plug and Play (UPnP)
          6. Media: Real-Time Transport Protocol (RTP), Real-Time Control Protocol, Real-Time Streaming Protocol (RTSP)
          7. Multicast: Internet Group Management Protocol (IGMP)
          8. Notifications: File Transfer Protocol (FTP), Simple Mail Transfer Protocol (SMTP)
       3. DDNS
          1. The camera shall support DDNS services offered by the Manufacturer and other publicly available service offerings.
       4. Quality of Service (QoS)
          1. Layer 3 DSCP
       5. Security features
          1. HTTPS(SSL) Login Authentication
          2. Digest Login Authentication
          3. IP Address Filtering
          4. User access log
          5. 802.1X Authentication(EAP-TLS, EAP-LEAP)
       6. Application Programming Interface
          1. ONVIF Profile S / G / T, SUNAPI(HTTP API)
       7. Discovery
          1. Manufacturer shall offer a discovery program to identify all devices of his manufacture on the network.
    2. Electrical
       1. Input Voltage : PoE (IEEE802.3af, Class2)
       2. Power consumption
          1. PoE : Max 6.4W, Typical 5.0W
    3. Mechanical And Environmental
       1. Material : Plastic, Aluminum
       2. Dimensions : Ø 120.3 x 91.7mm (Ø 4.74 x 3.61”)
       3. Weight : 410g (0.91lb)
       4. Temperature And Humidity
          1. Operating : -30°C ~ +55°C(-22°F ~ +131°F) / Less than 95% RH  
             \* Start up should be done at above -20°C(-4°F)
          2. Storage : -30°C ~ +55°C(-22°F ~ +131°F) / Less than 95% RH
       5. Environmental Rating
          1. IP66
          2. IK10
       6. RAL Code
          1. RAL9003
    4. EMC & Safety
       1. FCC 47 CFR Part 15 Subpart B
          1. ANSI C63.4a-2017 Class A
       2. IC Regulation ICES-003 Issue 7
          1. ANSI C63.4a-2017 Class A
       3. UL listed

END OF SECTION