

TNM-P9022EPT3-Z

2MP x 4CH H.265 Explosion Proof Panoramic 209° Network Camera

Description

The TNM-P9022EPT3-Z is a cFmus Class I/II/III, Division 1 (Groups: B, C, D, E, F, G) and IECEx & ATEX Zone 1/21 (IIB+H2/IIIC) camera system. The housing is proudly designed and manufactured in the USA to exceed the highest global industry standards for safe operation in hazardous or potentially combustible environments and in the most extreme weather conditions.

The TNM-P9022EPT3-Z utilizes an industry first patented multi-chambered enclosure design, with an explosion proof bulkhead used between chambers with each bulkhead including access ports to allow electrical/network connections to be safely passed through. The TNM-P9022EPT3-Z is designed with corrosion resistant marine-grade aluminum with an IP66/67 Type 4X rating for protection against water/dust particles and is certified to withstand temperatures ranging from -20°C to +55°C. The enclosure also features a patented GORE-TEX® Breather Drain membrane system incorporated into the housing design: air within the enclosure is allowed to equalize with the surrounding atmosphere, preventing interior condensation and negating any potential damage to the onboard electronics.

The TNM-P9022EPT3-Z utilizes 802.3at Power over Ethernet (PoE+) for power and network connectivity, providing a flexible low-voltage install solution.

Key Features

- Certified for Class I/II/III, Division 1, IECEx-ATEX Zone 1/21
- PoE+
- Light weight: 12.247 kg [27lbs]
- Marine-Ready Aluminum
- Dual Patented Technology

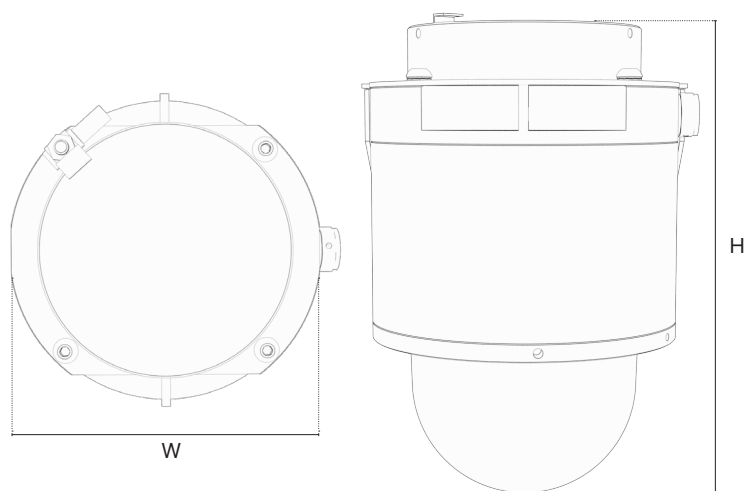


Housing
MADE IN
U. S. A.



GENERAL SPECIFICATIONS

Warranty	3-Year
Casing	Marine-ready Aluminum
Certifications	Class I/II/III Division 1 IECEx-ATEX Zone 1/21
Weight	12.247 kg [27lbs]
Power	802.3at Power over Ethernet (PoE+)
Temperature Range	-20°C to +55°C
Patents	US Patent 9917428 US Patent D858611



DIMENSIONS

Width (W)	218.44mm [8.59"]
Height (H)	347.269mm [13.672"]

GENERAL LABELS ONLY, SEE SPECIFIC MODEL FOR DETAILS

SPECIALIZING IN EXPLOSION PROOF TECHNOLOGY
8935 ALMEDA GENOA RD., HOUSTON, TEXAS 77075 USA

MODEL: DXXX-X-XXXXX **SERIAL:** XXXXXXXXXX

INPUT: VOLTS, WATTS
Class I, Zone 1, AEx/Ex db IIB+H2 T6 Gb Ta = -20°C to +55°C, Type 4X, IP66/67
Zone 21, AEx/Ex tb IIIC T85°C Db Ta = -20°C to +55°C, Type 4X, IP66

II 2 G Ex db IIB+H2 T6 Gb Ta = -20°C to +55°C, IP66
II 2 D Ex tb IIIC T85°C Db Ta = -20°C to +55°C, IP66
CERT NO. FM18ATEX0057X & IECEx FMG 18.0020X

