



# VN-BSD4MOUT-IPC

## Outdoor Bullet IP Camera



Launched by VirUni Technology, is a series of AI products and solutions that adopt independent AI chip and deep learning algorithm. It focuses on human and vehicle with high accuracy, enabling users to fast act on defined targets. Based on VirUni's advanced technologies, VN-BSD4MOUT-IPC provides intelligent, simple and inclusive products and solutions.

### Series Overview

With advanced deep learning algorithm, VirUni VN-BSD4MOUT-IPCSense 2 Series network camera supports intelligent functions, such as perimeter protection and smart motion detection. With starlight technology, this series camera provides a better image effect in the condition of low illuminance.

### Functions

#### Smart Dual Light

VirUni Smart Dual Light technology adopts smart algorithm to detect targets. Usually, the IR illuminator is on at night; when the target appears in the monitoring area, the white light is on, and the camera records the full-color video and information of key events. That is, the camera links snapshot and video with full-color image. When the target is out of the monitoring area, the white light is off and the IR illuminator is on, which reduces light pollution efficiently.

#### SMD Plus

With intelligent algorithm, VirUni Smart Motion Detection technology can categorize the targets that trigger motion detection and filter the motion detection alarm triggered by non-concerned targets to realize effective and accurate alarm.

#### Perimeter Protection

With deep learning algorithm, VirUni Perimeter Protection technology can recognize human and vehicle accurately. In restricted area (such as pedestrian area and vehicle area), the false alarms of intelligent detection based on target type (such as tripwire, intrusion, fast moving, parking detection, loitering detection and gathering detection) are largely reduced.

#### Smart H.265+ & Smart H.264+

With advanced scene-adaptive rate control algorithm, VirUni smart encoding technology realizes the higher encoding efficiency than H.265 and H.264, provides high-quality video, and reduces the cost of storage and transmission.

#### Features:

- 4-MP 1/2.9" CMOS image sensor, low luminance, and high definition image.
- Outputs max. 4 MP (2688 × 1520)@20 fps, and supports 2560 × 1440 @25/30 fps.

- H.265 codec, high compression rate, ultra-low bit rate.
- Built-in warm light and built-in IR LED, the max. IR light distance is 60 m and max. warm light is 50 m.
- ROI, SMART H.264+/H.265+, flexible coding, applicable to various bandwidth and storage environments.
- Rotation mode, Wide Dynamic Range(WDR), 3D NR, HLC, BLC, digital watermarking, applicable to various monitoring scenes.
- Intelligent monitoring: Intrusion, tripwire (the two functions support the classification and accurate detection of vehicle and human).
- Abnormality detection: Motion detection, video tampering, audio detection, no SD card, SD card full, SD card error, network disconnection, IP conflict, illegal access, and voltage detection.
- Alarm: 1 in, 1 out; audio: 1 in, 1 out; supports max. 256 G Micro SD card; built in MIC.
- 12 VDC/Power Over Ethernet, easy for installation.
- IP67, IK10 (optional) protection.
- SMD Plus.
- Support tamper proof, water proof and dust proof.



#### Full-color

With high-performance sensor and large aperture lens, VirUni Full-color technology can display clear colorful image in the environment of ultra-low illuminance. With this photosensitivity technology, the camera can capture more available light, and display more colorful image details.

#### Cyber Security

VirUni network cameras employ a series of security technologies, including security authentication and authorization, access control protocols, trusted protection, encrypted transmission and encrypted storage. These technologies improve the camera's defense against external cyber threats and prevent malicious programs from compromising the device.

#### Protection (IP67, Wide Voltage)

IP67: The camera passes a series of strict test on dust and soak. It has dust-proof function, and the enclosure can work normally after soaking in 1 m deep water for 30 minutes.

Wide voltage: The camera allows  $\pm 30\%$  (for some power supplies) input voltage tolerance (wide voltage range), and it is widely applied to outdoor environment with instable voltage.

## Technical Specification

### Camera

Image Sensor	1/2.9" CMOS
Max. Resolution	2688 (H) × 1520 (V)
ROM	128 MB
RAM	128 MB
Scanning System	Progressive
Electronic Shutter Speed	Auto/Manual 1/3 s–1/100,000 s
Min. Illumination	0.006 Lux@F1.6(Color,30IRE) 0.0006 Lux@F1.6(B/W,30IRE) 0 lux (Illuminator on)
S/N Ratio	>56 dB
Illumination Distance	Up to 60 m (195.85 ft) (IR) Up to 50 m (164.04 ft) (Warm light)
Illuminator On/Off Control	Auto; Manual
Illuminator Number	2 (IR LED); 2 (Warm light)
Pan/Tilt/Rotation Range	Pan: 0°–360° Tilt: 0°–90° Rotation: 0°–360°

