

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

For additional information, https://www.hanwhavision.com/

1. **PRODUCTS**
   1. **EQUIPMENT**
      1. Manufacturer: Hanwha Vision (https://www.hanwhavision.com/)
      2. Model: XNP-6040HW
      3. Alternates: XNP-6040H
   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 – maximum of 60 fps at all resolution
            2. MJPEG – maximum of 30 fps
         2. The camera shall be able to configure up to 10 independent video stream profiles with differing encoding, quality, frame rate, resolution, and bit rate settings.
         3. The camera shall be able to configure various resolution selections.
            1. 1920 x 1080, 1280 x 1024, 1280 x 960, 1280 x 720, 1024 x 768, 800 x 600, 800 x 448, 720 x 576, 720 x 480, 640 x 480, 640 x 360, 320 x 240
         4. The camera shall be able to stream at least 10 independent video stream types using unicast protocol.
         5. The camera shall support multicast and unicast video streaming.
         6. The camera shall be able to configure Dynamic DNS (DDNS). DDNS shall be provided with no additional cost by the manufacturer.
         7. The camera shall provide smart codec (WiseStream, Dynamic GOV, and Dynamic fps) to efficiently manage bit rate of the video stream and reduce storage while producing video quality that is visually equal to the one without smart codec.
      2. Camera – The camera device shall have the following physical and performance properties:
         1. It shall provide Wi-Fi interface which can stream video to a smart phone for installation purposes. The smart phone application shall be available in iOS and Android for free of charge with search keyword, ‘Wisenet Installation’. Moreover, the smart phone application shall also provide PTZ maneuver to help installers configure view of the PTZ dome camera. \*Wi-Fi dongle is required for Wi-Fi connection.
         2. The camera shall be able to produce clear images in highly contrast scenes with multi-exposure wide dynamic range up to 150dB.
         3. The camera shall have enhanced Digital Image Stabilization with built-in gyro sensor. The gyro sensor greatly reduces false alarm triggered by scene changes.
         4. Automated, manual, scheduled, or externally triggered day and night operation with infrared cut filter. Images are available in color or black and white.
            1. Low light level operation to 0.015 lux (F1.4, 1/30sec) in color mode and 0.0015 (F1.4, 1/30sec) lux in black and white mode.
         5. The camera shall support digital noise reduction using both 2D and 3D noise reduction technology.
         6. Configurable 32 privacy masking regions utilizing 4 points quadrangle.
         7. Defog feature to remove fogginess of scene.
         8. The camera shall support bi-directional audio.
         9. The PTZ dome camera shall have azimuth feature to display compass points on the screen. The available points are following.
            1. East, West, South, North, Northeast, Southeast, Northwest, Southwest
      3. Intelligence and Analytics – The camera shall have a suite of integral intelligent operations and analytic functions to include:
         1. Motion detection with eight definable detection areas with rectangular zones, and minimum/maximum object size.
         2. Detection of logical events of specified conditions from the camera’s video
            1. Tampering
            2. Loitering
            3. Directional Detection
            4. Fog Detection
            5. Virtual Line
            6. Enter/Exit,
            7. (Dis) Appear
            8. Audio Detection
            9. Face Detection
            10. Motion Detection
         3. Detection and classification of the following sound
            1. Scream
            2. Gunshot
            3. Explosion
            4. Crashing glass
      4. Interoperability – The camera shall be ONVIF Profile S, G and T compliant. Moreover it shall allow users to install third party applications from the manufacturer’s partners through Open Platform and the list of available applications and partners shall be available from the manufacturer’s homepage.
      5. The camera shall possess the following further characteristics:
         1. The camera shall provide streaming to multiple smart phones with DDNS provided freely from the manufacturer. In addition, the application shall be available for both iOS and Android, free of charge with search keyword, ‘Wisenet Mobile’.