WARNING: DO NOT OPEN WHEN ENERGIZED OR WHEN AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT
INSTALL SEAL AT ENCLOSURE ENTRY

www.spectrumcamera.com US Patent D858611

FABRICADO NO EUA
CERT NO. NCC 20.0083 X
MODELO: D(XXX)-X-XXXX-BD
ALIMENTAÇÃO: XX Vdc XX W MAX

NCC 20.0083 X
Ex db IIB+H2 T6 Gb Ta = -20°C to +55°C
Ex tb IIIC T85°C Db Ta = -20°C to +55°C
IP66/67

ATENÇÃO:
- ENTRADAS DE CABOS M20 X 1.5
- NÃO ABRA ENQUANTO UMA ATMOSFERA EXPLOSIVA PUDEIR ESTAR PRESENTE
- INSTALAR ANEL DE VITÃO NAS ENTRADAS
- NÃO ABRIR QUANDO ENERGIZADO
- RESOLUÇÃO TÉCNICA DE CARGA EEE INSTRUÍDA - VER INSTRUÇÕES

Patente EUA 9917428
Patente EUA D858611

8935 ALMEDA GENOA RD., HOUSTON, TEXAS 77075 USA

CERT NO. FM17US0156X

INPUT: VOLTS, WATTS
MODEL NUMBER: DXXX-X-XXXXX SERIAL: XXXXXXXXXX

Class I Division 1 Groups B,C,D T6, Type 4X, IP66/67
Class II/III, Division 1, Groups E,F,G T6

-WARNINGS:
Ta = -20°C to +55°C
-NOT INCLUDING KETONE OR ESTER ATMOSPHERES
-CONDUIT ENTRIES ARE M20 X 1.5
-DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT
-INSTALL SEAL AT ENCLOSURE ENTRY

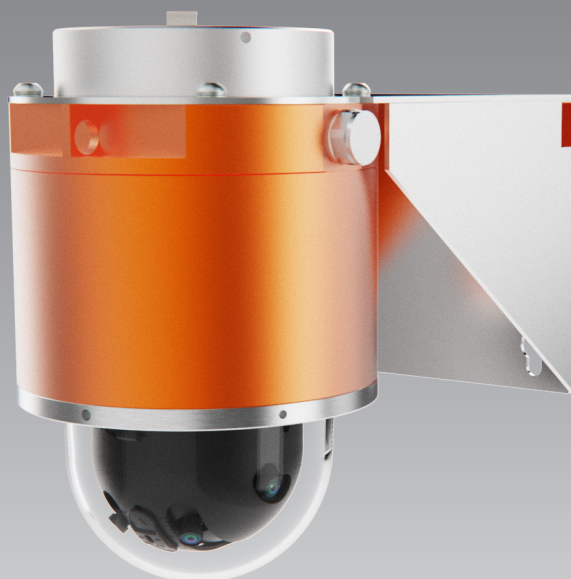
US Patent 9917428
US Patent D858611

TNM-P9022EPT3-Z

2MP x 4CH H.265 Explosion Proof Panoramic 209° Network Camera

KEY FEATURES

2MP x 4CH stitched panoramic camera, 8.3MP / 7.3MP resolution
209° Mode, 180° Mode switchable
2.8mm fixed focal lens x 4
H.265/H.264/MJPEG : 30fps stitched image
Extreme WDR (120db)
H.265, H.264, MJPEG codec, WiseStream II supported
Digital PTZ support
Intelligent Video Analytics, Visual Heatmap support
Certified for Class I/II/III, Division 1, IECEx-ATEX Zone 1/21
PoE+
Light-weight - 7.7kg [17lbs]
Marine-Ready Aluminum
Dual Patented Technology



Seamless 180° Views

The TNM-P9022EPT3-Z provides an expansive panoramic image with (4) 2MP multi-sensors, and up to a 8.3MP stitched image. It offers both 180° & 209° coverage depending on the mount, and up to a 83° vertical coverage, allowing you to monitor a wide area with a single camera.

