



# BNS TOTAL CATALOG

Total Security Solution



# CEO's message

BnS Co., Ltd. is a CCTV software and hardware company. The video and audio equipment market has been growing steadily.

Procurement (video surveillance system MAS)  
Distribution (CCTV, access control, beam projector, etc.)  
Expanding business to construction  
(information and communication, electrical work)  
Based on the full support and trust of our customers,  
The domestic market is, of course,  
developing into overseas markets as well.  
In addition, through continuous research and  
development, manufacturing and  
We are becoming a company that performs all  
distribution functions.

In the future, all executives and employees of B&S Co., Ltd.  
Not satisfied with the current situation,  
"A company that looks forward to today more than  
yesterday and tomorrow more than today."  
We will do our best to make it happen.  
thank you

## 01 Core Values

### Bear the responsibility

We take responsibility for our customers who trust us.

### Notable

Skills and values worthy of everyone's attention

### Sincerely

I will make it with all my sincerity.

## 02 General Information

Company Name	BNS Co.,Ltd
CEO	Gyeongin - Shin
Location	7-1 Donggwang-gil, Chuncheon-si, Gangwon-do
Establishment date	2019. 08. 07
Sectors	Construction, manufacturing, wholesale and retail, services
Event	Information and communication construction business, electrical construction business broadcasting and video equipment, CCTV, computer manufacturing, etc.

## 03 Main Business Areas

### 1 Information and Communication Corporation

- CCTV installation and maintenance
- Electrical work

### 2 SI business

- SI design

### 3 Solution

- Parking control solution
- Integrated control solution
- Flame detection solution
- Long-distance video transmission solution

### 4 Video surveillance device manufacturing

- CCTV camera
- Video storage device





# HISTORY

2012 - 2020

- Start of computer and communication business

2012

- Launch of BNS brand CCTV

2017

- Signed a contract with Beam Projector (Epson) and Yun's Gangwon Distributor
- Gobo light (LED floor advertising) procurement registration (Korea LED)

2018

- Establishment of BNS Company Co., Ltd.
- Registration of information and communication construction business
- Signed Korean distributor agreement (Tiandy, EMW)
- Introducing parking control business

2019

Establishment of BNS Corporation

- Factory registration completed
- Agency agreement (Commax Secu Center, JWC Networks)

2020

- Chinese factory contract
- Direct production verification  
(monitoring and detection equipment, software)
- BNS thermal imaging camera launched
- Launch of BNS brand analog camera and DVR
- BNS brand IP camera, NVR launched
- Launch of BNS brand Body Detection camera
- Network Camera Panel CE certification
- Network Thermal Camera CE certification
- Establishment of BNS Co., Ltd. headquarters
- Company with excellent technological capabilities



# HISTORY

2021 - 2023

- Export of camera to Japan

2021

- Supplied wireless bridge and camera to Ho Chi Minh City, Vietnam
- Acquisition of quality management system (ISO9001)
- IDIS agency agreement
- Establishment of a corporate research center
- Venture business certification
- BNS new lineup T-Series launched
- Smart Farm Korea product registration

2022

- Direct production confirmation (video surveillance device, video recording device)
- Patent application (electronic device, method and computer-readable storage medium for body detection)
- Patent application (bridge camera device and CCTV system including it)
- Patent application (video-based abnormal situation monitoring method and system)
- Acquisition of safety and health management system (ISO45001:2018)
- Acquisition of environmental management system (ISO14001:2015)
- Management innovative small business MAINBIZ certification
- Export of long-distance wireless bridge to Japan
- Camera sponsorship for JTBC drama "Empire of Law"
- BNS 36x PTZ camera TTA certification
- Partner agreement (Intercoex, CPRO)
- Video surveillance device MAS product registration
- Distributorship agreement (TVT)

2023

- Camera sponsorship for JTBC drama "Miracle Brothers"
- ENA drama 'Kidnapping Day' camera sponsorship
- Selected as a promising small and medium enterprise in Gangwon-do
- Certified as a family-friendly company
- Participation in overseas exhibitions (Tokyo Big Sight)
- Participation in domestic exhibitions (Chuncheon Architecture Expo, KINTEX Security Expo, Changwon Smart Farm)
- Technology-innovative small and medium-sized business INNOBIZ certification



# Patent and trademark registration certificate

This section displays a grid of eight official certificates from the Korean Intellectual Property Office (KIPO). The certificates include:

- 특허증 (Patent Certificate):** Four certificates for various inventions, including a camera lens and a display device.
- 상표등록증 (Trademark Registration Certificate):** One certificate for the 'BnS' logo.
- 디자인등록증 (Design Registration Certificate):** Three certificates for product designs, including a camera lens and a display device.

Each certificate includes the registration number, date, and a QR code for verification. The bottom of each certificate features the KIPO logo and the name of the Commissioner, Kim Dong-rae.

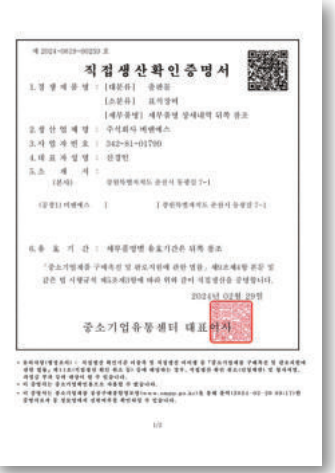
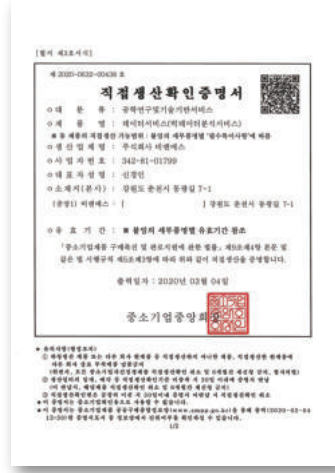
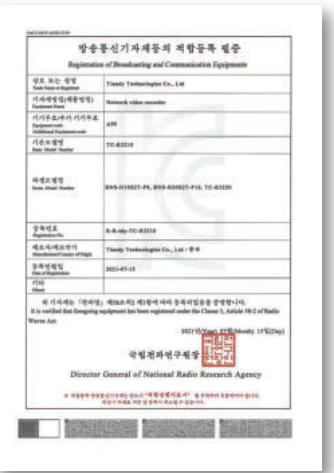
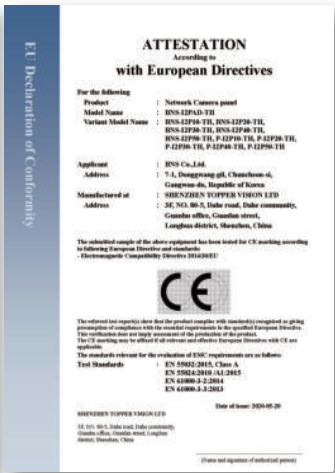
# Registration and certification status

This section displays a grid of various business registration and certification documents:

- 사업자등록증 (Business Registration Certificate):** Certificate for BnS Corporation, registration number 442-81-01799.
- 기업부설연구소 인정서 (Research Institute Recognition Certificate):** Certificate for the BnS Research Institute, issued by the Korea Research Council.
- 중소기업확인서 (Small Business Confirmation Certificate):** Certificate for BnS Corporation, issued by the Ministry of SMEs and Startups.
- 벤처기업확인서 (Venture Business Confirmation Certificate):** Certificate for BnS Corporation, issued by the Ministry of SMEs and Startups.
- 특수기업확인서 (Special Business Confirmation Certificate):** Certificate for BnS Corporation, issued by the Ministry of SMEs and Startups.
- 정보통신공사업등록증 (Information and Communication Business Registration Certificate):** Certificate for BnS Corporation, issued by the Korea Communications Commission.
- 전기공사업 등록증 (Electrical Business Registration Certificate):** Certificate for BnS Corporation, issued by the Korea Electric Power Corporation.
- 한국기업인증원 (Korea Enterprise Certification Institute) Certificates:** Multiple certificates for BnS Corporation, including ISO 9001, ISO 14001, and ISO 45001.
- 기술혁신형 중소기업 (Main-Biz) 확인서 (Innovation-oriented Small Business Confirmation Certificate):** Certificate for BnS Corporation, issued by the Ministry of SMEs and Startups.
- 가족친화인증서 (Family-friendly Certification Certificate):** Certificate for BnS Corporation, issued by the Ministry of SMEs and Startups.

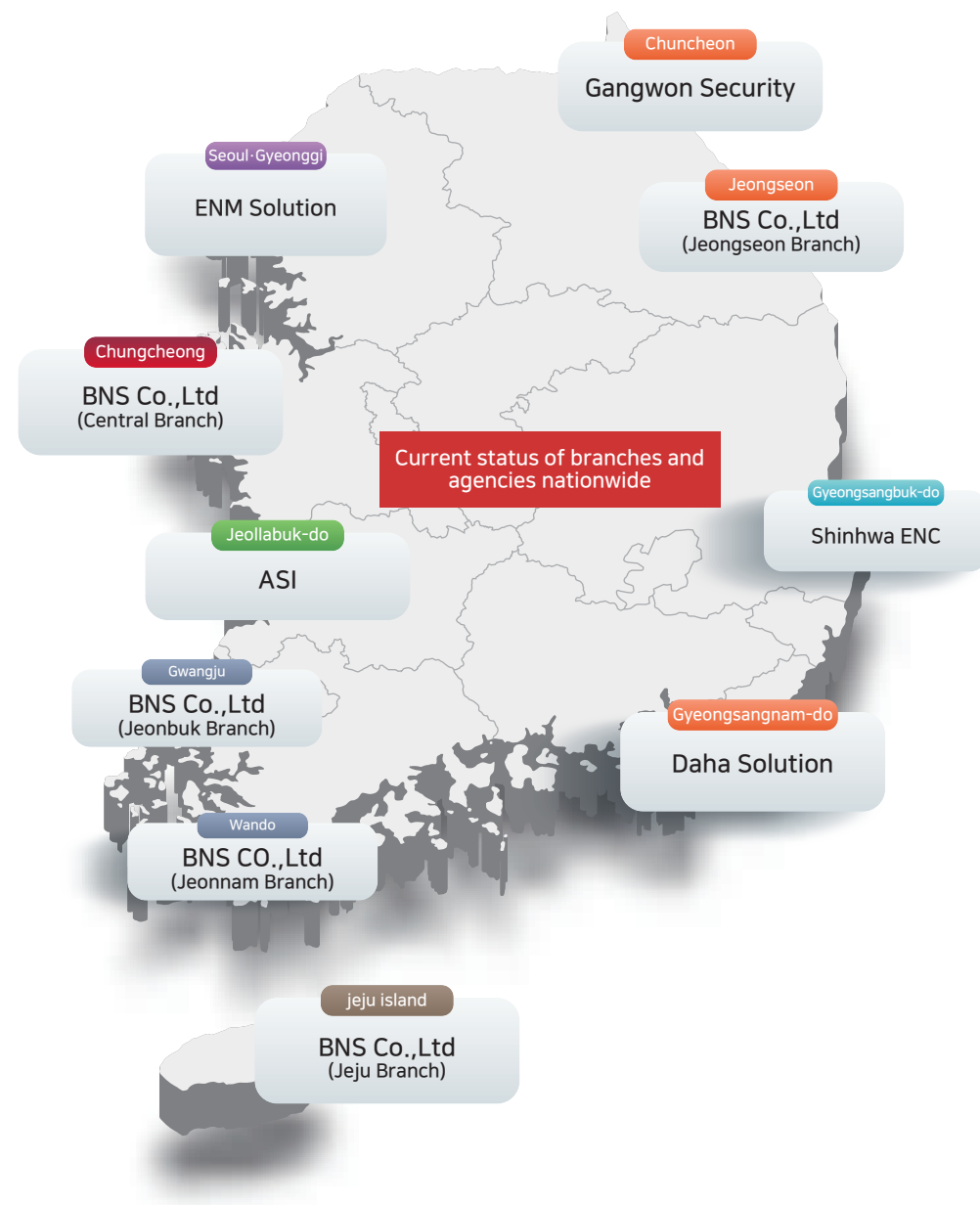
Each document includes the company name, registration number, and the date of issuance. The bottom of each document features the name of the official, Kim Dong-rae.







