

BN8029TH/NDAA

THERMAL AND OPTICAL CAMERA
 BI-SPECTRUM COMPLIES WITH NDAA



Thermal module

Image sensor	Uncooled Vanadium Oxide Focal Plane Arrays
Maximum resolution	256x192
Pixel pitch	12 μm
Response band	8-14 μm
NETD (Equivalent Noise Temperature Difference)	$\leq 40 \text{ mK}$ at 25°C F1.0, 25Hz
Lens (focal length)	3.2 mm
IFOV	3.75 mrad
Field of view	$56^\circ \times 42^\circ$
Minimum focusing distance	0.3 m
DRI (Detection, Recognition, Identification) distance for humans	Detection: 126 m, Recognition: 32 m, Identification: 21 m
DRI distance for vehicles	Detection: 421 m, Recognition: 90 m, Identification: 53 m
Heat detection distance	20 m
Aperture	F1.1

Image Function

Bi-Spectrum Image Fusion:	Fused view of the thermal channel and overlaid details of the optical channel
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Optical module

Maximum image resolution	2592x1944
Image sensor	1/2.7" Progressive Scan CMOS
Minimum illumination	Color: 0.003 Lux (F1.6, AGC on), B/W: 0 with IR on
Shutter speed	1/5s to 1/100,000s
Lens	3.6mm
Field of view	Horizontal: 81° , Vertical: 57° , Diagonal: 108°
WDR	DWDR
IR cut filter Day/Night	Auto Switching

Smart function

Intelligent Analysis (Optical)	Intrusion, Region Entry/Exit, Line Crossing, People/Vehicle Detection, Crossing Counting, Crowd Density, Line Length, Heat Map, Unusual Sounds, Facial Detection
Intelligent Analysis (Thermal)	Intrusion, Region Entry/Exit, Line Crossing, Temperature Exception Alarm
Temperature Measurement	Global, 12 Points, 12 Areas, and 12 Lines
Temperature Range	$-20^\circ\text{C} \sim 150^\circ\text{C}$
Temperature Accuracy	$\pm 8^\circ\text{C}$
Fire Detection	Yes



FACIAL
DETECTION



PEDESTRIAN
AND VEHICLES
DETECTION



LPR



ASSISTANCE
DETECTION



LINE CROSS
DETECTION



CROWD
DENSITY
DETECTION



HEAT MAP



PERIMETER
INTRUSION
DETECTION



STATIONARY
OBJECT



COUNTING
CROSS



QUEUE LENGTH
DETECTION



RARE SOUNDS
DETECTION

Features

- Thermal and Optical Bi-Spectrum Video with a Single IP
- Uncooled Vanadium Oxide Focal Plane Detector
- Thermal: 256x192 resolution, $12 \mu\text{m} \leq 40\text{mK}$ at 25°C F1.0
- Optical: 2592 x 1944 (5MP)
- Supports reliable fire and protected area detection
- Supports various AI functions for both thermal and optical streams
- Supports dual image fusion
- Temperature exception alarm
- Temperature range: $-20^\circ\text{C} \sim 150^\circ\text{C}$
- Audio and light alarm with built-in red and blue flashing lights

Illuminator

Supplementary Light Type	IR and warm light
Supplementary Light Range	Up to 30m (IR) / 15m (Warm light)
IR Wavelength	850nm
Intelligent Supplementary Light	Yes
Warning Light	1 red and 1 blue flashing light

Integration

Alarm Input	1 Channel
Alarm Output	1 Channel
Alarm Action	SD Recording/Alarm Output/Smart Capture/FTP Upload Email Linkage/Audio Alarm Red and Blue Flashing Light
Audio Input	1 Channel
Audio Output	1 Channel / Built-in Speaker
Reset	Yes
Communication Interface	1 RJ45 10M/100M with Auto Adaptation
SD Card Slot	Built-in Micro SD Card Slot (up to 256GB)
BNC Output	No
Web Browser	IE10/11, Safari V12.1 or higher, Firefox V.52 or higher, Google Chrome V.57 or higher, Edge V.79 or higher

Red

Mainstream (Visible Light)	50Hz a 25FPS 5MP (2592 x 1944), 4MP (2592 x 1520), 3MP (2304 x 1296), 1080P (1920 x 1080), 960P (1280 x 960), 720P (1280 x 720)
Mainstream (Thermal)	50Hz/60Hz a 25FPS 1280 x 720, 640 x 480
Understream	50Hz a 25FPS 5MP, 4MP, 3MP, 1080P, 960P, 720P
Mobile Stream (Visible Light)	50Hz a 25FPS VGA (640 x 480), QVGA (640 x 480), 60Hz at 30FPS VGA (640 x 480), QVGA (640 x 480)
Video Compression	H.265/H.265+/H.264/H.264+MJPEG
Audio Compression	G.711u/G.711a
Protocols	TCP/IP, HTTP, DHCP, DNS, DDNS, RTP/RTSP, SMTP, NTP, UPnP, SNMP, HTTPS, FTP

General

Menu Languages	English, Russian, German, Italian, French, Portuguese, Spanish, Turkish, Japanese
Power	12VDC $\pm$ 20%, POE (802.3af)
Power Consumption	Max. 10.4W
Working Temperature	-35°C ~ 60°C
Humidity	90% or less
Dimensions	10.8cm x 31.46cm
Weight	1.25kg
Environment	RoHS2.0