### Lens

Lens Type	Fixed-focal				
Lens Mount	M12				
Focal Length	3.6 mm; 6 mm; 8 mm				
Max. Aperture	F1.6				
Field of View	3.6 mm: H: 84°; V: 42°; D: 101° 6 mm: H: 52°; V: 28°; D: 61° 8 mm: H: 40°; V: 23°; D: 46°				
Iris Control	Fixed				
Close Focus Distance	3.6 mm: 1.7 m (5.58 ft) 6 m: 3.2 m (10.50 ft) 8 mm: 4.6 m (15.09 ft)				
DORI Distance	Lens	Detect	Observe	Recognize	Identify
	3.6 mm	85.4 m (208.18 ft)	34.2 m (112.20 ft)	17.1 m (56.10 ft)	8.5 m (27.89 ft)
	6 mm	124.0 m (406.82 ft)	49.6 m (162.73 ft)	24.8 m (81.36 ft)	12.4 m (40.68 ft)
	8 mm	150.4 m (493.44 ft)	60.2 m (197.51 ft)	30.1 m (98.75 ft)	15.0 m (49.21 ft)

### Intelligence

IVS (Perimeter Protection)	Intrusion, tripwire (the two functions support the classification and accurate detection of vehicle and human)
Smart Search	Work together with Smart NVR to perform refine intelligent search, event extraction and merging to event videos

### Video

Video Compression	H.265; H.264; H.264H; H.264B; MJPEG (Only supported by the sub stream)
Smart Codec	Smart H.265+; Smart H.264+

Video Frame Rate	Main stream: 2688 × 1520@(1–20 fps)/2560 × 1440@(1–25/30 fps) Sub stream: 704 × 576@(1–25 fps)/704 × 480@(1–30 fps) *The values above are the max. frame rates of each stream; for multiple streams, the values will be subjected to the total encoding capacity.
Stream Capability	2 streams
Resolution	4M (2688 × 1520); 4M (2560 × 1440); 3M (2304 × 1296); 1080p (1920 × 1080); 1.3M (1280 × 960); 720p (1280 × 720); D1 (704 × 576/704 × 480); VGA (640 × 480); CIF (352 × 288/352 × 240)
Bit Rate Control	CBR/VBR
Video Bit Rate	H.264: 32 kbps–6144 kbps H.265: 12 kbps–6144 kbps
Day/Night	Auto(ICR)/Color/B/W
BLC	Yes
HLC	Yes
WDR	120 dB
White Balance	Auto; natural; street lamp; outdoor; manual; regional custom
Gain Control	Auto; Manual
Noise Reduction	3D NR
Motion Detection	OFF/ON (4 areas, rectangular)
Region of Interest (RoI)	Yes (4 areas)
Smart Illumination	Yes
Image Rotation	0°/90°/180°/270° (Support 90°/270° with 2688 × 1520 resolution and lower)
Mirror	Yes
Privacy Masking	4 areas
Audio	
Built-in MIC	Yes
Audio Compression	G.711a; G.711Mu; G.726; PCM
Alarm	
Alarm Event	No SD card; SD card full; SD card error; network disconnection; IP conflict; illegal access; motion detection; video tampering; tripwire; intrusion detection; audio detection; voltage detection; SMD; security exception; external alarm
Network	
Network Port	RJ-45 (10/100 Base-T)
SDK and API	Yes
Network Protocol	IPv4; IPv6; HTTP; TCP; UDP; ARP; RTP; RTSP; RTCP; RTMP; SMTP; FTP; SFTP; DHCP; DNS; DDNS; NTP; Multicast; ICMP; IGMP; P2P
Interoperability	ONVIF Compliant(Profile S/Profile T/Profile G); CGI
User/Host	6 (Total bandwidth: 36 M)
Storage	FTP; SFTP; Micro SD card (support max. 256 GB)
Management Software	SmartVSS Lite; VSS; VNSS
Browser	IE; Chrome; Firefox

Mobile Client	iOS; Android
Cyber Security	Configuration encryption; trusted execution; Digest; security logs; WSSE; account lockout; syslog; video encryption; 802.1x; IP/MAC filtering; HTTPS; trusted upgrade; trusted boot; generation and importing of X.509 certification

#### Port

Audio Input	1 channel (RCA port)
Audio Output	1 channel (RCA port)
Alarm Input	1 channel in: 5 mA 3–5 VDC
Alarm Output	1 channel out: 300mA 12 VDC

#### Power

Power Supply	12 VDC/PoE (802.3af)
Power Consumption	Basic: 2 W (12 VDC); 2.6 W (PoE) Max. (H.265+ intelligence on + WDR + illuminator on): 6.1 W (12 VDC); 7.2 W (PoE)

#### Environment

Operating Temperature	–40 °C to +60 °C (–40 °F to +140 °F)
Operating Humidity	≤95%
Storage Temperature	–40 °C to +60 °C (–40 °F to +140 °F)
Storage Humidity	≤95%
Protection	IP67, water proof and dust proof; IK10 (optional)
Anti-corrosion Level	Low

#### Structure

Casing Material	Metal
Product Dimensions	238.5 mm × 90.7 mm × 90.7 mm (9.39" × 3.57" × 3.57") (L × W × H)
Net Weight	0.72 kg (1.59 lb)
Gross Weight	0.95 kg (2.09 lb)