## Branch and agency status



### ► Headquarters and branch offices

<b>Head office</b>	7-1 Donggwang-gil, Chuncheon-si, Gangwon-do
<b>Jeongseon Branch</b>	64 Bibong-ro, Jeongseon-eup, Jeongseon-gun, Gangwon-do
<b>Central Branch</b>	#110, 364 Galmae-ro, Sejong Special Self-Governing City (Eojin-dong, Sejong Prugio City)
<b>Jeonbuk Branch</b>	10, Hakso-ro 62beon-gil, Dong-gu, Gwangju (Sotae-dong)
<b>Jeonnam Branch</b>	173, Cheonghaejindong-ro, Wando-eup, Wando-gun, Jeollanam-do
<b>Jeju Branch</b>	1st floor, 18 Hagwi 5-gil, Aewol-eup, Jeju-si, Jeju-do

## Construction and delivery performance

### Sports facilities

Construction name	Order
Yangyang Seolhaewon CC CCTV delivery and installation	Seolhaewon CC
Chuncheon The Players CC CCTV delivery and installation	The Players CC
Hongcheon Cascadia CC CCTV delivery and installation	Cascadia CC
Saam-ri tennis court CCTV installation work	Jooheon Construction Co., Ltd.
Additional CCTV installation and maintenance work at the stadium	Jeongseon-gun Facility Management Corporation
Delivery and installation of Oak Valley CCTV equipment and network equipment	Gangwon-do Road Management Office Northern Branch
CCTV integrated control center construction project (Pyeongchang Winter Olympics) - 6 venues including Pyeongchang area, Yongpyeong area, and Jeongseon Stadium	KT&G Core Co.,Ltd
CCTV installation work outside Donggang City Star CC parking lot	SM Donggang Sistar CC
Hongcheon Hildrosis CC camera delivery and installation	Hongcheon Hildrosis CC

### Medical and educational facilities

Construction name	Order
CCTV delivery and installation	Seum Child Kindergarten Honam Kindergarten
Thermal imaging camera delivery and installation (BNS-I2B-TH)	9 kindergartens including Blue Forest Kindergarten
Dongsan Middle School communication construction	Dongsan Middle School
Installation of parking breaker in public health center annex parking lot	Chuncheon City Public Health Center
Installation of video surveillance system at Mokpo Yeonghwa Middle School	Jeollanam-do Mokpo Office of Education
Seonglim Elementary School After-School Classroom Remodeling and Communication Work	Chuncheon Office of Education Gangwon-do
Chuncheon National University of Education house entrance relocation and communication facility installation work	Chuncheon National University of Education
Kangwon National University Hospital nationally designated inpatient treatment bed negative pressure room expansion project construction (CCTV)	Kangwon National University Hospital
Access control and emergency bell installation in care classroom	Cheonghae Elementary School
Jeongseon Office of Education Vehicle Gate Installation Work	Gangwon-do Jeongseon Office of Education
Network cable construction, video surveillance device installation	Gumi Office of Education Haemaru Middle School
Kangwon National University mobile solar charging system equipment installation work	Unitech
Long-term care facility CCTV installation	Angel Silver Home
Additional installation of access control system for dementia care center at senior nursing home in Jeongseon-gun	Jeongseon County Office
Temporary security equipment (CCTV) installation work for Forestry College Building No. 1 and 3 other buildings	Kangwon National University
Gangwon High School parking breaker construction	Gangwon High School



## Construction and delivery performance

### Public institutions

Construction name	Order
Seawater pumping station CCTV purchase and installation	Wando County Office
Dadohae Sunrise Park (Wando Tower) CCTV installation work	Wando County Office
Soan-myeon CCTV installation	Wando County Office
Additional installation of access control system for dementia care center at senior nursing home in Jeongseon-gun	Wando County Office
Landfill CCTV installation	Wando County Office
Yeoryang-myeon public sewage treatment facility office (operation room) remodeling electrical work, government-supplied CCTV installation work	Jeongseon-gun Waterworks and Sewerage Office
Imge-myeon public sewage treatment facility old CCTV replacement work	Jeongseon-gun Waterworks and Sewerage Office
Han River Hydropower Chuncheon Dam CCTV relocation and installation work	Yekwang Co., Ltd.
Delivery and installation of deep learning detection cameras during Seoul C-ITS demonstration project	Estrepic Co., Ltd.
Yeongdong area network and CCTV maintenance	Gangneung city
CCTV camera installation work	KNHP
Wireless AP installation work	KOREA LAND & HOUSING CORPORATION
Ministry of Environment and Resources CCTV installation work for facility monitoring	Chuncheon City Hall
Chuncheon underground shopping mall CCTV new installation and repair work	Chuncheon City Hall
CCTV installation in Hwaam Cave district	Jeongseon-gun Waterworks and Sewerage Office
City Hall recycling sorting facility communication construction	Chuncheon City Hall
Chuncheon City Hall sound equipment relocation and installation work	Chuncheon City Hall
Emergency bell system improvement work in rooms at the National Recreational Forest Management Center	Korea Forest Service National Natural Recreation Forest Management Office
Installation of community center CCTV, etc. (Support project for areas around power plant, Wonchang 1-ri)	Dongsan-myeon Office
Chungju city sanitary landfill CCTV installation work	Chungju City Facility Management Corporation
Installation of mobile cameras for illegal dumping of waste	Imgemyeon Administrative Welfare Center

### Police Office

Construction name	Order
Installation of CCTV cameras and recorders (8 locations)	Chuncheon Police Station
Installation of CCTV cameras and recorders (5 locations)	Chuncheon Police Station

### Hotels and Apartments

Construction name	Order
Chuncheon e-Pyeonhansesang Community Center CCTV delivery and installation	Chuncheon e-Pyeonhansesang Apartment Community Center
New City Coreu Apartment CCTV camera replacement and repair work	New City Coreu Apartment Resident Representative Meeting
Hupyeong Geumho Village CCTV replacement work	Hupyeong Geumho Village Resident Representative Meeting
Chuncheon Hotel Gongjicheon CCTV delivery and installation	Chuncheon Hotel Gongjicheon
Jeongseon-gun Daewon Cantabil CCTV installation and delivery	Daewon Cantabile Jeongseon
Chuncheon Udu A-2BL and Hwacheon Shineup Apartment Information and Communication Construction Section 3	KOREA LAND & HOUSING CORPORATION
Hupyeong Geumho Village CCTV replacement work	Hupyeong Geumho Village Resident Representative Meeting
Danyang Shinsung Misogium Apartment CCTV installation work	Danyang Shinsung Misogium Resident Representative Meeting
Usan Deokwon Apartment CCTV installation work	Usan Deokwon Apartment Resident Representative Meeting

### Tunnels and Transportation facilities

Construction name	Order
Omijae Tunnel CCTV delivery and installation work	Ilhwa Construction
Local road tunnel disaster prevention facility (CCTV) replacement work	Gangwon-do Road Management Office Northern Branch
Budari Tunnel Temperature and Humidity Measurement System Installation Work on Line 407	Gangwon-do Road Management Office Northern Branch
National Highway Line 5 Hwacheon Tunnel CCTV enclosure and wiring replacement work	Gangwon-do Road Management Office Northern Branch
Sabuk Underground Passage Modernization Project Communication Construction	Sabuk-eup Administrative Welfare Center
Yeoryang public bus stop vehicle gate installation work	Jeongseon-gun Traffic Management Office
Railway construction CCTV maintenance	CN System
Railroad traffic control center video surveillance system improvement project	Korail

### Military base

Construction name	Order
Delivery of CCTV installation to ammunition depot for direct unit	Unit 2218
Communication equipment A/S and maintenance	Unit 6685
Special Mobile Support Brigade (132nd Battalion) CCTV product contract installation work	Ground Operations Command
Network equipment delivery and installation	Armed Forces Financial Management Group
CCTV camera construction	Unit 7162

## Construction and delivery performance

### Farm and support business

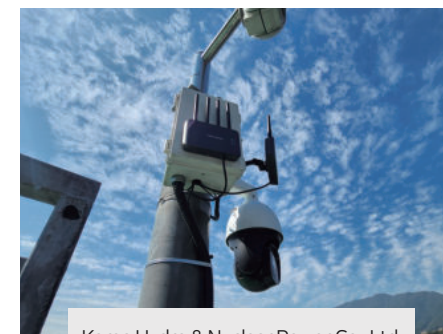
Construction name	Order
Disaster prevention system CCTV installation	individual customer
Korean beef cattle barn facility modernization installation work	individual customer
Hanwoo ICT convergence diffusion CCTV installation work	individual customer
Livestock auxiliary business CCTV construction	individual customer
Smart farm ICT integrated system CCTV delivery and installation	individual customer
Intelligent livestock facility introduction project CCTV installation	individual customer
Installation of CCTV support project	Hoseong Farm
Sampo Farm CCTV installation work	individual customer
Cheongju City CCTV quarantine infrastructure construction	individual customer
Moorim Farm CCTV installation work	individual customer
Network FULL HD CCTV delivery and installation	individual customer
CCTV support construction for each object in the livestock barn	Gwangam Farm
Cheorwon Pyeongchang Smart Farm House CCTV delivery and installation work	Easy Farm Co., Ltd.
Eco-friendly agricultural product freeze dryer remodeling and communication work	Moenaedteul Agricultural Cooperative Food Factory 2
Livestock equipment (CCTV) construction	Woori Farm, an agricultural corporation limited

### Enterprise

Construction name	Order
Ramid Group CCTV delivery and installation work	Ramid Group
E-mart communication construction	Yedam Interior
Sutasa Park CCTV camera installation	Ilhwa Construction
Legoland CCTV delivery and installation work	Chuncheon Legoland
Industrial thermal imaging camera installation	Wonik Robotics Co., Ltd.
Home automation communication construction	EAGAIA Co., Ltd.
Delivery and installation of facial recognition thermal imaging camera (pad type)	CNC Tech, SecuOn, Computer House
Information and communication network reinstallation work following the relocation of network and communication cables	Peace Labor Law Firm
Chuncheon integrated wiring construction (communication) - Saam-ri, Yongam-ri, Cheonjeon-ri, Jungri, Hupyeong-dong, Mancheon-ri, Hyoja-dong	Wonchang, Seoil Electric Daesan Electric
Delivery and installation of communication equipment	Daehan Co., Ltd.
Beam projector delivery and installation	The Players Co., Ltd.

Delivery and installation of outdoor wireless equipment	Hi-Vision Tech Co., Ltd.
Optical cable connection construction	Vision Technology
LED circular neon delivery and installation, speaker delivery and installation	Daemyung TP&E Co., Ltd.
On-site facility construction, Chuncheon 1st factory CCTV delivery and installation construction	EUbiologics Co., Ltd.
Underground vehicle access system repair work	Post office
UC Sand Co., Ltd. parking control installation work	KT Telecop Co., Ltd.
Beam projector and other sound work	Samwoo Electric Power Co., Ltd.
BNS-IMD2812-PS delivery and installation	Jeje Company
BNS-NM100B8-ES24 delivery and installation	Joeun Information Technology
BNS-NM36-BS24 delivery and installation	JC Network
BNS-NM128B8-ES24 delivery and installation work	ASI

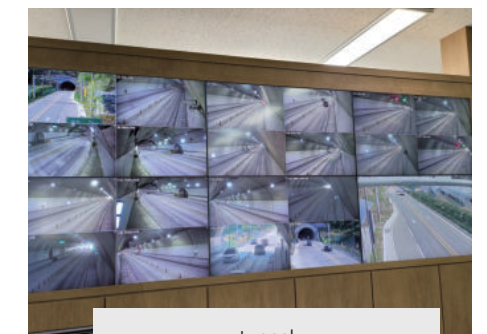
### construction photos



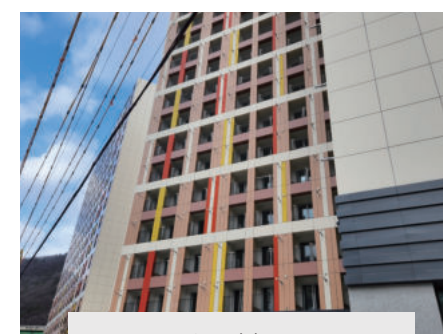
Korea Hydro & Nuclear Power Co., Ltd.  
CCTV delivery and installation photos



Chuncheon Gongjicheon Hotel  
CCTV delivery and installation photos



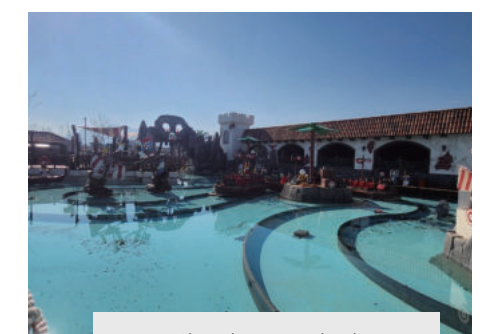
tunnel  
CCTV delivery and replacement photos



Daewon Cantabile, Jeongseon  
CCTV delivery and installation photos



tennis court Electrical and  
communication construction photos



Chuncheon Legoland  
CCTV delivery and installation photos



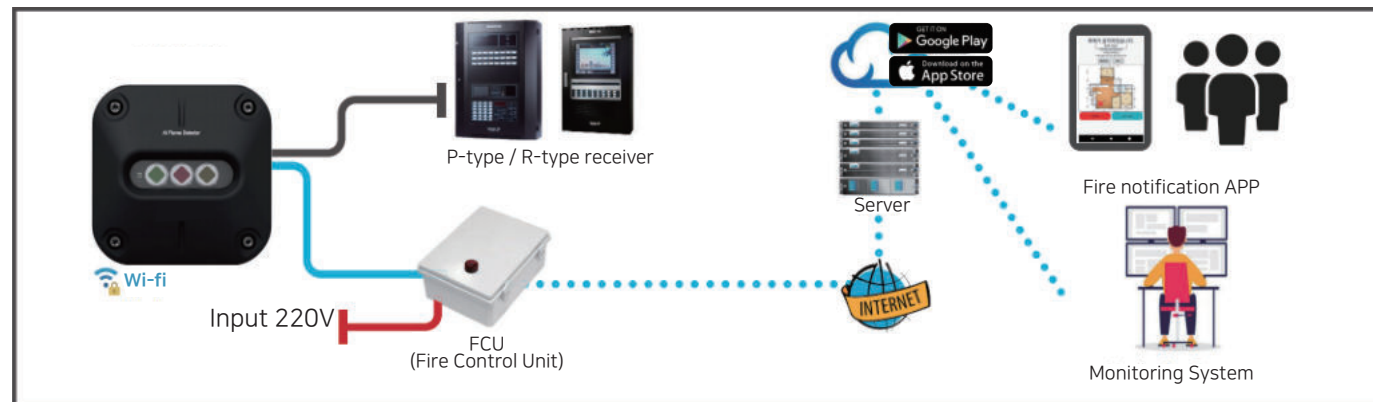
# AI intelligent flame detection solution

AI intelligent flame detection solution has fast fire detection speed and Fire alarms enable early fire response and evacuation to prevent disasters caused by fire. It is a smart safety solution.

