



Network

Fisheye

## TNF-9010

12MP sensor Fisheye Camera - For parking guidance



### Key Features

- Up to 30fps @ 3,008 x 3,008 resolution
- Stereographic type lens enhances images on the edges
- 360° monitoring with onboard dewarping
- AI based parking detection identifies up to 16 lots
- Various LED colors & single/split mode
- Central/side raceway installations
- Defocus/audio detection and tampering
- Integrated to emergency alerts with alarm & audio I/O

# TNF-9010

12MP sensor Fisheye Camera - For parking guidance



## Specifications

### Video

<b>Imaging Device</b>	1/2.3" 12MP CMOS
<b>Resolution</b>	Original view(1:1): 3008x3008~480x480, Quad view: 3584x2688~640x480, Q1/Q2/Q3/Q4(4:3): 1792x1344~640x480
<b>Max. Framerate</b>	H.265/H.264: Max.30fps/25fps@3008x3008(60Hz/50Hz), MJPEG: Max.30fps/25fps@1080x1080(60Hz/50Hz)
<b>Min. Illumination</b>	Color: 0.39 Lux (F2.2, 1/30sec)
<b>Video Out</b>	CVBS : 1.0 Vp-p / 75Ω composite, 720x480(N), 720x576(P), for Installation

### Lens

<b>Focal Length (Zoom Ratio)</b>	1.08mm fixed focal
<b>Max. Aperture Ratio</b>	F2.2
<b>Angular Field of View</b>	H: 187° / V: 187° / D: 187°
<b>Min. Object Distance</b>	0.5m(1.64ft)

### Pan / Tilt / Rotate

<b>Pan / Tilt / Rotate Range</b>	Rotate : +/- 180
----------------------------------	------------------

### Operational

<b>Camera Title</b>	Displayed up to 85 characters
<b>Day &amp; Night</b>	Auto(Electrical)
<b>Backlight Compensation</b>	BLC, HLC, WDR, SDDR
<b>Wide Dynamic Range</b>	extremeWDR (120dB)
<b>Digital Noise Reduction</b>	SSNR V
<b>Motion Detection</b>	8ea, 8point polygonal zones
<b>Privacy Masking</b>	32ea, polygonal zones - Color: Grey/Green/Red/Blue/Black/White - Mosaic
<b>Gain Control</b>	Low / Middle / High
<b>White Balance</b>	ATW / Narrow ATW / AWC / Manual / Indoor / Outdoor
<b>Electronic Shutter Speed</b>	Minimum / Maximum / Anti flicker (1/5~1/12,000sec)
<b>Video Rotation</b>	Flip, Mirror
<b>Analytics</b>	- Parking detection based on AI engine (LED color: Green/Red/Blue/Pink/Yellow/Skyblue/Purple) - Analytics events : Defocus detection, Motion detection, Tampering
<b>Alarm I/O</b>	1/1
<b>Alarm Triggers</b>	Analytics, Network disconnect, Alarm input
<b>Alarm Events</b>	File upload via FTP and e-mail Notification via e-mail SD/SDHC/SDXC or NAS recording at event triggers Alarm output PTZ Preset Handover Audio clip playback LED status
<b>Audio In</b>	Selectable(mic in/line in) Supply voltage: 2.5VDC(4mA), Input impedance: 2K Ohm
<b>Audio Out</b>	Line out, Max. output level: 1Vrms

## Network

<b>Ethernet</b>	Metal shielded RJ-45(10/100BASE-T)
<b>Video Compression</b>	H.265/H.264: Main/Baseline/High, MJPEG
<b>Audio Compression</b>	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
<b>Smart Codec</b>	Manual(5ea area), WiseStream II
<b>Bitrate Control</b>	H.264/H.265: CBR or VBR MJPEG: VBR
<b>Streaming</b>	Unicast(20 users) / Multicast Multiple streaming(Up to 10 profiles)
<b>Protocol</b>	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)
<b>Security</b>	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, pre-installed) Secure by default certificate HTPM (Hanwha Trusted platform module) Secure OS/Boot/Storage, Verify firmware forgery
<b>Application Programming Interface</b>	ONVIF Profile S/T SUNAPI(HTTP API) Wisenet open platform(TBD)

## General

<b>Webpage Language</b>	English, Korean, Chinese, French, Italian, Spanish, German, Japanese, Russian, Swedish, Portuguese, Czech, Polish, Turkish, Dutch, Hungarian, Greek
<b>Edge Storage</b>	Micro SD/SDHC/SDXC 1slot 512GB
<b>Memory</b>	4096MB RAM, 512MB Flash

## Environmental & Electrical

<b>Operating Temperature / Humidity</b>	-10°C ~ +50°C (14°F ~ +122°F) / Less than 95% RH
<b>Storage Temperature / Humidity</b>	-50°C ~ +60°C(-58°F ~ +140°F) / Less than 95% RH
<b>Input Voltage</b>	PoE(IEEE802.3af, Class3), 12VDC
<b>Power Consumption</b>	PoE : Max 12.95W, Typical 10W 12VDC: Max 10W, Typical 8.3W

## Mechanical

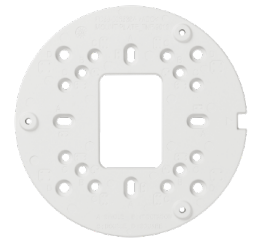
<b>Color / Material</b>	White / Aluminum
<b>RAL Code</b>	RAL9003
<b>Product Dimensions / Weight</b>	Ø158x80.5mm(6.22x"3.17), 1,280g(2.82lb)

## DORI (EN62676-4 standard)

<b>Detect (25PPM/ 8PPF)</b>	34.9m(114.49ft)
<b>Observe (63PPM/ 19PPF)</b>	13.9m(45.60ft)
<b>Recognize (125PPM/ 38PPF)</b>	7.0m(22.96ft)
<b>Identify (250PPM/ 76PPF)</b>	3.5m(11.48ft)

# TNF-9010

12MP sensor Fisheye Camera - For parking guidance



CAD

Unit: mm [inch]

Unit : mm [inch]

