

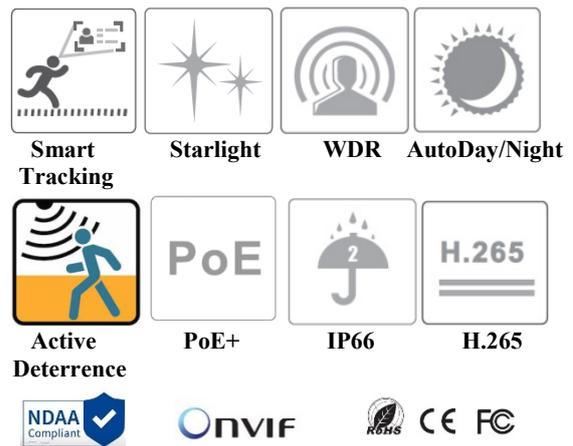
## SPECIFICATION:

Camera Module					
Image sensor	1/2.7" progressive scan CMOS with BSI and NIR+ technology				
Mini. Illumination	Color: 0.01 Lux @ (F1.6, AGC ON); B/W: 0.002Lux @(F1.6, AGC ON);0Lux with IR				
Image setting	Flip, Mirror, Saturation, Brightness, Contrast, Sharpness, AGC, and AWB adjusted by client				
Shutter Speed	50Hz: 1/25s~1/25,000s, 60Hz: 1/30s~1/30,000s				
White Balance	Auto/Manual/Indoor/Outdoor				
Gain	Auto/Manual				
Day & Night	Auto/Manual				
Aperture control	N/A				
S/N Ratio	≥52dB				
3D DNR	Auto/Manual				
AE Enhancement	BLC, HLC, WDR				
Privacy Mask	4 Programmable privacy masks, up to 8 per request				
Picture overlay	Logo picture could be overlaid on video with 128x128pixels,24bits BMP format				
Font overlay	Max 15characters per line, 8lines max, white color or red color				
Lens					
Focus length	f=2.8-12mm lens,4x optical				
Zoom Speed	About 1.6second(Wide->tele)				
Field of View	Horizontal: 97° to 31°±5%;Vertical: 51° to 18°±5%; Diagonal: 115° to 36°±5% (wide-tele)				
Working distance	wide: 0.3m ~ INF; tele: 0.5m ~ INF				
Aperture Range	F1.6~ F2.7 (wide-tele)				
IRCut filter	Electrical switchable ICR				
DORI table	Lens	Detect(25px/m)	Observe(63px/m)	Recognize(125px/m)	Identify(250px/m)
	2.8mm	68m(223 f.t)	27.1m(88.9 f.t)	13.6m(44.6 f.t)	6.8m(22.3 f.t)
	12mm	206.7m(678.1 f.t)	82m(269 f.t)	41.3m (135.5 f.t)	20.7m(68f.t)
PTZ					
Pan Range	0~355°				
Pan speed	Configurable, from 0.1~80°/s; Preset speed: 80°/s				
Tilt Range	From -5° to 90°				
Tilt Speed	Configurable, from 0.1°~ 60°/s, Preset speed: 60°/s				
Pan/Tilt action intervals	At least 10seconds, adjustable				
Proportional Zoom	Yes				
Preset	300				
Cruise	8 cruises, up to 16 presets for each cruises				
Trace	4 traces, record time over 3 minutes for each trace				
Power off memory	Support				
Action mode	Preset/Cruise/Trace/Auto Scan/Random Scan				
3D Positioning	Support				
PTZ Position Display	Support				
Schedule Task	Preset/Cruise/Trace/Random Scan/Boundary Scanning /Dome reboot				
Supplement Light					
IR Distance	Up to 50m,4pcs of IR Array into 2 Groups, auto switch with zoom ratio				
Smart IR	Yes				
White light Distance	Up to 30m, 2pcs of White LED Array				
White light Mode	Flash mode(2x brightness), time interval adjustable; torque mode per request				
Network					
Max Resolution	2560×1440				
Main stream	25fps (2560×1440, 2048×1536, 1920×1080, 1280×960, 1280×720);30fps (2560×1440, 2048×1536, 1920× 1080, 1280× 960, 1280× 720)				
Sub stream	25fps (704 × 576, 640 × 480, 352 × 288); 30fps (704 × 480, 640 × 480, 352 × 240)				
Third Stream	25fps (1280 × 720, 704 × 576, 640 × 480, 352 × 288) ; 30fps (1280 × 720, 704 × 480, 640 × 480, 352 × 240)				