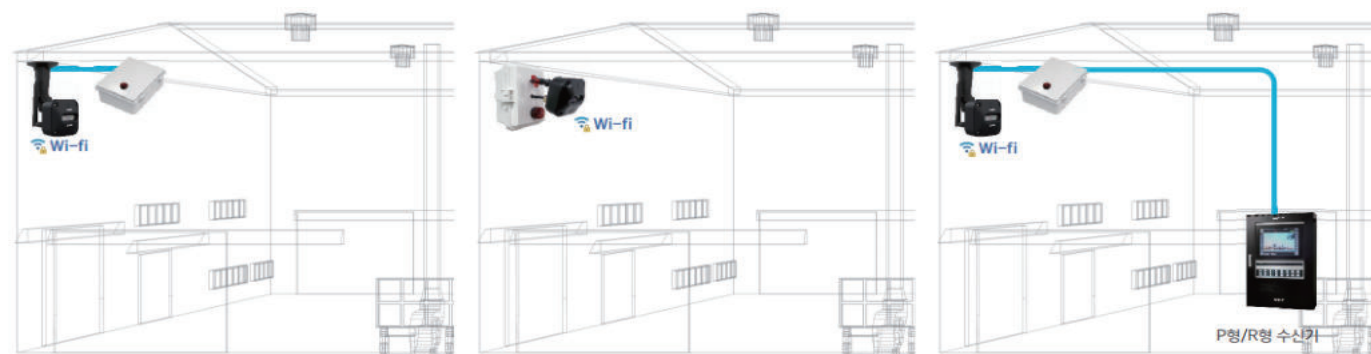
- Eliminate human fire using machine learning
- Reduces false alarm rate by recognizing only actual fire flames
- Capable of recognizing small flames in the very early stages of a fire
- Compatible with all firefighting receivers by supporting both wired and wireless
- Real-time monitoring possible through smartphone APP or PC environment
- Fast paper detection speed and reliability of fire alarm



## Wired and wireless installation configuration diagram

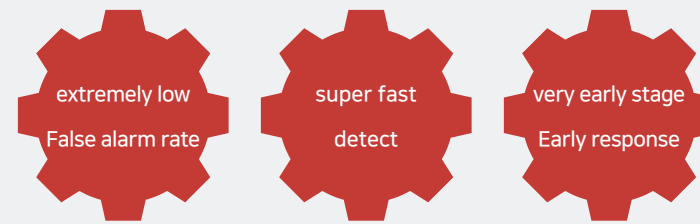


## Example of wired/wireless installation configuration



# The birth of an innovative artificial intelligence fire detector

With AI intelligent flame detectors, you can prevent fires through early response wherever you are.



AI intelligent flame detector  
New Technology  
Certification (NET) and  
Acquired innovative  
product certification



## Fast flame detection within 10 seconds

Using independently developed flame CO2 signal processing technology, small flames are quickly recognized within 10 seconds of ignition.

Existing flame detector



AI intelligent flame detector

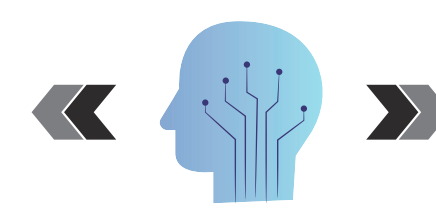


## Fire classification recognition through machine learning

It accurately distinguishes and recognizes fire/non-fire by determining whether the fire reflects human intention to use it.



Non-fire (use fire)



Machine Learning Model



fire

## Application examples

We protect valuable property and life from fires in traditional markets, cultural assets, data centers, and logistics warehouses.



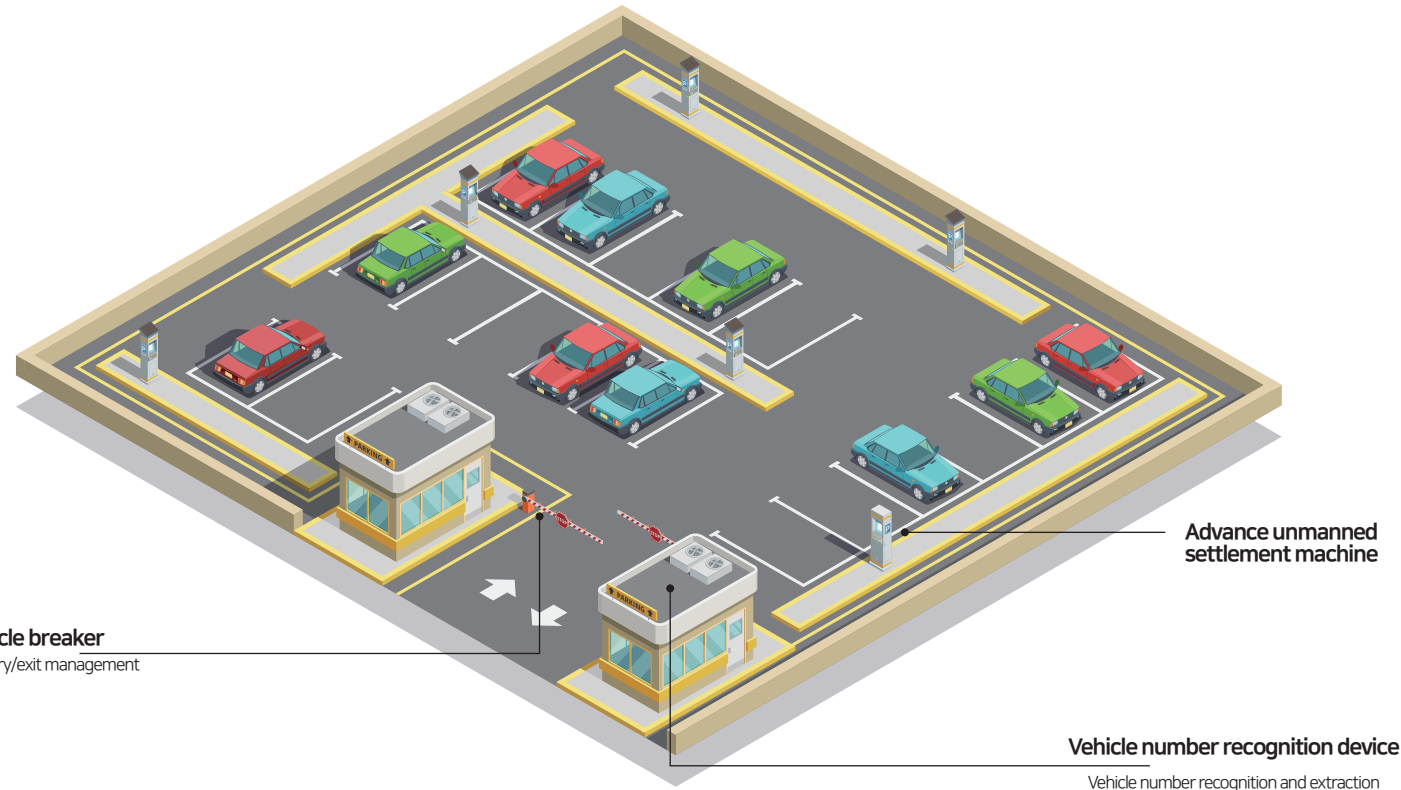


# Smart parking control solution

Counting of incoming and outgoing vehicles and management of parking information, provision of remaining parking space information and fee settlement, registration of regular vehicles and management of discount coupons, etc.

We provide a variety of parking management services to increase user convenience and enable effective parking lot operation. By applying a high-performance vehicle detection device, it is possible to detect various vehicles (passenger cars, trucks, etc.) regardless of the type and size of the vehicle.

It is possible to detect incoming and outgoing vehicles without false detection due to the influence of the surrounding environment.



## Key Features

### Unmanned parking lot operation method (card payment only)



Residents' vehicles are automatically parked by registering them on the parking management server. Visitors can only enter when a worker opens the bar after calling.

### Vehicle number recognition system



The basic type of visiting vehicle is that you can enter by calling the security office. When exiting the car, the barrier bar is automatically opened by the loop sensor.

## Fee collection system

### Vehicle number recognition device



When the vehicle leaves the vehicle, the license plate recognition device identify the vehicle number and use it in the parking management server. After checking the entry time, use the automatic payment machine at the exit. Parking fees are displayed on the monitor. Drivers can receive a discount on fares using the discount voucher provided, and for the remaining amount after the discount is applied. You can pay by credit card.

### vehicle breaker



Vehicle barriers are used for access control. Installed in the driveway, parking ticket issuance machine and it opens automatically in conjunction with the fare calculator. When a vehicle passes the Loop Coil, it automatically configured to close. Peripheral devices and billing devices. It is a fully supported device.

### Pre-integrated unmanned settlement machine



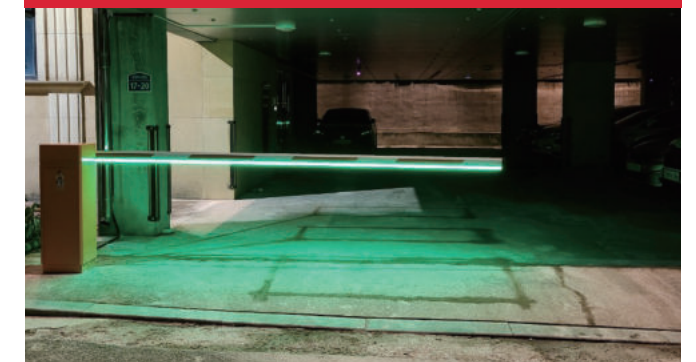
Credit card payment function  
Discount coupon application function  
Voice guidance function according to situation  
IP interphone function for making calls in case of emergency  
Receipt issuing function  
Removal function through TCP/IP communication through parking management server

## Construction and application examples

### Public parking lot



### Building and commercial parking lots



### National Museum parking lot



### Apartment and underground parking lot



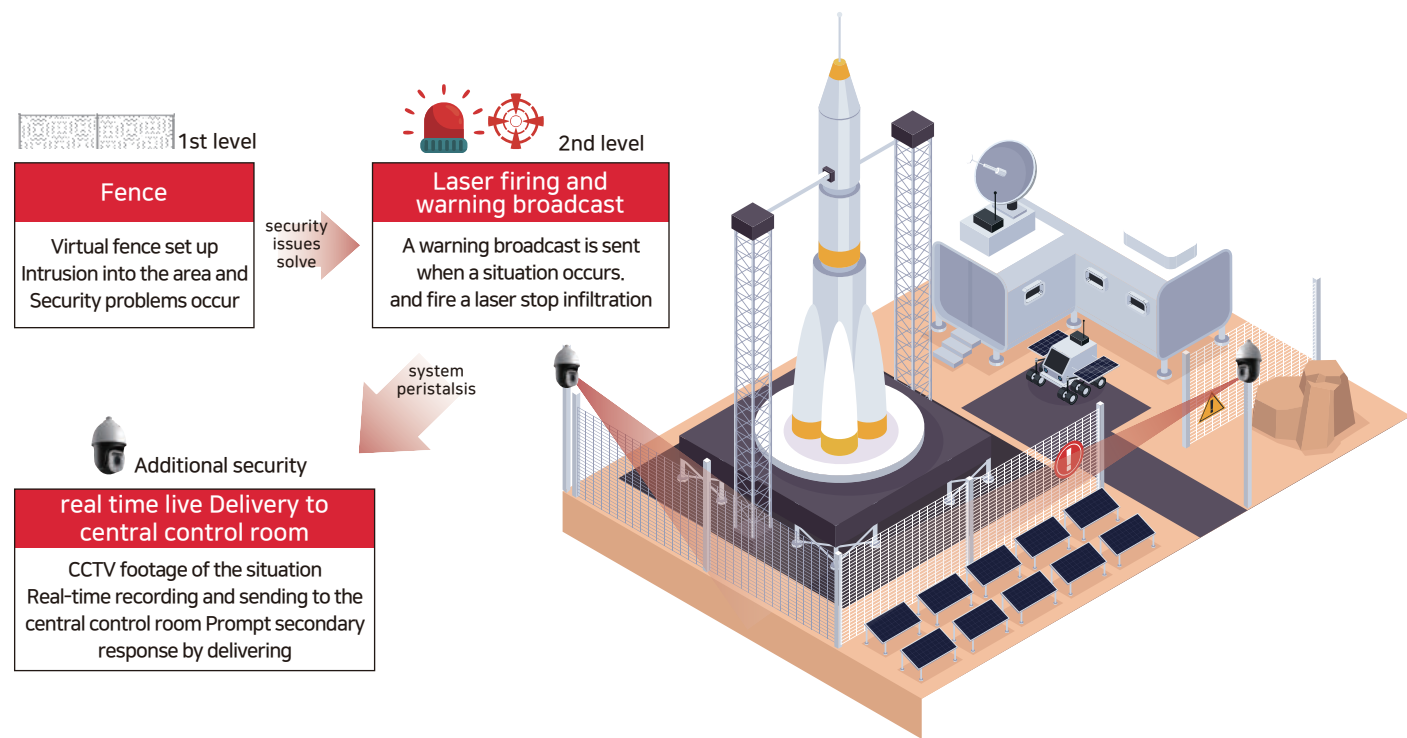


# Outskirts Surveillance Solution

Tracks moving objects, people, and cars as they enter and exit high-importance suburban areas.

A solution that monitors internal intrusions by unspecified unauthorized persons in real time.

A solution that can respond quickly and accurately by transmitting information to the control room when a situation occurs



**Intrusion detection**

Moving objects, people, cars, etc.  
 In case of unauthorized intrusion  
 Track and monitor in real time

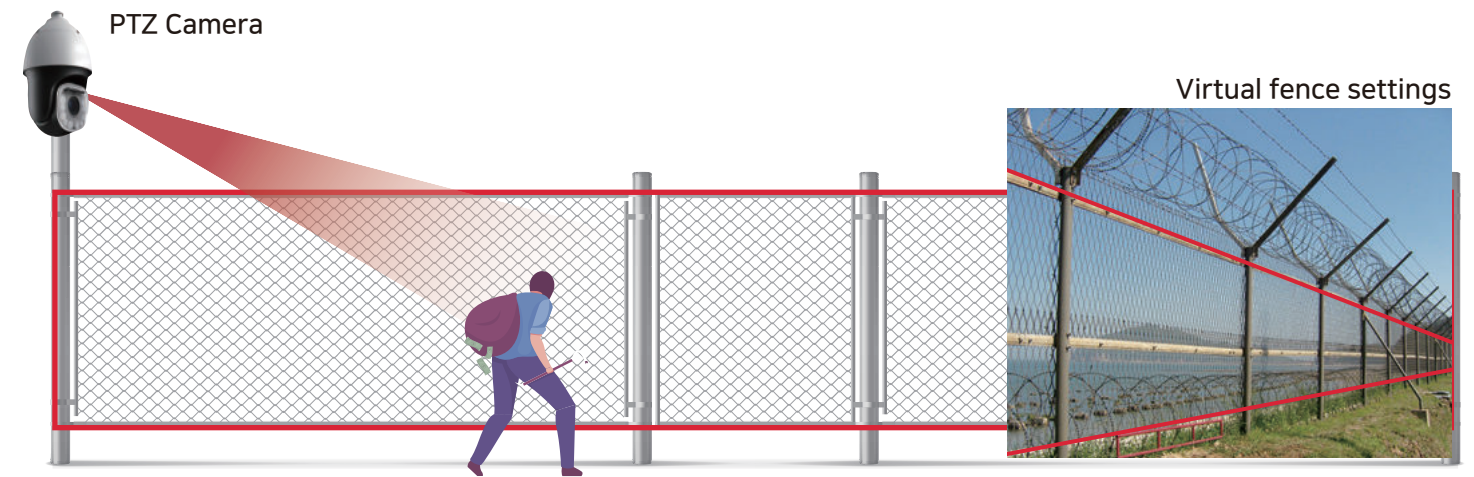
**Laser firing / Warning signal**

In case of an intrusion, a laser is applied  
 to the object. Fire and transmit  
 a warning signal.

