

	TNO-3010T	TNO-3020T	TNO-3030T
VIDEO			
Imaging Device	Uncooled micro bolometer		
NETD	< 60mK		
Pixel Size	12 μ m		
Video Out	CVBS : 1.0 Vp-p / 75 Ω composite, 720x480 for installation USB : Micro USB Type B, 1280x720 for installation		
LENS			
Focal Length (Zoom Ratio)	2.7mm fixed focal	4.7mm fixed focal	13.7mm fixed focal
Maximum Aperture Ratio	F1.0		
Angular Field of View	H :92.0°, V :65.5°, D :125.7°	H :50.0°, V :36.4°, D :65.3°	H :16.0°, V :12.0°, D :20.0°
Minimum Object Distance	0.3m (0.98ft)	1m (3.28ft)	8m (26.25ft)
Focus Control	Fixed		
OPERATIONAL			
Camera Title	Displayed up to 85 characters		
Digital Image Stabilization	Support (Built-in gyro sensor)		
Motion Detection	8ea, 8point polygonal zones		
Privacy Masking	32ea, polygonal zones - Color : Grey / Green / Red / Blue / Black / White - Mosaic		
Color palettes	Whitehot, Blackhot, Rainbow, Rainbow 2, Sepia, Red, Iron, Custom		
Video Rotation	Flip, Mirror, Hallway view (90°/270°)		
Analytics	Directional detection, Motion detection, Appear/Disappear, Enter/Exit, Loitering, Tampering, Virtual line, Audio detection, Temperature detection, Sound classification, Shock detection		
Alarm I / O	Input 1ea / Output 2ea		
Alarm Triggers	Analytics, Network disconnect, Alarm input		
Alarm Events	File upload via FTP and e-mail Notification via e-mail SD/SDHC/SDXC or NAS recording at event triggers Alarm output Handover		
Audio In	Selectable (microphone in/line in) Supply voltage : 2.5VDC (4mA), Input impedance : 2K Ohm		
Audio out	Line out, Maximum output level : 1Vrms		
NETWORK			
Ethernet	RJ-45(10/100BASE-T)		
Video Compression	H.265/H.264 : Main/Baseline/High, MJPEG		
Resolution	320 x 240		
Maximum Framerate	H.265/H.264 : Maximum 30fps MJPEG : Maximum 30fps		
Smart Codec	Manual (5ea area), WiseStream II		
Bitrate Control	H.264/H.265 : CBR or VBR MJPEG : VBR		
Streaming	Unicast (20 users) / Multicast Multiple streaming (Up to 10 profiles)		
Audio Compression	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		
Protocol	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, PIM-SM, UPnP, Bonjour, LLDP, SRTP		
Security	HTTPS(SSL) Login Authentication Digest Login Authentication IP Address Filtering User access log 802.1X Authentication (EAP-TLS, EAP-LEAP), Device Certificate(Hanwha Techwin Root CA)		

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Edge Storage	Micro SD/SDHC/SDXC slot maximum capacity 256GB		
Application Programming Interface	ONVIF Profile S/G/T SUNAPI (HTTP API) Wisenet open platform		
Web Viewer	Supported OS : Windows 7, 8.1, 10, Mac OS X 10.10, 10.11, 10.12 Recommended Browser : Google Chrome Supported Browser : MS Internet Explorer 11, MS Edge, Mozilla Firefox (Windows 64-bit only), Apple Safari(Mac OS X only)		
Memory	1024MB RAM, 256MB Flash		
ENVIRONMENTAL			
Operating Temperature / Humidity	-40°C ~ +60°C (-40°F ~ +140°F) / Less than 90% RH		
Storage Temperature / Humidity	-50°C ~ +60°C (-58°F ~ +140°F) / Less than 90% RH		
Certification	IP66, IK10, NEMA4X		
ELECTRICAL			
Input Voltage	PoE (IEEE802.3af, Class3), 24VAC, 12VDC		
Power Consumption	PoE : Maximum 8.7W, typical 7.5W 12VDC : Maximum 7.8W, typical 6.7W 24VAC : Maximum 9.2W, typical 8.0W		
MECHANICAL			
Color / Material	White / Aluminum		
RAL Code	RAL9003		
Product dimensions / weight	Ø147.51x375.3mm(5.81x14.78") / 2512g(5.538lb)		

* The latest product information / specification can be found at hanwhasecurity.com

* Design and specifications are subject to change without notice.

* Wisenet is the proprietary brand of **Hanwha Techwin**, formerly known as Samsung Techwin.