Additionally, you can also mount 2 cameras back-to-back and achieve a complete 360° overview.

VIDEO

Imaging Device	1/2.8" CMOS x 4
Resolution	[209° Mode] 4608X1800, 4032X1576, 3456X1352, 2864X1124, 2304X900, 1728X676, 1152X452, 560X224, 720X576 [180° Mode] 4096X1800, 3584X1576, 3072X1352, 2560X1124, 2048X900, 1536X676, 1024X452, 512X224, 720X576
Maximum Frame Rate	H.265/H.264: 30fps MJPEG: 30fps
Minimum Illumination	Color: 0.1Lux(F1.6, 1/30sec) B&W: 0.01Lux(F1.6, 1/30sec)
Video Out	USB : Micro USB Type B, 1280x720 for installation

LENS

Focal Length (Zoom Ratio)	2.8mm fixed focal x 4
Maximum Aperture Ratio	F1.6
Angular Field of View	H: 209°/180°, V: 83°
Focus Control	Fixed

Pan/Tilt/Rotate

Pan/Tilt/Rotate Range	0°~355° / 0°~60° / -
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Operational

Camera Title	Displayed up to 85 characters
Day & Night	Auto (ICR)
Backlight Compensation	BLC, HLC, WDR, SSDR
Wide Dynamic Range	Extreme WDR (120dB)

Digital Noise Reduction	SSNR V
Defog	Support
Motion Detection	8ea, 8point polygonal zones
Privacy Masking	32ea, polygonal zones - Color: Grey/Green/Red/Blue/Black/White - Mosaic
Gain Control	Low/Middle/High
White Balance	ATW/AWC/MANUAL/INDOOR/OUTDOOR
Electronic Shutter Speed	Minimum/Maximum/Anti flicker (2~1/12,000sec)
Video Rotation	Flip, Mirror
Analytics	Defocus detection, Motion detection, appear/disappear, enter/exit, tampering, virtual line, audio detection
Business Intelligence	Heatmap
Alarm I/O	Selectable 2 port
Alarm triggers	Analytics, network disconnect, alarm input
Alarm Events	File upload via FTP and e-mail Notification via email SD/SDHC/SDXC recording at event triggers Alarm output
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	Metal shielded RJ-45(10/100BASE-T)

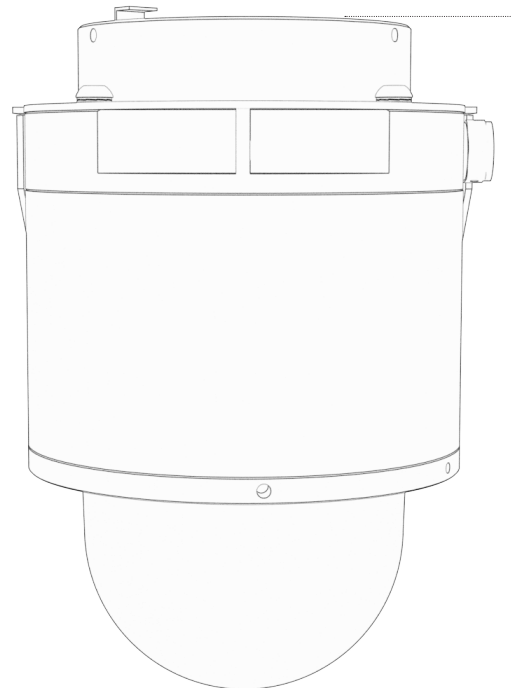
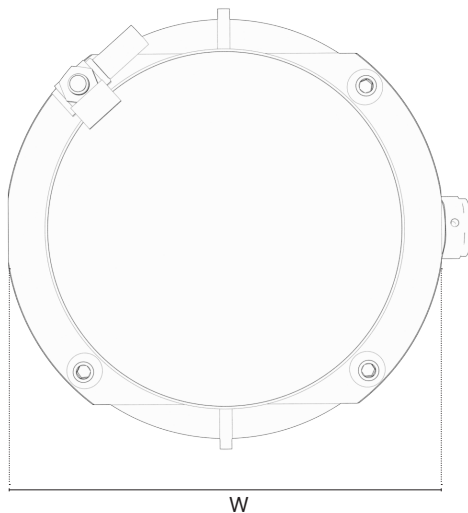
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Video Compression	H.265/H.264: Main/Baseline/High, MJPEG
Audio Compression	G.711 u-law /G.726 Selectable G.726(ADPCM) 8KHz, G.711 8KHz G.726: 16Kbps, 24Kbps, 32Kbps, 40Kbps AAC-LC: 48Kbps at 16KHz
Smart Codec	Manual(5ea area), WiseStream II
Bitrate Control	H.264/H.265: CBR or VBR MJPEG: VBR
Streaming	Unicast(20 users) / Multicast Multiple streaming(Up to 10 profiles)
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)
Application Programming Interface	ONVIF Profile S/G/T SUNAPI(HTTP API) Wisenet open platform