**Delivery to central control room**

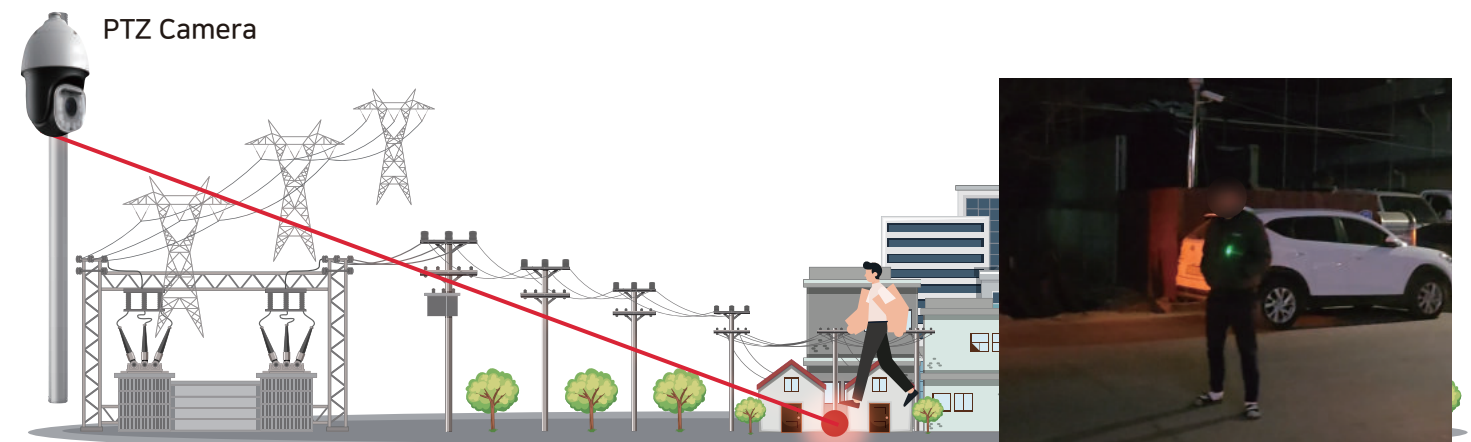
situation quickly and accurately  
 in real time to respond  
 Delivered to the central control room

## Virtual fence (fence monitoring) function



- By setting up a virtual fence on the fence, you can accurately detect an intruder in a location with weak security.
- When an alarm occurs, the camera can be magnified to accurately identify the intruder.
- Rotating camera minimizes blind spots, enabling multi-angle surveillance with one camera
- When a situation occurs, it is quickly communicated to the central control room to respond quickly and accurately.

## Human body detection and laser pointing function



- Auto-tracking function allows automatic close-up and tracking of detected objects
- The laser pointing function allows you to spot people or vehicles in environments with changing illumination levels such as sunrise or sunset, or at night. Accurate and fast identification
- When tracking an object with a rotating camera, it can be tracked by rotating more than 180 degrees.

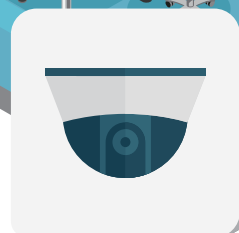
## Video Analysis Solution

# Intelligent Monitoring Systems

A real-time intelligent monitoring system that prevents incidents, accidents, disasters, and disasters in advance and responds quickly through real-time situational awareness. By analyzing video footage input from CCTV cameras in real time, we detect and track actions by meaningful events such as people and vehicles. It allows quick alarm generation, video recording, and complex search of stored images and events when an event that meets the surveillance purpose occurs.



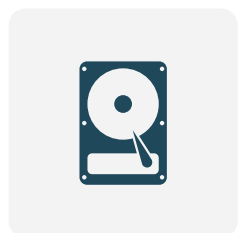
Object movement path automatic tracking



PTZ camera rotation



Person/vehicle classification

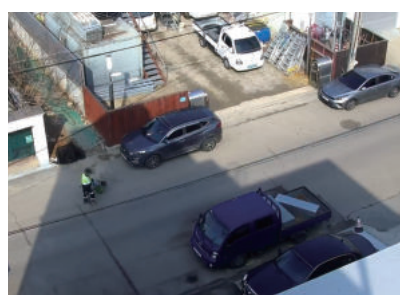


save video

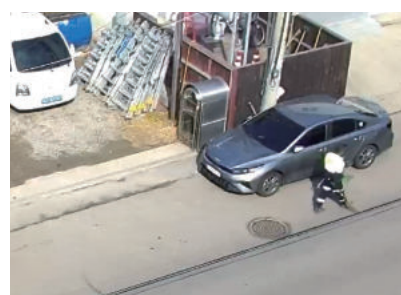
### Example of operation of automatic motion tracking surveillance camera



- Monitoring at home position
- When movement is captured by the camera, Automatic tracking started



- If the captured target is lost, the camera stops searching at that location. Return to the designated home position.



### BNS-I2SP25XH

#### IP 2MP 25x speed dome camera



- Up to 1920X1080@30fps
- Optical zoom: 25x, digital zoom 16x
- Smart IR, IR range: 150m
- S+265/H.265/H.264/M-JPEG
- Intelligent monitoring/face capture mode
- Person/vehicle classification support
- Automatic tracking support
- Plugin Free
- IP66

### BNS-I2SP33XH

#### IP 2MP 33x speed dome camera



- Up to 1920 x 1080 @ 60fps
- Optical zoom: 33x, digital zoom 16x
- Smart IR, IR range: 200m
- S+265 / H.265 / H.264 / M-JPEG
- Intelligent monitoring/face capture mode
- Person/vehicle classification support
- person recognition/vehicle recognition
- Automatic tracking support
- IP 66

### BNS-2M36WS

#### IP 2MP 36x speed dome camera



- Supports resolutions up to 1920 x 1080
- Optical zoom: 36x, digital zoom 16x
- Infrared LED, white light, alarm function
- Built-in image analysis function (tampering disappearance, invasion, auto-tracking, etc.)
- Built-in speaker for warning information and broadcasting
- Equipped with smart infrared rays according to zoom ratio
- Wiper brush installed

### BNS-5M44W

#### IP 5MP 44x speed dome camera



- Supports resolutions up to 3072 x 1728
- Optical zoom: 44x, digital zoom 16x
- Infrared LED, white light, alarm function
- Built-in video analysis function (tampering, disappearance, invasion, auto-tracking, etc.)
- Built-in speaker for warning information and broadcasting
- Equipped with smart infrared rays according to zoom ratio
- Supports Smart Defog, 3D-DNR, BLC, HLC
- Wiper brush installed





**Security performance quality  
for public institutions  
TTA Verified Ver.1  
acquired product**



TTA certified products have functional integrity, performance efficiency, compatibility, usability, reliability, security, and maintainability.

If a product is TTA certified, it is a product you can trust and use.



# BNS-4P36W

IP-4MP 36x PTZ (TTA인증)

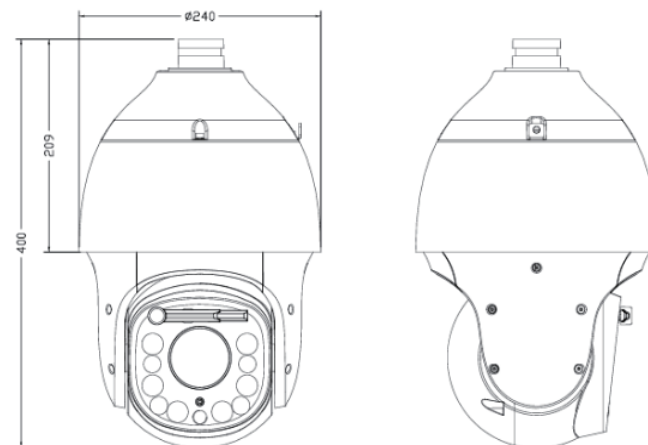


## KEY FEATURES

- Supports KC, TTA, Onvif
- Color mode 0.001 Lux, infrared black and white mode 0 Lux
- Infrared LED, white light alarm function
- Built-in 4W speaker for broadcasting
- H.265 / H.264 / MJPEG / JPEG, quad streaming support
- Infrared light transmission distance: up to 400m (smart infrared)
- Directional location subtitle function (font, color, size, special characters)
- Pan rotates up to 240°/s
- Supports Smart Defog, 3D-DNR, BLC, HLC
- Wiper brush installed
- Built-in overcurrent protection circuit



### Dimension: (mm)



	BNS-4P36W		
Image Sensor	1/1.8" CMOS Sensor, 4Mega Pixel	fan rotation speed	0.1° ~ 240°/s
Effective pixels	3096 x 1760	Tilt rotation range	-16° to 90° (auto flip)
Resolution	2560 x 1440	Tilt rotation speed	0.1° ~ 180°/s
Zoom	Optical 36x zoom, digital 32x zoom	preset	255
ultra low light	Color : 0.001Lux, B/W : 0Lux	PTZ Setting	Touring, auto parking, power on action
Day&Night	Automatic / Manual	ROI	Zoning and encoding support
Focal length	6 ~ 216mm	Direction sign Character expression	Support (font, color, size, special characters)
angle of view	64.54°(Wide) ~ 2.55°(Tele)	Ethernet	10/100 Base-T, RJ45
aperture ratio	F1.5 (wide) ~ F4.8 (tele)	ONVIF	support
focus	Automatic / Manual	Audio in/out	1 input, 1 output
Infrared transmission distance	Max 400m	Alarm in/out	4 inputs, 2 outputs
smart infrared	support	network protocol	TCP, UDP, IGMP, ICMP, ARP, RARP, PPPoE, RTCP, RTSP, RTP, SDP, HTTP, HTTPS, FTP, SMTP, DHCP, uPNP, NTP, DNS, DDNS
white light Speaker/wiper	Built In		
Fog correction	support	external storage	Micro SD
Backlight compensation	support	Operating temperature humidity	-45°C ~ 60°C
video shake correction	support	input power	AC 24V 3A
white balance	Automatic / Manual / Indoor / Outdoor / One push	Power Consumption	Max. 43W
electronic shutter	1/25 ~ 1/30,000s	Surge protection circuit	TVS 6000V, Surge 4000V
video compression	H.265 / H.264 / MJPEG	Dimension	222(Ø) x 372(H)mm
Framerate	60fps	Weight	5.5kg
audio compression	G.711 / G.711U / ADPCM / AAC		
Fan rotation range	360°		

CCTV TTA security certification  
Certification number TTA-V22-081



# BNS-2P37WS

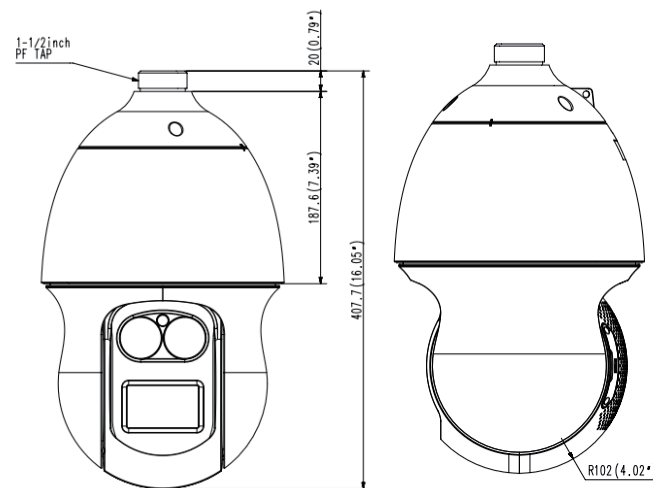
IP-2MP 37x PTZ (TTA Certification)



## KEY FEATURES

- H.265 / H.264 / MJPEG triple codec and WiseStream II support
- 1/2-type ultra-low-illuminance CMOS adoption, 6 ~ 222mm 37x optical zoom
- Night visibility up to 350m (Smart IR)
- Gyro sensor applied shake compensation, IP66 dust and water resistance, IK10 impact resistance certification
- Linkage with internal control solutions to prevent misuse of video information, including creating misuse audit logs, changing environment settings/firmware, and setting initialization records