         2. Micro SD/SDHC/SDXC memory card with configurable pre-alarm and post-alarm recording intervals
         3. NAS recording option with configurable pre-alarm and post-alarm recording intervals
         4. Alarm trigger: Alarm input, Video & Audio analytics, Network disconnect
         5. Alarm Events (When alarm trigger occurred)
            1. File Upload: FTP and E-mail
            2. Notification: E-mail
            3. Local storage (SD / SDHC / SDXC) or NAS recording at event triggers
            4. Alarm output
            5. Presets
         6. Pixel Counter available in the web viewer.
         7. PoE capable
   3. **DETAILED SPECIFICATIONS**
      1. Video
         1. Image device: 1/2.8" CMOS
         2. Resolution: 1920 x 1080, 1280 x 1024, 1280 x 960, 1280 x 720, 1024 x 768, 800 x 600, 800 x 448, 720 x 576, 720 x 480, 640 x 480, 640 x 360, 320 x 240
         3. Minimum illumination
            1. Color: 0.015Lux (F1.4, 1/30sec)
            2. BW: 0.0015Lux (F1.4, 1/30sec)
         4. Video out for Installation
            1. CVBS: 1.0 Vp-p / 75Ω composite, 720 x 480 (N) or 702 x 576 (P)
            2. USB: Micro USB Type B (1280 x 720)
      2. Lens
         1. Focal length: 2.8 ~ 12mm (optical 4.3x zoom), digital 32x zoom (total 137.6x zoom)
         2. Max. Aperture Ratio: F1.4 (Wide) ~ F3.6 (Tele)
         3. Angle of view
            1. H: 119.5° (Wide) ~ 27.9° (Tele)
            2. V: 62.8° (Wide) ~ 15.7° (Tele)
            3. D: 142.1° (Wide) ~ 32.0° (Tele)
         4. Min. Object Distance: 1.5m (4.92ft) (Wide), 2m (6.56ft) (Tele)
         5. Focus Control: One shot AF
         6. Lens Type: DC Auto Iris
      3. Pan & Tilt
         1. Pan Range: 0 ~ 350°
         2. Pan Speed: 0.1°/sec ~ 60°/sec
         3. Tilt Range: 0° ~ 90°\
         4. Tilt Speed: 0.1°/sec ~ 60°/sec
         5. Sequence: Preset (300ea), Swing, Group (6ea), Trace, Tour, Auto Run, Schedule
         6. Preset Accuracy: ±0.5˚
      4. Operational Functions
         1. Camera Title: Displayed up to 85 characters
         2. Day and Night: Auto (ICR) / Color / B/W / Schedule
         3. Backlight Compensation: BLC / HLC / WDR / SSDR
         4. WDR: 150dB
         5. Digital Noise Reduction: SSNR Ⅴ
         6. Digital Image Stabilization: support (Built-in gyro sensor)
         7. Defog: support
         8. Motion Detection: 8ea, polygonal zones
         9. Privacy Masking: 32ea, 4 points quadrangle zones
         10. Gain Control: Off / Low / Middle / High
         11. White Balance: ATW / AWC / Manual / Indoor / Outdoor
         12. Electronic Shutter Speed: Minimum / Maximum / Anti-flicker (2 ~ 1/12,000sec)
         13. Rotation: Flip, Mirror
         14. Analytics: Directional detection, Fog detection, Face detection, Motion detection, Appear/Disappear, Enter/Exit, Loitering, Tampering, Virtual line, Audio detection, Sound classification
         15. Serial Interface: RS-485(Samsung-T, Pelco-D/P, Panasonic, Bosch, AD, GE, Vicon, Honeywell)
         16. Alarm I/O: Input 1ea / Output 1ea
         17. Alarm Triggers: Alarm Input, Video & Audio analytics, Network disconnect
         18. Alarm Events
             1. File Upload Via FTP and E-mail
             2. Notification Via E-mail, TCP and HTTP
             3. Local storage (SD / SDHC / SDXC) or NAS recording at event triggers
             4. Alarm output
             5. PTZ Preset
         19. Audio In: Selectable (Mic in / Line in), Supply voltage (2.5VDC, 4mA), Input impedance (2KOhm)
         20. Audio Out: Line out (3.5mm mono jack), Max output level (1 Vrms)
