

# TNO-X6320E1W\*

7j b'aeja` BdaaXBullet 5S\_ W6

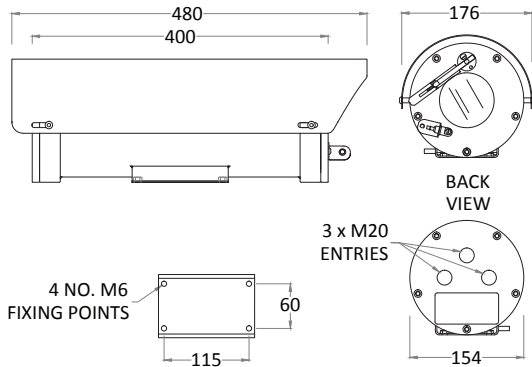


## Key Features

- 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 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
- Integrated Wiper
- Supply voltage 24 VAC

## Dimensions

Unit: mm



## Accessories (Optional)



## TNO-X6320E\*

### 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 analytics, motion detection, day & night (ICR), WDR (150dB), HLC, auto focus, auto iris, AGC, SDR, SSNR III, 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
Integral Wiper	Silicone wiper blades that are resistant and do not perish after long exposure to ozone, UV, ice, snow, heat or cold
Ingress Protection Rating	IP66/67, IP68 (1.5m for 24 hours)
Temperature Rating	T1: -40°C ~ +60°C (-40°F ~ +140°F); T2: -60°C ~ +60°C (-76°F ~ +140°F)

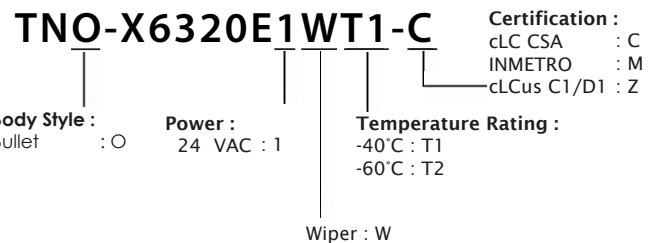
### ELECTRICAL

Input Voltage	24 VAC
Power Consumption	37W Maximum
Cable Entry	Three M20 entries located in housing rear flange; 1 entry for PoE models
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 15Kg (33.1lb)

Model Number:



**TNO-X6320E\***

<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 Analytics	Tampering, Loitering, Directional/Virtual Line detection, Fog detection, Enter/Exit, Appear/Disappear, Face detection, Motion detection, Shock detection
Alarm Triggers	Motion detection, Video 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, Preset
Pixel counter	Support

**TNO-X6320E\***

<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)
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**.