### Dimension : (mm)



	BNS-2P37WS		
Image Sensor	1/2" 2.17M CMOS	Protocol	Samsung-T, Pelco-D/P, Panasonic Honeywell, AD, Vicon, GE, BOSCH
Pixel	Total pixels 1,952(H) x 1,113(V) Effective pixels 1,937(H) x 1,097(V)	etc	Pixel counter, SD/SDHC/SDXC slot (up to 256GB)
Res	1920x1080 / 1280x1024 / 1280x960 / 1280x720 1024x768 / 800x600 / 800x448 / 720x576 640x480 / 640x360 / 320x240	video compression	H.265 / H.264(MPEG-4 part10/AVC) MJPEG Triple Streaming
Zoom	Optical 37x zoom, digital 32x zoom	Simultaneous connection	Up to 20 people (unicast mode)
frame	H.265/H.264 up to 60fps, MJPEG up to 30fps	Simultaneous transmission	Multistreaming (up to 10 profiles)
Video output	CVBS (720x480, gender for installation)	Smart Compression	Designation of 5 areas of interest (ROI) WiseStream II support
focal length	6 ~ 222mm	audio communication	Two-way
angle of view	H 1.9° ~ 59.3°, V 1.1° ~ 35.8°	audio compression	G.711 u-law/G.726 selectable
focus control	AF / One-Shot AF / Manual	S/W linkage	ONVIF ProfileS/G, SUNAPI 2.0 (HTTP API) Wisenet open platform
Fan range / speed	360° Endless / Preset 400°/sec Manual 0.024°/sec ~ 250°/sec	security	HTTPS(SSL), Digest 802.1X (EAP-TLS, EAP-LEAP) authentication IP address filtering, user access log
Tilt range / speed	190° (-5° ~ 185°) / Preset 300°/sec Manual 0.024°/~250°/sec	web viewer	OS (Windows7, 8.1, 10, MAC OS X 10.10 ~ 10.12)
sequence	Presets (300), swing, group (6), tracking Tour, auto run, schedule	VPM integration	Abuse audit log, configuration/firmware change Creation of settings initialization records, etc. Video information misuse prevention and internal control solution integration (S-VPM)
azimuth	Support (East/West/South/North/Northwest/Southwest /Northeast/Southeast OSD)	Operating temperature / humidity	-50°C ~ 55°C / 90%RH less
Auto tracking	support	certification	KC, IP66 dustproof and waterproof IK10 impact resistant certification
Backlight compensation	BLC, HLC, WDR(150dB)	Power	AC 24V
Day&Night	Auto (ICR) / Color / B&W / Schedule	Power Consumption	90W (Heater On, IR LED On)
Intelligent Analysis	Tampering, loitering, audio detection, virtual line entry/exit Appearance/disappearance sound source separation, face/motion/fog detection	Size/Weight	236.9mm(Ø) X 407.7mm(H), 7.1Kg
Shake correction	Support (built-in gyro sensor)		
Fog correction	support		
Alarm	Input 4 / Output 2 (Relay supported)		
Audio	Input (MIC / line, 2.5VDC, 4mA, 2KΩ) Output (line, 3.5mm mono)		
remote control	RS-485		



CCTV TTA security certification  
Certification number TTA-V-24-146



# BNS-I2MB2713

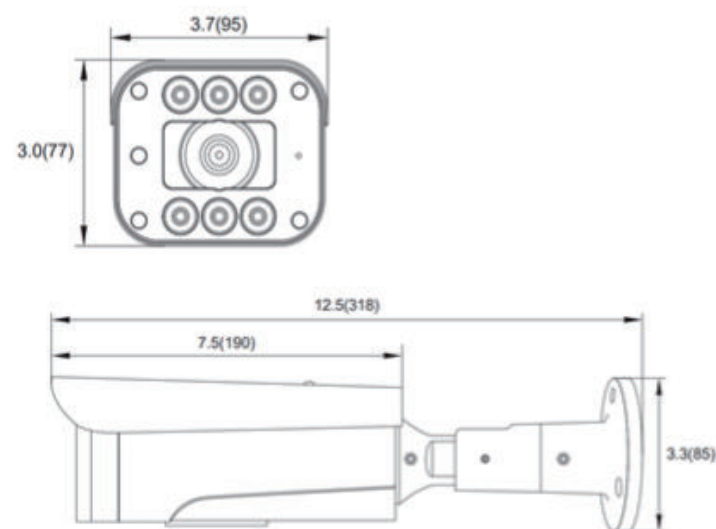
IP-2MP Bullet Motorized Variable Focus Lens  
(TTA Certified)



## KEY FEATURES

- 1/2.8" 2Mega Starvis low light Sony sensor
- Motorized varifocal lens (f=2.7 - 13.5mm)
- IR LED (Night viewing distance: 45m~55m)
- Supports various functions (WDR, fog correction, motion detection, privacy protection, 2DNR/3DNR)
- ONVIF support
- Triple streaming support
- H.264, H.265

### Dimension : (mm)



CCTV TTA security certification  
Certification number TTA-V-24-592

BNS-I2MB2713			
Image Sensor	Sony 1/2.8" CMOS Sensor	Login permission	Administrator, Operator, Guest
Max. pixel count	1985 (H) x 1105 (V) (2.19M)	security	Multi-user authentication, IP filtering, HTTPS
scanning system	Progressive scan	network time synchronization	Computer synchronization / NTP server, manual
focal length	Motorized 2.7 ~ 13.5mm (5X)	protocol	TCP/IP, UDP, IPv4/v6, HTTP, HTTPS, FTP, UPnP, RTP, RTSP, RTCP, DHCP, ARP, Zeroconf
viewing angle	H108.78° (W) ~ V57.22° (W)	Max.number of users connected	10 Users
High dynamic range	DOL, HDR	SDK support	API, ONVIF Profile S, ONVIF Profile T standard specifications
Day&Night	Auto, daytime, night, external signal, IR night infrared ray	interface	RJ-45(10/100Base-T)
noise removal	2D noise removal, 3D noise removal	Alarm in/out	Alarm input: 1 / Alarm output: 1
shutter speed	Min. 1/100,000 sec ~ Max. 1/2 sec	Audio in/out	Audio input: 1 / Audio output: 1
color temperature (white balance)	Automatic, Outdoor, Cloudy Sky, Incandescent, Flame, Manual	operating humidity	0 to 90% (non-condensing)
digital zoom	16X	operating temperature	-20°C ~ +50°C
OSD Mode	On / Off	operating voltage	DC12V/POE supported
image effect	Up/down inversion, left/right inversion	Power Consumption	8W
privacy mask	Set up to 8 zones		
motion detection area	Set up to 4 zones		
portrait mode (Hallway mode)	90° rotation, 270° rotation		
Lens distortion correction	On / Off		
video compression	H.265 / H.264 / MJPEG		
video resolution	1920x1080, 1280x270, 1024x576, 768x432, 704x392, 640x360, 384x216		
audio streaming / codec	Two-way / G.711		
Event	Motion detection, VCA (video content analysis) screen occlusion detection, Notification detection boot detection, manual, network, timer, day/night		



# BNS-I2MD2713

IP-2MP dome motorized variable focus lens  
(TTA certified)



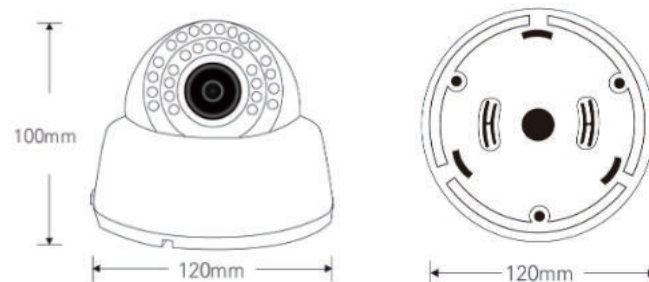
## KEY FEATURES

- 1/2.8" 2Mega Starvis low light Sony sensor
- Motorized varifocal lens (f=2.7 - 13.5mm)
- IR LED (night visibility: 25m to 35m)
- Supports various functions  
(WDR, fog correction, motion detection, privacy protection, 2DNR/3DNR)
- ONVIF support
- Triple streaming support
- H.264, H.265

### Dimension : (mm)



CCTV TTA security certification  
Certification number TTA-V-24-591



BNS-I2MD2713			
Image Sensor	Sony 1/2.8" CMOS Sensor	Login permission	Administrator, Operator, Guest
Max. pixel count	1985 (H) x 1105 (V) (2.19M)	security	Multi-user authentication, IP filtering, HTTPS
scanning system	Progressive scan	network time synchronization	Computer synchronization / NTP server, manual
focal length	Motorized 2.7 ~ 13.5mm (5X)	protocol	TCP/IP, UDP, IPv4/v6, HTTP, HTTPS, FTP, UPnP, RTP, RTSP, RTCP, DHCP, ARP, Zeroconf
viewing angle	H108.78° (W) ~ V57.22° (W)	Max.number of users connected	10 Users
High dynamic range	DOL, HDR	SDK support	API, ONVIF Profile S, ONVIF Profile T standard specifications
Day&Night	Auto, daytime, night, external signal, IR night infrared ray	interface	RJ-45(10/100Base-T)
noise removal	2D noise removal, 3D noise removal	Alarm in/out	Alarm input: 1 / Alarm output: 1
shutter speed	Min. 1/100,000 sec ~ Max. 1/2 sec	Audio in/out	Audio input: 1 / Audio output: 1
color temperature (white balance)	Automatic, Outdoor, Cloudy Sky, Incandescent, Flame, Manual	operating humidity	0 to 90% (non-condensing)
digital zoom	16X	operating temperature	-20°C ~ +50°C
OSD Mode	On / Off	operating voltage	DC12V/POE supported
image effect	Up/down inversion, left/right inversion	Power Consumption	6W
privacy mask	Set up to 8 zones		
motion detection area	Set up to 4 zones		
portrait mode (Hallway mode)	90° rotation, 270° rotation		
Lens distortion correction	On / Off		
video compression	H.265 / H.264 / MJPEG		
video resolution	1920x1080, 1280x270, 1024x576, 768x432, 704x392, 640x360, 384x216		
audio streaming / codec	Two-way / G.711		
Event	Motion detection, VCA (video content analysis) screen occlusion detection, Notification detection boot detection, manual, network, timer, day/night		



# BNS-I5MB2713

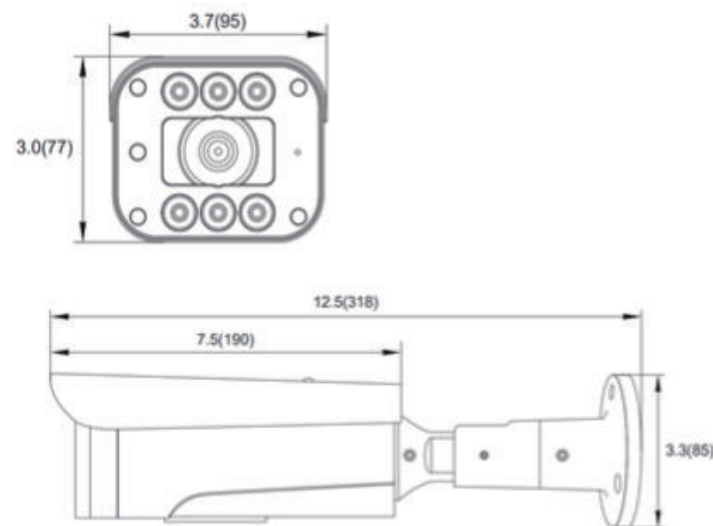
IP-5MP Bullet Motorized Variable Focus Lens  
(TTA Certified)



## KEY FEATURES

- 1/2.8" 5.2 Mega Starvis low light Sony sensor
- Motorized varifocal lens (f=2.7 - 13.5mm)
- IR LED (Night viewing distance: 45m~55m)
- Supports various functions  
(WDR, fog correction, motion detection, privacy protection, 2DNR/3DNR)
- ONVIF support
- Triple streaming support
- H.264, H.265

### Dimension : (mm)



CCTV TTA security certification  
Certification number TTA-V-24-592

BNS-I5MB2713			
Image Sensor	Sony 1/2.8" IMX335 CMOS Sensor	Login permission	Administrator, Operator, Guest
Max. pixel count	2704 (H) x 2104 (V) (5.69M)	security	Multi-user authentication, IP filtering, HTTPS
scanning system	Progressive scan	network time synchronization	Computer synchronization / NTP server, manual
focal length	Motorized 2.7 ~ 13.5mm (5X)	protocol	TCP/IP, UDP, IPv4/v6, HTTP, HTTPS, FTP, UPnP, RTP, RTSP, RTCP, DHCP, ARP, Zeroconf
viewing angle	H108.78° (W) ~ V57.22° (W)	Max.number of users connected	10 Users
High dynamic range	DOL, HDR	SDK support	API, ONVIF Profile S, ONVIF Profile T standard specifications
Day&Night	Auto, daytime, night, external signal, IR night infrared ray	interface	RJ-45(10/100Base-T)
noise removal	2D noise removal, 3D noise removal	Alarm in/out	Alarm input: 1 / Alarm output: 1
shutter speed	Min. 1/100,000 sec ~ Max. 1/2 sec	Audio in/out	Audio input: 1 / Audio output: 1
color temperature (white balance)	Automatic, Outdoor, Cloudy Sky, Incandescent, Flame, Manual	operating humidity	0 to 90% (non-condensing)
digital zoom	16X	operating temperature	-20°C ~ +50°C
OSD Mode	On / Off	operating voltage	DC12V/POE supported
image effect	Up/down inversion, left/right inversion	Power Consumption	8W
privacy mask	Set up to 8 zones		
motion detection area	Set up to 4 zones		
portrait mode (Hallway mode)	90° rotation, 270° rotation		
Lens distortion correction	On / Off		
video compression	H.265 / H.264 / MJPEG		
video resolution	2592x1944, 2560x1920, 2048x1536, 1920x1440 1600x1200, 1280x960, 800x300, 640x480, 480x360		
audio streaming / codec	Two-way / G.711		
Event	Motion detection, VCA (video content analysis) screen occlusion detection, Notification detection boot detection, manual, network, timer, day/night		



# BNS-I5MD2713

IP-5MP dome motorized variable focus lens  
(TTA certified)



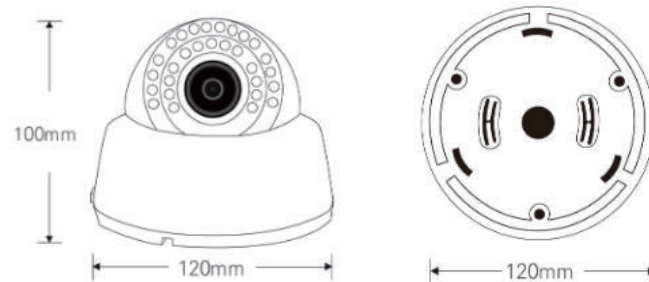
## KEY FEATURES

- 1/2.8" 5.2Mega Starvis low light Sony sensor
- Motorized varifocal lens (f=2.7 - 13.5mm)
- IR LED (night visibility: 25m to 35m)
- Supports various functions  
(WDR, fog correction, motion detection, privacy protection, 2DNR/3DNR)
- ONVIF support
- Triple streaming support
- H.264, H.265