         21. Audio Compression
             1. G.711 u-law /G.726 Selectable
             2. G.726 (ADPCM) 8KHz, G.711 8KHz
             3. G.726: 16Kbps, 24Kbps, 32Kbps, 40Kbps
         22. Auto Tracking: support
         23. Edge storage: Micro SD / SDHC / SDXC, 512GB (2 slots 256GB)
         24. Memory: 1GB RAM, 256MB Flash
      5. Video Streams
         1. The camera shall be able to produce 10 video profiles, each of which may have the following properties:
         2. Encoding type: H.265, H.264, MJPEG
         3. Maximum frame rate
            1. H.265 and H.264: Max. 60 fps at all resolutions
            2. MJPEG: Max. 30 fps
         4. Smart Codec: Manual(5ea area), WiseStreamⅡ
         5. Video quality adjustment
            1. H.265 and H.264: Target bitrate level control
            2. MJPEG: Target bitrate level control
         6. Bitrate control
            1. H.265 and H.264: CBR / VBR
            2. MJPEG: VBR
         7. Number of multi-streaming profiles: Max. 10
         8. Simultaneous users (total): Max. 20 (unicast)
         9. Application Programming Interface
            1. ONVIF Profile S / G / T
            2. SUNAPI (HTTP API)
            3. Wisenet open platform
      6. Network
         1. Connectivity: 10/100 Base-T Ethernet via RJ-45 connector
         2. Protocols: IPv4, IPv6, TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, UPnP, Bonjour, LLDP, SRTP (TCP, UDP Unicast), NTCIP 1205
         3. DDNS – The camera shall support DDNS services offered by the Manufacturer and other publicly available service offerings.
         4. Quality of Service (QoS) – Layer 3 DSCP
         5. Security features:
            1. User password protection
            2. IP address filtering - list of allowed or blocked IP addresses
            3. HTTPS(SSL) login authentication
            4. Digest login authentication
            5. User access log
            6. 802.1x Authentication (EAP-TLS, EAP-LEAP)
         6. Discovery - Manufacturer shall offer a discovery program to identify all devices of his manufacture on the network.
         7. Configuration – Manufacturer shall offer a configuration program that remotely allows users to change settings on multiple cameras simultaneously.
      7. Electrical
         1. Input Voltage: PoE (IEEE802.3af, Class 3), 12VDC
         2. Power Consumption
            1. DC12V: Max. 8.6W
            2. PoE: Max. 9.6W
      8. Mechanical And Environmental
         1. Color and Material: White, Aluminum
         2. RAL Code: RAL9003
         3. Dimensions (W x H): Ø168.0 x 161.5mm (Ø6.61" x 6.36")
         4. Weight: 1.9 Kg (4.19lb)
         5. Temperature
            1. Operating: -30° C to 55° C (-22° F to 131° F)
            2. Storage: -30° C to 60° C (-22° F to 140° F)
         6. Humidity: 0 ~ 90%, non-condensing
         7. Ingress Protection / Vandal Resistance: IP66, IK10
      9. DORI Distance
         1. Detect (25PPM / 8PPF): Wide 22.4m (73.47ft) / Tele 154.6m (507.18ft)
         2. Observe (63PPM / 19PPF): Wide 9.0m(29.39ft) / Tele 61.8m (202.87ft)
         3. Recognize (125PPM / 38PPF): Wide 4.5m (14.69ft) / Tele 30.9m (101.44ft)
         4. Identify (250PPM / 76PPF): Wide 2.2m (7.35ft) / Tele 15.5m (50.72ft)
      10. EMC & Safety
          1. FCC: 47 CFR Part 15 Subpart B
          2. CE: EN 55022:2010, EN 50130-4:2011, EN 61000-3-3:2014, EN 61000-4-2:2009, EN 61000-4-3:2006+A2:2010, EN 61000-4-4:2012, EN 61000-4-5:2014, EN 61000-4-6:2009
          3. UL listed
          4. CE EN 50581:2012 (hazardous substances)

END OF SECTION