

# TNO-X6320EP\*

7j b'aeja` ZbaaXBullet 5S\_ Vb

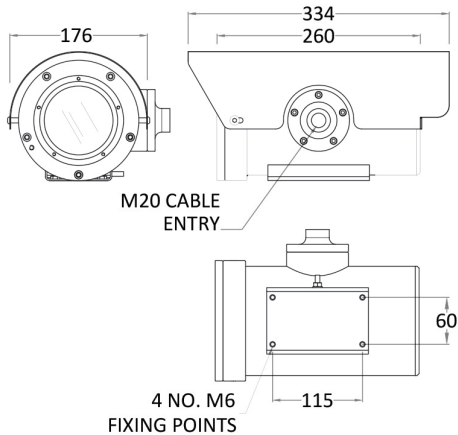


## Key Features

- 2 MP (1920 x 1080) resolution
- 4.44-142.6mm (32x) optical zoom, 16x digital zoom
- H.265, H.264, MJPEG triple codec, WiseStream II
- Day & Night (ICR), WDR (150dB)
- Video & Audio Analytics, SDXC memory slot
- DIS with built-in Gyro sensor
- cLCus C1/D1/INMETRO / cLC CSA Certified
- Electro-polished 316L stainless steel on all welded assemblies
- Camera window in toughened glass
- Powered by IEEE802.3af PoE

## Dimensions

Unit: mm



## Accessories (Optional)



## TNO-X6320EP\*

VIDEO	
Image Sensor	1/2.8" 2.4 MP CMOS
Resolution	Resolution: 1920x1080 to 320x180; 60fps at all resolutions (H.265/H.264)
Lens	32x optical 16x digital zoom 4.44-142.6 mm F1.6 to F4.4, horizontal angle of view 62.8° - 2.23°
Minimum Illumination	Color : 0.05Lux (1/30sec, F1.6, 50IRE) B/W : 0.005Lux (1/30sec, F1.6, 50IRE)
Streaming	H.265, H.264, MJPEG triple codec, multiple streaming, VBR/CBR, WiseStream II
Features	Intelligent video/audio analytics, motion detection, day & night (ICR), WDR (150dB), HLC, auto focus, auto iris, AGC, SDR, SSNR, BLC, Gyro DIS, Defog
Standards Protocols	ONVIF Profile S/G/T, 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, PIM-SM, UPnP, Bonjour

## SPECIFICATIONS

Sun Shield	Standard stainless steel 316L mirror finish
Ingress Protection Rating	IP66/67, IP68 (1.5m for 24 hours)
Temperature Rating	-10°C ~ +55°C (+14°F ~ +131°F)

## ELECTRICAL

Input Voltage	IEEE802.3af PoE
Power Consumption	Maximum 12.0W (PoE, Class 3)
Cable Entry	One 1/2" NPT side entry
Body Material	Electro-polished 316L stainless steel on all welded assemblies
Fixings Material	A4 stainless steel
Camera Window	Toughened glass

## CERTIFICATIONS

INMETRO	Ex d IIC T4 (T5 On Request) Gb -60°C ≤ Ta ≤ +60°C Ex tb IIIC T135°C Db IP66/67. Certificate Number: TUV 12.1080X / TUV 12.1081X
cLCus C1/D1	Class I, Division 1, Groups B,C,D, -60°C ≤ Ta ≤ 60°C T4/ Class II, Division 1, Groups E, F, G IP67 CSA-C22.2 No:30-M1986 No:25-1966(R2009) CSA-C22.2 No:60065-03(R2012) & UL1203,UL60065(ED.7). Certificate Number: 11671-1S / 11677-1S
cLC CSA	Ex d IIC T4 (T5 On Request) LC1311396 -60°C ≤ Ta ≤ +60°C. CAN CSA-C22.2 No.60079-0:2011 & 60079-1-2011. Certificate Number: 11396-1S-CSA
Weight	Up to 8.54Kg (18.9lb)

Model Number:

## TNO-X6320EPT0-Z

Body Style :  
Bullet : O

Power :  
PoE : P

Temperature Rating :  
-10°C : T0

Certification :  
cLC CSA : C  
INMETRO : M  
cLCus C1/D1 : Z

<b>VIDEO</b>	
Imaging Device	1/2.8" 2.4 MP CMOS
Total Pixels	1981(H) x 1288(V), 2.55 MP
Effective Pixels	1944(H) x 1212(V), 2.35 MP
Scanning System	Progressive scan
Minimum Illumination	Color : 0.05 Lux (1/30 sec, F1.6) B/W : 0.005 Lux (1/30 sec, F1.6)
S / N Ratio	50dB
<b>LENS</b>	
Focal Length (Zoom Ratio)	4.44 ~ 142.6mm (Optical 32x)
Maximum Aperture Ratio	F1.6 (Wide) / F4.4 (Tele)
Angular Field of View	H : 61.8°(Wide) ~ 2.19°(Tele) / V : 36.2°(Wide) ~ 1.24°(Tele)
Minimum Object Distance	Wide 1.5m (4.92ft), Tele 2m (6.56ft)
Focus Control	Auto / Manual / One shot AF
Lens Type	DC auto iris
Mount Type	Board-in type
<b>OPERATIONAL</b>	
Camera Title	Off / On (Displayed up to 85 characters) - English / International / Numeric / Special characters - Multi-line (Maximum 5), Color (Grey / Green / Red / Blue / Black / White), Transparency, Auto scale by resolution
Day & Night	Auto (ICR) / Color / B/W / Schedule
Backlight Compensation	Off / WDR / BLC / HLC
Wide Dynamic Range	150dB
Contrast Enhancement	SSDR (On / Off)
Digital Noise Reduction	SSNR5 (2D+3D noise filter) (On / Off)
Digital Image Stabilization	On / Off (Built-in gyro sensor)
Defog	Off / Manual / Auto
Motion Detection	On / Off (8ea, Polygonal)
Privacy Masking	On / Off (24 Zones of rectangle zone) - Color : Grey / Green / Red / Blue / Black / White - Mosaic
Gain Control	Off / Low / Middle / High
White Balance	ATW / AWC / Manual / Indoor / Outdoor (Included Mercury & Sodium)
Electronic Shutter Speed	Minimum / Maximum / Anti flicker (1 ~ 1 / 12,000sec)
Digital Zoom	32x
Flip / Mirror	On / Off
Video & Audio Analytics	Tampering, Loitering, Directional/Virtual Line detection, Fog detection, Enter/Exit, Appear/Disappear, Audio detection, Face detection, Motion detection, Sound classification, Shock detection
Serial Interface	RS-485/RS-422 Supported protocols - Samsung-T, Pelco-D/P, Panasonic, Bosch, AD, GE, Vicon, Honeywell
Alarm I/O	Input 1ea / Output 2ea (Relay)
Alarm Triggers	Alarm input, Motion detection, Video & Audio analytics, Network disconnect
Alarm events	File upload via FTP and E-Mail, Notification via E-Mail, TCP and HTTP, Local storage (SD/SDHC/SDXC) or NAS recording at alarm triggers, External output, Preset
Audio In	Selectable (Mic In/Line In) Supply voltage: 2.5VDC (4mA), Input impedance: approx. 2K Ohm
Audio out	Line out (3.5mm), Maximum output level: 1 Vrms
Pixel counter	Support

<b>NETWORK</b>	
Ethernet	RJ-45 (10/100BASE-T)
Video Compression Format	H.264 (MPEG-4 Part 10/AVC), H.265, Motion JPEG
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
Maximum Framerate	H.264 / H.265 : Maximum 60fps at all resolutions Motion JPEG : Maximum 30fps at all resolutions
Smart Codec	Manual mode (Area-based : 5ea)
WiseStream II	Support
Video Quality Adjustment	H.264 / H.265 / MJPEG : Target bitrate level control
Bitrate Control Method	H.264 / H.265 : CBR or VBR Motion JPEG : VBR
Streaming Capability	Multiple streaming (Up to 10 profiles)
Audio Compression Format	G.711 u-law / G.726 selectable G.726 (ADPCM) 8KHz, G.711 8KHz G.726 : 16Kbps, 24Kbps, 32Kbps, 40Kbps AAC-LC : 48Kbps at 16KHz
Audio Communication	Bi-directional (2-Way)
IP	IPv4, IPv6
Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, PIM-SM, UPnP, Bonjour
Security	HTTPS (SSL) login authentication, Digest login authentication, IP address filtering, User access log, 802.1X Authentication (EAP-TLS, EAP-LEAP)
Streaming Method	Unicast / Multicast
Maximum User Access	20 users at Unicast mode
Edge Storage	Micro SD/SDHC/SDXC 2 slots (up to 512 GB total capacity) - Continuous recording(1st slot to 2nd slot) - Motion Images recorded in the Micro SD/SDHC/SDXC memory card can be downloaded. NAS (Network Attached Storage) Local PC for instant recording
Application Programming Interface	ONVIF Profile S/G,T SUNAPI 2.0 (HTTP API), Wisenet Open Platform
Webpage Language	English, Korean, Chinese, French, Italian, Spanish, German, Japanese, Russian, Swedish, Portuguese, Czech, Polish, Turkish, Dutch, Hungarian, Greek
Web Viewer	Supported OS : Windows 7, 8.1, 10, Mac OS X 10.10, 10.11, 10.12 Plug-in Free Webviewer supported browser : Google Chrome, Microsoft Edge, Microsoft Internet Explorer, Mozilla Firefox (Windows 64-bit only) , Apple Safari 10 (Mac OS X only)
Central Management Software	Wisenet WAVE, SmartViewer, SSM

\* The latest product information / specification can be found at [hanwhavision.com](http://hanwhavision.com)

\* Design and specifications are subject to change without notice.

\* Wisenet is the proprietary brand of **Hanwha Vision**.