### Dimension : (mm)



CCTV TTA security certification  
Certification number TTA-V-24-591



BNS-I5MD2713			
Image Sensor	Sony 1/2.8" IMX335 CMOS Sensor	Login permission	Administrator, Operator, Guest
Max. pixel count	2704 (H) x 2104 (V) (5.69M)	security	Multi-user authentication, IP filtering, HTTPS
scanning system	Progressive scan	network time synchronization	Computer synchronization / NTP server, manual
focal length	Motorized 2.7 ~ 13.5mm (5X)	protocol	TCP/IP, UDP, IPv4/v6, HTTP, HTTPS, FTP, UPnP, RTP, RTSP, RTCP, DHCP, ARP, Zeroconf
viewing angle	H108.78° (W) ~ V57.22° (W)	Max.number of users connected	10 Users
High dynamic range	DOL, HDR	SDK support	API, ONVIF Profile S, ONVIF Profile T standard specifications
Day&Night	Auto, daytime, night, external signal, IR night infrared ray	interface	RJ-45(10/100Base-T)
noise removal	2D noise removal, 3D noise removal	Alarm in/out	Alarm input: 1 / Alarm output: 1
shutter speed	Min. 1/100,000 sec ~ Max. 1/2 sec	Audio in/out	Audio input: 1 / Audio output: 1
color temperature (white balance)	Automatic, Outdoor, Cloudy Sky, Incandescent, Flame, Manual	operating humidity	0 to 90% (non-condensing)
digital zoom	16X	operating temperature	-20°C ~ +50°C
OSD Mode	On / Off	operating voltage	DC12V/POE supported
image effect	Up/down inversion, left/right inversion	Power Consumption	8W
privacy mask	Set up to 8 zones		
motion detection area	Set up to 4 zones		
portrait mode (Hallway mode)	90° rotation, 270° rotation		
Lens distortion correction	On / Off		
video compression	H.265 / H.264 / MJPEG		
video resolution	2592x1944, 2560x1920, 2048x1536, 1920x1440, 1600x1200, 1280x960, 800x300, 640x480, 480x360		
audio streaming / codec	Two-way / G.711		
Event	Motion detection, VCA (video content analysis) screen occlusion detection, Notification detection boot detection, manual, network, timer, day/night		











# BNS-NM64B8-E

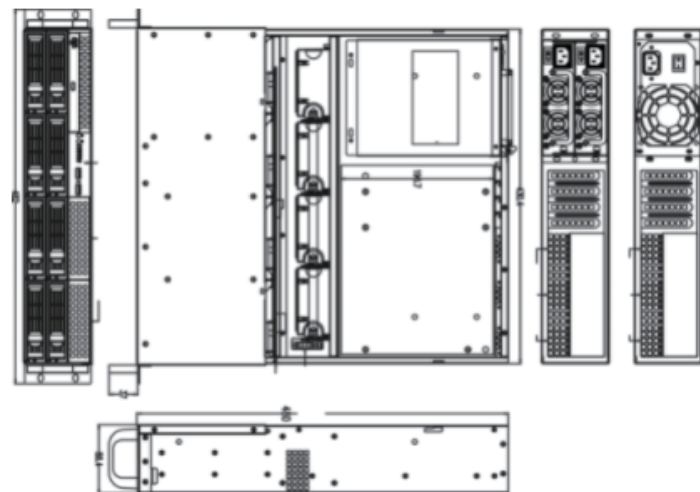
IP-PC type NVR (TTA certified)



## KEY FEATURES

- Supports all resolutions including 12M/8M/5M/2M/1.3M
- Supports ONVIF/RTSP standard protocols
- Various split screen and full screen modes
- Clear quality video through high-efficiency H.265 / H.264 compression method
- Ample self-storage space of up to 160TB
- Equipped with up to 8 HDDs
- Fast and stable system operation using DOM-SSD
- Redundancy devices automatically take over when the system stops
- Events such as motion / sensor / camera signal loss / disk error, etc.
- Various recording modes such as constant / motion detection sensor detection / schedule, etc.

## Dimension : (mm)



CCTV TTA security certification  
Certification number TTA-V23-1775

	BNS-NM16B8-E	BNS-NM36B8-E	BNS-NM64B8-E
Video input	16CH ~ 64CH	Smartphone	iPhone/Android App provided
CPU	i5 3.0GHz or Higher	network interface	10/100/1000 Base-Tx Ethernet (RJ45) - 2ea
RAM	DDR4 16GB (36CH) / DDR4 32GB (64,CH)	Max.users	1024 (with in network bandwidth)
Monitor output	1xHDMI / 1xDP(orVGA)	network protocol	TCP/IP, UDP, DNS, DDNS, HTTP, NTP, RTP/RTCP, RTSP
split screen	1 / 2 / 4 / 6 / 7 / 9 / 10 / 13 / 16 / 25 / 36 / 49 / 64	network bandwidth control	Automatic Manual
live / Search performance	Supports up to 12M	security	Multi User Level
Supported resolutions (channels/fps)	12M(10CH/300fps), 8M(16CH/480fps) 5M(25CH/750fps), 1080P(64CH/1920fps), 720P(128CH/3840fps)	Date /Time Synchronization	Synchronization through Windows / NTP time server, own NTP server function
recording mode	Continuous / Schedule / Event Linkage	Max.frame rate	30ips : 3840 x 2160
Performance	Up to 500Mbps CIF~12MP	Operating temperature /humidity	5°C~40°C / 0%~90%
Compression method	H.265 / H.264 / MPEG4 / MJPEG	Power used / Power consumed	100~240VAC, 50/60Hz, 500W(Default), Dual Power(Optional)
search mode	Date/time calendar search, individual/channel bundle search, event search	Dimension	482(W) X 88.4(H) X 480(D)mm
Playback Control	Forward/reverse playback (high speed: x1~x32, low speed: 1/4~1/2), step before/after	Weight	11kg (without HDD installed)
resolution	CIF~12M		
IP camera protocol	Supports IP cameras and ONVIF/RTSP IP cameras/UDP/Axis/Dynacolor Protocols dedicated to over 100 manufacturers including Sony / Panasonic / Hanwha Techwin		
operating system	Linux 64bit (Embedded) / mSATA 16GB (OS, NVR SW dedicated disk)		
storage	Up to 8 3.5" HDDs can be installed (20TB HDD recognized, maximum capacity 160TB)		
backup mode	Video (multiple backup, date/time/event information display encryption function, partial masking support) Freeze screen (partial mosaic support)		
file format	MP4, JPG		
Event type	Motion detection, sensor, relay, disk error camera signal loss/recovery		
event action	Recording, alarm generation, pop-up camera, warning sound generation Warning message generation, e-mail notification, preset operation		
PC	Live, search, backup, event manager, E-Map Multi-monitor, PAN/TILT/ZOOM control, NVR settings		
Web	All channels live, PAN/TILT/ZOOM control		

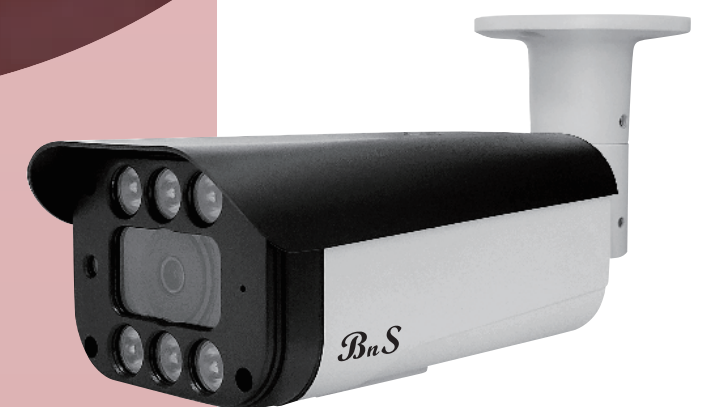


# SECURITY

PROTECT YOUR  
INFORMATION  
WITH SECURE ACCESS

## BNS IP CAMERA C Series

- 5MP · 2MP
- Dome · Bullet
- Body detection · Ultra-low light
- Electric zoom · Mini PTZ

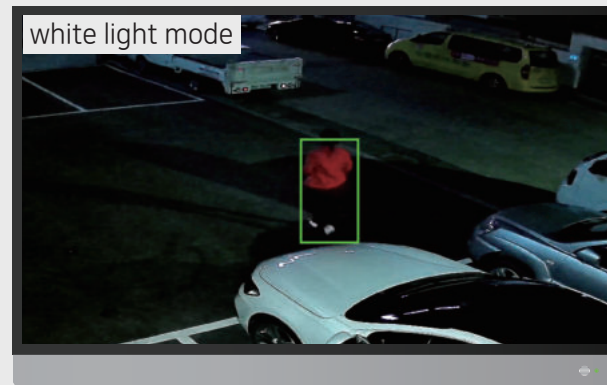
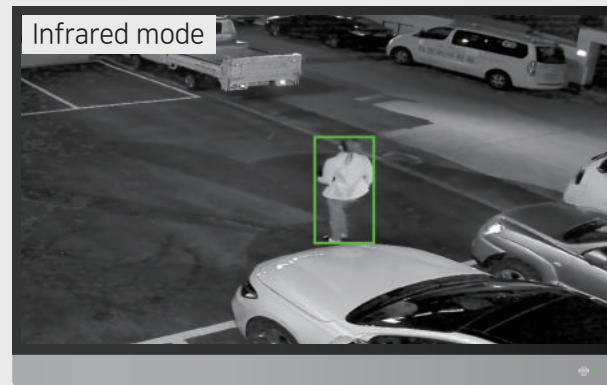




Smart choice

# Body Detection Solution

Body detection means that when movement is detected at night, it tracks the movement and turns on the white IR. A solution that can identify the movement of objects by changing from infrared mode to white light mode

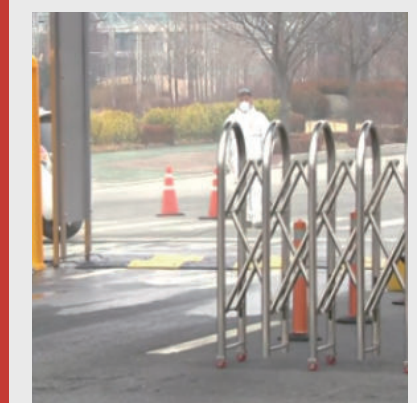


※The photo above is an actual photo taken with our camera.

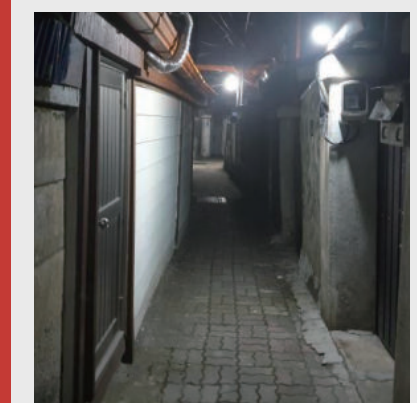
## Installation example



military base



entrance



night view

## BNS-I5BSS-C

BnS Corporation (주)비앤에스



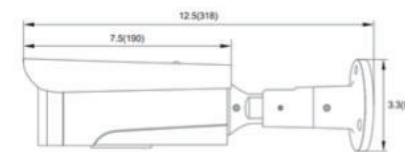
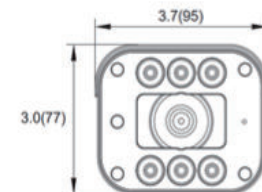
IP-5MP body detection camera

- 1/2.8" CMOS Sony Sensor
- H.264, 265 support
- 5MP high definition resolution
- 3.6mm fixed focus lens
- IR distance: 40m (6 Hi Power LEDs)
- Day & Night (ICR)
- 0.05 Lux (BW Mode)
- Built-in speaker/built-in microphone
- Onvif support
- PoE, DC12V



	BNS-I5BSS-C
Image Sensor	1/2.8" 5Mega Pixel CMOS Sensor
effective pixels	2,592 x 1,944 (5.0MP)
Scanning System	Progressive Scan
Min.illumination	0.05lux @(f1.2 AGC ON), 0 lux with IR
DAY&NIGHT	Support (IR-CUT standard)
Backlight compensation	Support
WDR	WDR(120dB)
Noise removal	Support
privacy	Support
Motion detection /alarm/audio	Support
Smart AI	People detection
Ethernet	RJ-45 (10/100Base-T)
video compression	H.264/H.265/MJPEG
bitrate control	128Kbps~12Mbps CBR/VBR adjustment
streaming	Main : 2,592 x 1,944 (5.0MP) Sub 1 : 448P (800x448) / 704x576 / 640x360 / 352x288
security	IP Filter
audio compression	G.711U
protocol	HTTP, TCP/IP, IPv4, UPNP, RTSP, UDP, SMTP, NTP, DHCP DNS, IP Filter, PPPoE, DDNS, FTP, IP Search (Support P6S IP camera,DVR, NVS and etc.)
API support	Onvif
Lens Magnification	3.6mm fixed lens
lens aperture	F=2.0
lens adjustment	manual
Lens type	manual
Operating temperature / water resistance	-10°C ~ +50°C / Outdoor(IP66)
Operating humidity	-40 F to 140 F Humidity 90% or less (non-condensing)
input power	PoE/12V DC +10%
PoE	POE support
Power Consumption	Max8W

### Dimension : (mm)





# BNS-I5B36-C / I2B36-C



IP-5MP, 2MP IPC Sony bullet camera

- Bitrate usage bandwidth reduction
- H.264, 265
- D-WDR
- H.264,265 support
- Number of IR: 6 IR Leds 6 White Leds // 30m (5MP)
- 4 IR Leds // 20m (2MP)
- 3.6mm fixed focus lens
- High definition resolution