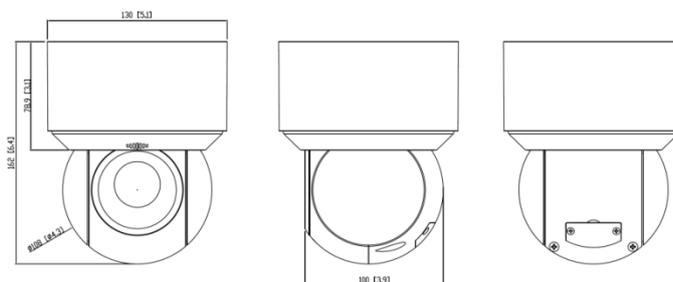
Video compression	Smart H.265+/H.265/H.264+/H.264/MJPEG
H.264 Encoder	H.264/AVC codec BP/MP/HP, level 5.1
H.265 Encoder	H.265/HEVC codec MP, level 5.0
Video bit rate	64Kbps ~ 16Mbps
Audio Compression	G.711 A/U
Audio bit rate	64Kbps
Protocols	HTTP, HTTPS, IPv4/IPv6, 802.1x, QoS, FTP, SMTP, UPnP, SNMP,DNS, DDNS, NTP, RTSP, RTCP, RTP, TCP/IP, UDP, IGMP, ICMP,DHCP, PPPoE
User / Host	Up to 16 users, 3 levels: Administrator, Advanced User and Normal User
Security Measures	User authentication (ID and PW), Host authentication (MAC address); HTTPS encryption, IEEE802.1x port-based network access control; IP address filtering
<b>Smart Features</b>	
Basic event	Motion detection, video tampering alarm, exception (network disconnected, IP address conflict, SD full, SD error)
Face recognize	Support human face detection, max 15 human faces per scene. Support face capture, tracking, comparison, edge storage
Road traffic	Vehicle detecting and tracking, etc.
Smart Detection	Tripwire, Bi-directional tripwire, Illegal intrusion detection, Region entrance detection, Region exiting detection,etc. More VCA per request.
Smart Tracking	Smart tracking of human or vehicle, auto/manual
Active Deterrence	Flash strong white light and predefined voice upon invaders detected. Support 10 more different predefined voice clips
Dual way talk	Support trusted visitors / host dual-way talk
<b>System Integration</b>	
Ext. Audio Interface	1-ch audio input(mic in),2.0-2.4Vp-p,1kΩ±10%;1-ch audio output(line out),line level,impedance:600 Ω;
Built-in speaker	4Ω, 2.5Watt. Rotation with camera lens direction, up to 30m distance audible
Built-in MIC	1channel, rotation with camera lens direction, up to 8m distance voice recordable.
Audio device switch	Default use built-in speaker and MIC, manually switch to external
Alarm interface	1CH alarm input(Dry contact); 1CH alarm output
Alarm Linkage	Alarm actions, such as Preset, Cruise, Trace, Memory Card Video Record, Trigger Recording, Notify Surveillance Center, Upload to FTP/Memory Card, Send Email, etc.
Network Interface	1 RJ45 10M/100M Adaptive Ethernet (Support PoE+ )
Storage Slot	Standalone ext. memory card chamber, support microSD/TF card, up to 256GB
Serial interface	N/A (RS485/232)
Auxiliary video out	N/A(BNC/CVBS/TVI)
Reset button	Yes
Heat and Fan	Built-in temperature sensor, auto shut down at over- temperature; auto heat at cold start. No built-in fan.
Water removal	Dust and Water-resistant coating for lens cover
API	ONVIF, support TVT SDK and third-party management platform
Client	TVT N9000 1.4.5, TVT NVMS 2.0; and the third-party client, free iOS and Android App
Web Browser	IE8-11
App version	Default:5.0.1. Update to 5.1.1 per request
<b>General</b>	
Languages	Czech; English, German; Hungarian ; Italian ; Japanese ; Korean ; Portuguese, Polish;Russian, Romanian, Spanish; Spanish(Mexico);Simplified Chinese; Turkish; Traditional Chinese. etc.
Power	DC12V±20%,3000mA,PoE+ (802.3.at), AVG. 4.5Watt, Max 16.2Watt at day; 20.2Watt at night (LED on, Speaker on + PT Rotation)
Working condition	-40°C ~ 70°C (-40°F ~ 158°F) IR off, -40°C ~ 60°C IR on; Cold start≥- 25°C(1Hour waiting), ≤90%RH
Storage condition	-40°C ~ 70°C ; ≤ 95% RH
Protection	6000V Lightning Protection, Surge Protection and Voltage Transient Protection
Shield Material	Main body: Aluminum Alloy(ADC12),Decoration: Polymer(Glass fiber and Plastic)
Dimensions	Φ 130mm x 162mmH ( Φ 5.1'x 6.4)
Net Weight	Approx. 1.2Kg (2.645lb.)
Certification	IP66,IK10(include lens window), ROHS,CE,FC,3C

## Key Spec:

- Progressive scan BSI+NIR image sensor
- Up to 2560x1440 resolution
- Mini illumination:
  - Color: 0.01 lux @ (F1.6 AGC ON)
  - 0 Lux with IR
- 4x optical zoom, fast and accurate
- Smart 4 IR LEDs up to 50m, 2 White LED 30m
- Bi-directional audio, built-in Mics &Speaker
- 30m for audible warnings, 7m for voice recording
- AI-based human vehicle detection &classification and tracking, perimeter precaution, cross line, etc.
- SD/TF card chamber, Reset button, Alarm in/out
- PoE+ or DC12V power supply, easy installation
- IP66 Water-proof, IK10, -40°C~70°C
- Onvif, API, SDK, IE/NVR/VMS/free mobile Apps



## Dimensions(mm/inch):



\*All texts,pictures and data subject to change without notice.