General

Webpage Language	English, Korean, Chinese, French, Italian, Spanish, German, Japanese, Russian, Swedish,, Portuguese, Czech, Polish, Turkish, Dutch, Hungarian, Greek Micro
Edge Storage	SD/SDHC/SDXC 2 slots 1TB (512GB X 2)
Memory	4GB RAM, 512MB Flash
Input Voltage	PoE+ (IEEE802.3at, Class4)
Power Consumption	PoE+: Maximum 18W, Typical 10.4W
Storage Temperature / Humidity	-50°C ~ +60°C (-58°F ~ +140°F) / Less than 90% RH
Operational Temperature / Humidity	Normal : -40°C~+55°F (-40°F ~ +131°F) / Intermittent : -40°C~+60°C (-40°F ~ +140°F) Less than 95% RH(Non-condensing)
Casing	Aluminum
Weight	12.247 kg [27lbs]



DIMENSIONS

Width (W)	218.44mm [8.59"]
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SPECTRUM CAMERA SOLUTIONS
SPECIALIZING IN EXPLOSION PROOF TECHNOLOGY
8935 ALMEDA GENOA RD. HOUSTON, TEXAS 77075 USA

FM APPROVED
MADE IN USA
CERT NO. FM17US0156X & FM18CA0103X

MODEL: D503-A-PNM-9022V-BD **SERIAL:** _____

INPUT: 44-57 Vdc 18W

Class I, Zone 1, AEx/Ex db IIB+H2 T6 Gb Ta = -20°C to +55°C, Type 4X, IP66
Zone 21, AEx/Ex tb IIIC T85°C Db Ta = -20°C to +55°C, Type 4X, IP66
II 2 G Ex db IIB+H2 T6 Gb Ta = -20°C to +55°C, IP66
II 2 D Ex tb IIIC T85°C Db Ta = -20°C to +55°C, IP66
CERT NO. FM18ATEX0057X & IECEx FMG 18.0020X

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www.spectrumcamera.com US Patent 9917428 US Patent D858611

SPECTRUM CAMERA SOLUTIONS
SPECIALIZING IN EXPLOSION PROOF TECHNOLOGY
8935 ALMEDA GENOA RD. HOUSTON, TEXAS 77075 USA
No. SÉRIE: TIME-DY-MN-YEAR

FABRICADO NO EUA
CERT NO. NCC 20.0083 X
MODELO: D503-A-PNM-9022V-BD
ALIMENTAÇÃO: 57Vdc 18W

Segurança
NCC 20.0083 X
Ex db IIB+H2 T6 Gb Ta = -20°C to +55°C,
Ex tb IIIC T85°C Db Ta = -20°C to +55°C
IP66

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- NÃO ABRIR QUANDO ENERGIZADO
- RISCO POTENCIAL DE CARGA ELETROSTÁTICA - VER INSTRUÇÕES

-Patente EUA 9917428
-Patente EUA D858611

FM APPROVED
CERT NO. FM17US0156X
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8935 ALMEDA GENOA RD. HOUSTON, TEXAS 77075 USA

SPECTRUM CAMERA SOLUTIONS

INPUT: 44-57 VDC 18W; **SERIAL:** _____

MODEL NUMBER: D503-A-PNM-9022V-BD **SERIAL:** _____

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