	BNS-I5B36-C	BNS-I2B36-C
Image Sensor	1/2.8" CMOS SONY Sensor( IMX335 )	1/2.8" CMOS Sony Sensor(IMX307)
effective pixels	2,592 x 1,944 (5.0MP)	1,920 x 1,080 (2.0MP)
Scanning System	Progressive Scan	Progressive Scan
Min.illumination	0.05 lux @(F1.2,AGC ON), 0 lux with IR	0.01lux @(F1.2,AGC ON),0 lux with IR
DAY&NIGHT	Auto, daytime, night (IR CUT)	Auto, daytime, night (IR CUT)
Backlight compensation	support	support
WDR	WDR	WDR
motion detection	support	support
privacy	Zone 4 support	support
Alarm/Audio	Support (optional)	Support (optional)
AI features	People detection	People detection
Ethernet	RJ-45 (10/100Base-T)	RJ-45 (10/100Base-T)
video compression	H.264/H.265/MJPEG	H.264/H.265
bitrate control	128Kbps~12Mbps CBR/VBR adjustment	512Kbps~5120Kbps CBR/VBR adjustment
streaming	Main : 2,592 x 1,944 (5.0MP) Sub 1 : 448P (800*448)/704*576/640*360/352*288	Main : 1,920 x 1,080 (2.0MP) Sub:704*576/640*360/352*288
audio compression	G.711U	G.711A
network protocol	HTTP, TCP/IP, IPv4, UPNP, RTSP, UDP, SMTP, NTP, DHCP, DNS, IP Filter, PPPoE, DDNS FTP, IP Search(Support P6S IP camera,DVR, NVS and etc	HTTP, TCP/IP, IPv4, UPNP, RTSP, UDP, SMTP, NTP, DHCP, DNS, IP Filter, PPPoE, DDNS
security	IP Filter	IP Filter
API support	Onvif	Onvif,support (profile G)
Lens angle of view	3.6mm	3.6mm
brightness	F=2.0	F=1.8
lens adjustment	fixed	manual
Lens type	short focus	short focus
Operating temperature / Waterproof	-10°C ~ +50°C/Outdoor (IP66)	-10°C ~ +50°C / Outdoor (IP66)
operating humidity	-40 F to 140 F Humidity 90% or less (non-condensing)	-40 F to 140 F Humidity 90% or less (non-condensing)
input power	PoE/12V DC +10%	PoE/12V DC +10%
PoE	support	support
Power Consumption	6W	Max.5W

# BNS-I5D24-C / I2D24-C



IP-5MP, 2MP IPC short focus dome camera

- Audio in and out (Option)
- 5MP, 2MP high resolution
- Onvif support
- IR distance: 30m (5MP), 20m (2MP)
- 2.8mm / 3.6mm fixed focus lens
- PoE, DC12V
- D-WDR



	BNS-I5D24-C	BNS-I2D24-C
Image Sensor	1/2.8"CMOS Sony Sensor( IMX335 )	1/2.8"CMOS Sony Sensor( IMX307 )
effective pixels	2,592 x 1,944 (5.0MP)	1,920 x 1,080 (2.0MP)
Scanning System	Progressive Scan	Progressive Scan
Min.illumination	0.05lux @(F1.2, AGC ON), 0 lux with IR	0.01lux @(F1.2, AGC ON), 0 lux with IR
DAY&NIGHT	support (IR-CUT standard)	resolution 2mp @ 30fps // Main Stream
Backlight compensation	Supports backlight compensation function	DAY & NIGHT Support D/N switching (IR-CUT standard)
WDR	WDR ( 120dB )	BLC / Fog correction support
Noise removal / motion detection	support	WDR WDR
Fog detection / privacy protection	support	Noise correction Support 3D-DNR
Alarm/Audio	support	Motion detection / privacy support
video rotation	Mirror	Alarm/Audio support
Smart AI	People detection	image conversion support
Ethernet	RJ-45 (10/100Base-T)	Smart AI People detection
video compression	H.264/H.265/MJPEG	Ethernet RJ-45 (10/100Base-T)
Bitrate	128Kbps~12Mbps CBR/VBR adjustment	video compression H.264/H.265
streaming	Main : 2,592 x 1,944 (5.0MP) Sub 1 : 448P (800*448)/704*576/640*360/480*360	Bitrate 512Kbps~5120Kbps CBR/VBR adjustment
audio compression	G.711U	streaming Main : 1,920 x 1,080 (2.0MP) SUB 1 : 704*576/640*360/352*288
protocol	HTTP, TCP/IP, IPv4, UPNP, RTSP, UDP, SMTP, NTP, DHCP, DNS, IP Filter, PPPoE, DDNS, IP Search (Support P6S IP camera, DVR, NVS and etc.)	audio compression G.711U
security	IP Filter	protocol HTTP, TCP/IP, IPv4, UPNP, RTSP, UDP, SMTP, NTP, DHCP, DNS, IP Filter, PPPoE, DDNS
API support	Onvif	security IP Filter
lens magnification	3.6mm fixed lens	API support Support ( Profile G )
lens aperture	F=2.0	lens magnification 2.8mm
lens adjustment	manual	lens aperture F=1.8
Lens type	manual	lens adjustment manual
operating temperature	-10°C ~ +50°C	Lens type short focus
operating humidity	-40 F to 140 F Humidity 90% or less (non-condensing)	operating temperature -10°C ~ +50°C
Waterproof	Outdoor (IP66)	operating humidity -40 F to 140 F Humidity 90% or less (non-condensing)
Input power	12V DC +10%	Waterproof Outdoor (IP66)
PoE	POE support	Input power 12V DC +10%
Power Consumption	Max 5W	PoE POE support
		Power Consumption Max 4W



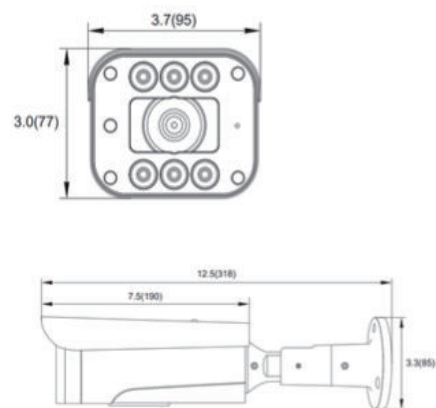
# BNS-I5BSBAF-C

## IP-5MP SONY ultra-low light motorized zoom camera

- Use autofocus using X5 ZOOM
- Bitrate usage bandwidth reduction
- Supports Onvif Profile S
- H.264, 265 support
- 5MP high definition resolution
- 2.8~12mm Motorized Lens
- Built-in speaker / Built-in microphone
- Number of IR, distance: 6 IR LEDs HI-POWER // 40m
- PoE, DC12V



Dimension : (mm)



	BNS-I5BSBAF-C
Image Sensor	1/2.8" CMOS Sony Sensor( IMX335 )
effective pixels	2,592 x 1,944 (5.0MP)
Scanning System	Progressive Scan
Min.illumination	0.05lux @(F1.2, AGC ON), 0 lux with IR
DAY&NIGHT	Support (IR-CUT standard)
Backlight compensation	WDR ( 120dB )
WDR	D-WDR
Noise removal / privacy	Support
Fog detection / motion detection	Support
Alarm/Audio	Support
video rotation	Mirror
Smart AI	People detection
Ethernet	RJ-45 (10/100Base-T)
video compression	H.264/H.265/H.265+
Bitrate	128Kbps~12Mbps CBR/VBR adjustment
streaming	Main : 2,592 x 1,944 (5.0MP) Sub 1 : 448P (800*448)/704*576/640*360/352*288
audio compression	G.711U
protocol	HTTP, TCP/IP, IPv4, UPNP, RTSP, UDP, SMTP, NTP, DHCP, DNS IP Filter, PPPOE, DDNS, IP Search (Support P6S IP camera, DVR, NVS and etc.)
Security	IP Filter
API Support	Onvif
lens magnification	2.8~12 mm variable lens
lens aperture	F=2.0
lens adjustment	auto focus
lens type	Vari Focal
operating temperature	-10°C ~ +50°C
operating humidity	-40 F to 140 F Humidity 90% or less (non-condensing)
Waterproof	Outdoor ( IP66 )
input voltage	12V DC +10%
PoE	POE Support
Power Consumption	Max. 8W

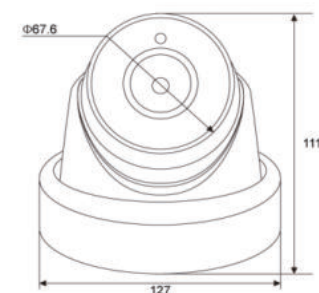
# BNS-I5DSAF-C

## IP-5MP electric zoom dome camera

- 1/2.8" megapixel SONY image sensor
- Bitrate usage bandwidth reduction
- Supports Onvif Profile S
- H.264, 265 support
- 5MP high definition resolution
- 2.8~12mm Motorized Lens
- D-WDR
- Number of IR, distance: 6 Super Array LEDs // 30m
- PoE, DC12V



Dimension : (mm)



	BNS-I5DSAF-C
Image Sensor	1/2.8" CMOS Sony Sensor( IMX335 )
effective pixels	2,592 x 1,944 (5.0MP)
Scanning System	Progressive Scan
Min.illumination	0.05lux @(F1.2, AGC ON), 0 lux with IR
DAY&NIGHT	Support (IR-CUT standard)
Backlight compensation	Support
WDR	WDR ( 120dB )
Fog detection / motion detection	Support
Noise removal / privacy	Zone 4 support
Alarm/Audio	Support
video rotation	Mirror
Smart AI	People detection
video compression	H.264/H.265/MJPEG
Bitrate Control	128Kbps~12Mbps CBR/VBR adjustment
streaming	Main : 2,592 x 1,944 (5.0MP) Sub 1 : 448P (800*448)/704*576/640*360/352*288
audio compression	G.711U
protocol	HTTP, TCP/IP, IPv4, UPNP, RTSP, UDP, SMTP, NTP, DHCP, DNS IP Filter, PPPOE, DDNS, IP Search (Support P6S IP camera, DVR, NVS and etc.)
Security	IP Filter
API Support	Onvif
lens magnification	2.8~12 mm variable lens
lens aperture	F=2.0
lens adjustment	auto focus
lens type	Vari Focal
operating temperature	-10°C ~ +50°C
operating humidity	-40 F to 140 F Humidity 90% or less (non-condensing)
Waterproof	Outdoor ( IP66 )
input voltage	12V DC +10%
PoE	POE Support
Power Consumption	Max. 7W



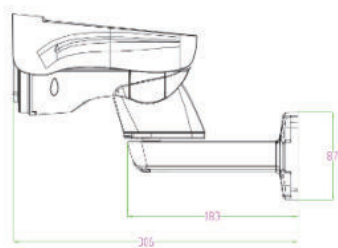
# BNS-I5B10X-C

## IP-5MP Outdoor 10x Mini PTZ

- 1/2.8" 5 megapixel SONY image sensor
- 0.05 Lux (BW Mode)
- Day & Night (ICR)
- Supported PoE
- Number of IR, distance: 6 IR Leds//50m
- Automatic pan tilt
- Pan:0-220°/Tilt:-45°~40° (Moving Speed@Pan:0~30°/s , Tilt:0~25°/s)
- 5-50mm 10x autofocus lens
- Supported P2P (QR Code Scan)



### Dimension : (mm)



	BNS-I5B10X-C
Image Sensor	1/2.8" CMOS Sony Sensor( IMX335 )
effective pixels	2,592 x 1,944 (5.0MP)
Scanning System	Progressive Scan
Min.illumination	0.05lux @(F1.2, AGC ON), 0 lux with IR
DAY&NIGHT	Support (IR-CUT standard)
Backlight compensation	Supports backlight compensation function
WDR	WDR ( 120dB )
Noise removal / privacy	Support
Fog detection / motion detection	Support
Alarm/Audio	Support
video rotation	Mirror
Smart AI	People detection
Ethernet	RJ-45 (10/100Base-T)
video compression	H.264/H.265/H.265+
Bitrate	128Kbps~12Mbps CBR/VBR adjustment
streaming	Main : 2,592 x 1,944 (5.0MP) Sub 1 : 448P (800*448)/704*576/640*360/352*288
audio compression	G.711U
Network Protocol	HTTP, TCP/IP, IPv4, UPNP, RTSP, UDP, SMTP, NTP, DHCP, DNS IP Filter, PPPoE, DDNS, IP Search (Support P6S IP camera, DVR, NVS and etc.)
Security	IP Filter
API support	Onvif
lens magnification	5-50mm(10X)
lens aperture	F=1.6
lens adjustment	Auto
Lens type	Varifocal
operating temperature	-10°C ~ +50°C
operating humidity	-40 F to 140 F Humidity 90% or less (non-condensing)
Waterproof	Outdoor ( IP66 )
Input power	12V DC +10%
PoE	POE Support
Power Consumption	Max. 10W

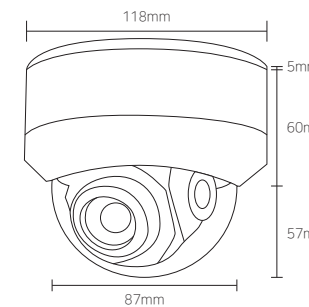
# BNS-I5D05X-C

## IP-5MP Indoor 05x Mini PTZ

- 1/2.8" 5 megapixel SONY image sensor
- 0.05 Lux (BW Mode)
- Day & Night (ICR)
- Supported PoE
- Number of IR, distance: 2 IR Leds // 35m
- Automatic pan tilt
- Pan:0-355°/Tilt:0-90° (Moving Speed@40°/s)
- 2.7-13.5mm 5x optical zoom lens
- Supported P2P (QR Code Scan)



### Dimension : (mm)



	BNS-I5D05X-C
Image Sensor	1/2.8" CMOS Sony Sensor( IMX335 )
effective pixels	2,592 x 1,944 (5.0MP)
Scanning System	Progressive Scan
Min.illumination	0.05lux @(F1.2, AGC ON), 0 lux with IR
DAY&NIGHT	Support (IR-CUT standard)
Backlight compensation	Support
WDR	WDR ( 120dB )
Noise removal / privacy	Support
Fog detection / motion detection	Support
Alarm/Audio	Support
video rotation	Mirror
Smart AI	People detection
Ethernet	RJ-45 (10/100Base-T)
video compression	H.264/H.265/H.265+
Bitrate	128Kbps~12Mbps CBR/VBR adjustment
streaming	Main : 2,592 x 1,944 (5.0MP) Sub 1 : 448P (800*448)/704*576/640*360/352*288
audio compression	G.711U
Network Protocol	HTTP, TCP/IP, IPv4, UPNP, RTSP, UDP, SMTP, NTP, DHCP, DNS IP Filter, PPPoE, DDNS, IP Search (Support P6S IP camera, DVR, NVS and etc.)
Security	IP Filter
API support	Onvif
lens magnification	2.7-13.5mm(5X)
lens aperture	F=1.6
lens adjustment	Auto
Lens type	Varifocal
operating temperature	-10°C ~ +50°C
operating humidity	-40 F to 140 F Humidity 90% or less (non-condensing)
Waterproof	Outdoor ( IP66 )
Input power	12V DC +10%
PoE	POE Support
Power Consumption	Max. 10W



# BNS Camera

## E Series



- IP Auto Focus
- Analog SDI
- Starvis
- Analog Auto Focus
- Special camera



# 5MP/2MP IP Camera [STARVIS]

Compared to existing products, the use of Sony high-sensitivity image sensor Provides excellent identification even in dark environments at night.



**BNS-I5H04E / BNS-I2H04E**  
 - 1/2.8" 5.69 Mega Pixel Sony STARVIS CMOS  
 - 1/2.8" 2.24 Mega Pixel Sony STARVIS CMOS  
 - 04 IR / Searchlight  
 - 3.6mm/6mm Lens



**BNS-I5H08E / BNS-I2H08E**  
 - 1/2.8" 5.69 Mega Pixel Sony STARVIS CMOS  
 - 1/2.8" 2.24 Mega Pixel Sony STARVIS CMOS  
 - 08 IR / HI-POWER  
 - 2.8mm/3.6mm/6mm/2.7-12mm  
 2.8-12mm/5-50mm Lens



**BNS-I5H84E / BNS-I2H84E**  
 - 1/2.8" 5.69 Mega Pixel Sony STARVIS CMOS  
 - 1/2.8" 2.24 Mega Pixel Sony STARVIS CMOS  
 - 84 IR  
 - 2.8mm/3.6mm/6mm/2.7-12mm  
 2.8-12mm/5-50mm Lens



**BNS-I5B06E / BNS-I2B06E**  
 - 1/2.8" 5.69 Mega Pixel Sony STARVIS CMOS  
 - 1/2.8" 2.24 Mega Pixel Sony STARVIS CMOS  
 - 06 IR / HI-POWER  
 - 2.8mm/3.6mm/6mm/2.7-12mm/2.8-12mm Lens

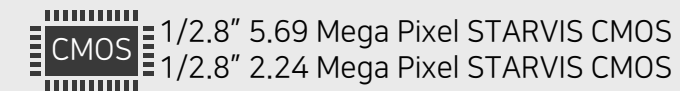


**BNS-I5B54E / BNS-I2B54E**  
 - 1/2.8" 5.69 Mega Pixel Sony STARVIS CMOS  
 - 1/2.8" 2.24 Mega Pixel Sony STARVIS CMOS  
 - 54 IR  
 - 3.6mm/6mm Lens



**BNS-I5B08E / BNS-I2B08E**  
 - 1/2.8" 5.69 Mega Pixel Sony STARVIS CMOS  
 - 1/2.8" 2.24 Mega Pixel Sony STARVIS CMOS  
 - 08 IR / HI-POWER  
 - 2.8mm/3.6mm/6mm Lens

# 5MP/2MP IP Camera [STARVIS]



▶ main function

- 2616x1964 (5MP) SONY STARVIS CMOS Sensor
- 1985x1105 (2MP) SONY STARVIS CMOS Sensor
- PoE support (IEEE802.3af)
- Onvif Profile S compatible
- Fog correction, backlight correction  
2DNR/3DNR motion detection
- H.264, H.265, MJPEG
- Supports privacy protection function
- Excellent compatibility
- Supports various functions
- 2mm/2.8mm/3.6mm/6mm/2.7-12mm/2.8~12mm  
/5~50mm Lens



**BNS-I5D00E / BNS-I2D00E**  
 - 1/2.8" 5.69 Mega Pixel STARVIS CMOS  
 - 1/2.8" 2.24 Mega Pixel STARVIS CMOS  
 - 2mm/2.8mm/3.6mm/6mm/2.7-12mm  
 2.8-12mm Lens



**BNS-I5D24E / BNS-I2D24E**  
 - 1/2.8" 5.69 Mega Pixel STARVIS CMOS  
 - 1/2.8" 2.24 Mega Pixel STARVIS CMOS  
 - 24 IR  
 - 2.8mm/3.6mm/6mm/2.7-12mm  
 2.8-12mm Lens



**BNS-I5C02E / BNS-I2C02E**  
 - 1/2.8" 5.69 Mega Pixel STARVIS CMOS  
 - 1/2.8" 2.24 Mega Pixel STARVIS CMOS  
 - 02 IR / HI-POWER  
 - 2.8mm/3.6mm/6mm Lens

## 5MP IP CAMERA [STARVIS]

Image Sensor	1/2.8" 5.69 Mega Pixel Sony STARVIS CMOS	Video compression method	H.264 MP / H.265 HP / MJPEG
effective pixels	2616(H) x 1964(V) 5.14 megapixels	1st Resolution	2592X1944 / 2592X1520 / 2592X1458 / 2304X1296 1920X1080 / 1280X720
Scanning System	Progressive	2nd Resolution	1920X1080 / 1280X720 / 1024X768 / 960X540 854X480 / 640X480 / 640X360
Min.illumination	Color : 0.01Lux(F1.6, DSS off) B/W : 0Lux (IR LED on)	3rd Resolution	640X480 / 640X360 / 352X240
signal to noise ratio	120dB (AGC off)	Max.frame rate	H.264 / H.265 / MJPEG all resolutions up to 30fps
White balance	AUTO / MANUAL / DAYLIGHT / CLOUDY / TUNGSTEN / SUNSET	video streaming	H.264 / H.265 / MJPEG triple streaming, CBR/VBR
slow shutter	OFF / X2 / X4	max.number of users	Control up to 10 profiles
WDR	OFF / AUTO / MANUAL (0~255)	audio streaming	Two-way communication G.711
BLC	OFF / ON (1~3)	protocol	TCP/IP, HTTP, RTP, RTSP, UDP, DHCP, FTP, SMTP, NTP, ARP, ICMP, DDNS, Onvif
SHDR	OFF / ON (1~100)	security	User authentication, IP filtering, MAC filtering, digest authentication
2DNR	0~200	Client software	Web Browser, CMS, MobileViewer
3DNR	0~200	Language	Korean, English, French, Japanese, German
shutter speed	1/33333 ~ 1/30	SDK support	API, Onvif Profile S Compliant
anti flicker	OFF / ON	Operating temperature / humidity	-10°C~+50°C / 90% RH or less
AGC	0 ~ 20	Power	DC 12V / PoE DC 48V
Day/Night Mode	AUTO / DAY / NIGHT / EXT / SCHEDULE		
video effects	Mirror / Flip / LDC / Corridor (90, 270)		
motion detection	Yes		
Privacy	OFF / ON (4 Blocks)		
Compensation	EV -4 ~ EV +4		
Fog correction	OFF / ON		
OSD	Through Web		

## 2MP IP CAMERA [STARVIS]

Image Sensor	1/2.8" 2.24 Mega Pixel Sony STARVIS CMOS	Video compression method	H.264 MP / H.265 HP / MJPEG
effective pixels	1985(H) x 1105(V) 2.19 megapixels	1st Resolution	1920X1080 / 1280X720 / 960X540 / 854X480 / 640X480 / 640X360
Scanning System	Progressive	2nd Resolution	1280X720 / 960X540 / 854X480 / 640X480 / 640X360 / 320X240
Min.illumination	Color : 0.01Lux(F1.6, DSS off) B/W : 0Lux (IR LED on)	3rd Resolution	320X240
signal to noise ratio	120dB (AGC off)	Max.frame rate	H.264 / H.265 / MJPEG all resolutions up to 30fps (optional: 60fps)
White balance	AUTO / MANUAL / DAYLIGHT / CLOUDY / TUNGSTEN / SUNSET	video streaming	H.264 / H.265 / MJPEG triple streaming, CBR/VBR
slow shutter	OFF / X2 / X4	max.number of users	Control up to 10 profiles
WDR	OFF / AUTO / MANUAL (0~255)	audio streaming	Two-way communication G.711
BLC	OFF / ON (1~3)	protocol	TCP/IP, HTTP, RTP, RTSP, UDP, DHCP, FTP, SMTP, NTP, ARP, ICMP, DDNS, Onvif
SHDR	OFF / ON (1~100)	security	User authentication, IP filtering, MAC filtering, digest authentication
2DNR	0~200	Client software	Web Browser, CMS, MobileViewer
3DNR	0~200	Language	Korean, English, French, Japanese, German
shutter speed	1/33333 ~ 1/30	SDK support	API, Onvif Profile S Compliant
anti flicker	OFF / ON	Operating temperature / humidity	-10°C~+50°C / 90% RH or less
AGC	0 ~ 20	Power	DC 12V / PoE DC 48V
Day/Night Mode	AUTO / DAY / NIGHT / EXT / SCHEDULE		
video effects	Mirror / Flip / LDC / Corridor (90, 270)		
motion detection	Yes		
Privacy	OFF / ON (4 Blocks)		
Compensation	EV -4 ~ EV +4		
Fog correction	OFF / ON		
OSD	Through Web		

# 5MP/2MP IP Camera [Moterized]

Compared to existing products by adopting Sony's high-sensitivity image sensor, Provides excellent identification even in dark environments at night. The use of a moterized lens automatically optimizes focus when adjusting zoom. Auto, manual mode and auto focus button, and automatic focus when switching between day and night. Provides the ability to adjust.



**BNS-I5H04EAF/BNS-I2H04EAF**  
 - 1/2.8" 5.69 Mega Pixel Sony STARVIS CMOS  
 - 1/2.8" 2.24 Mega Pixel Sony STARVIS CMOS  
 - 04 IR / Searchlight  
 - AF 2.7-12mm / 2.8-12mm Lens



**BNS-I5H08EAF / BNS-I2H08EAF**  
 - 1/2.8" 5.69 Mega Pixel Sony STARVIS CMOS  
 - 1/2.8" 2.24 Mega Pixel Sony STARVIS CMOS  
 - 08 IR HI-POWER  
 - AF 2.7-12mm / 2.8-12mm / 5-50mm Lens



**BNS-I5H84EAF / BNS-I2H84EAF**  
 - 1/2.8" 5.69 Mega Pixel Sony STARVIS CMOS  
 - 1/2.8" 2.24 Mega Pixel Sony STARVIS CMOS  
 - 84 IR  
 - AF 2.7-12mm / 2.8-12mm / 5-50mm Lens



**BNS-I5U00EAF / BNS-I2U00EAF**  
 - 1/2.8" 5.69 Mega Pixel Sony STARVIS CMOS  
 - 1/2.8" 2.24 Mega Pixel Sony STARVIS CMOS  
 - AF 2.8-12mm Lens



**BNS-I5B06EAF / BNS-I2B06EAF**  
 - 1/2.8" 5.69 Mega Pixel Sony STARVIS CMOS  
 - 1/2.8" 2.24 Mega Pixel Sony STARVIS CMOS  
 - 06 IR HI-POWER  
 - AF 2.7-12mm / 2.8-12mm Lens



**BNS-I5B08EAF / BNS-I2B08EAF**  
 - 1/2.8" 5.69 Mega Pixel Sony STARVIS CMOS  
 - 1/2.8" 2.24 Mega Pixel Sony STARVIS CMOS  
 - 08 IR HI-POWER  
 - AF 2.7-12mm / 2.8-12mm / 5-50mm Lens

## 5MP IP CAMERA [Moterized]

Image Sensor	1/2.8" 5.69Mega Pixel Sony STARVIS CMOS	Video compression method	H.264 MP / H.265 HP / MJPEG
effective pixels	2616(H)×1964(V) 5.14 megapixels	1st Resolution	2592X1944 / 2592X1520 / 2592X1458 / 2304X1296 / 1920X1080 / 1280X720
Scanning System	Progressive	2nd Resolution	1920X1080 / 1280X720 / 1024X768 / 960X540 / 854X480 / 640X480 / 640X360
Min.illumination	Color : 0.01Lux(F1.6, DSS off) B/W : 0Lux (IR LED on)	3rd Resolution	640X480 / 640X360 / 352X240
signal to noise ratio	120dB (AGC off)	Max.frame rate	H.264 / H.265 / MJPEG all resolutions up to 30fps
White balance	AUTO / MANUAL / DAYLIGHT / CLOUDY / TUNGSTEN / SUNSET	video streaming	H.264 / H.265 / MJPEG triple streaming, CBR/VBR
slow shutter	OFF / X2 / X4	max.number of users	Control up to 10 profiles
WDR	OFF / AUTO / MANUAL (0~255)	audio streaming	Two-way communication G.711
BLC	OFF / ON (1~3)	protocol	TCP/IP, HTTP, RTP, RTSP, UDP, DHCP, FTP, SMTP, NTP, ARP, ICMP, DDNS, Onvif
SHDR	OFF / ON (0~100)	security	User authentication, IP filtering, MAC filtering, digest authentication
2DNR	0~200	Client software	Web Browser, CMS, MobileViewer
3DNR	0~200	Language	Korean, English, French, Japanese, German
shutter speed	1/33333 ~ 1/30	SDK support	API, Onvif Profile S Compliant
anti flicker	OFF / ON	Operating temperature / humidity	-10°C~+50°C / 90% RH or less
AGC	0 ~ 20	Power	DC 12V / PoE DC 48V
Day/Night Mode	AUTO / DAY / NIGHT / EXT / SCHEDULE		
video effects	Mirror / Flip / LDC / Corridor (90, 270)		
motion detection	Yes		
Privacy	OFF / ON (4 Blocks)		
Compensation	EV -4 ~ EV +4		
Fog correction	OFF / ON		
OSD	Through Web		

# 5MP/2MP IP Camera [Moterized]



CMOS 1/2.8" 2.24 Mega Pixel STARVIS CMOS  
 1/2.8" 5.69 Mega Pixel STARVIS CMOS



▶ main function

- 2616x1964 (5MP) SONY STARVIS CMOS Sensor
- 1985x1105 (2MP) SONY STARVIS CMOS Sensor
- PoE support (IEEE802.3af)
- Onvif Profile S compatible
- H.264, H.265, MJPEG / dual, triple streaming support

- Fog correction, backlight correction, 2DNR/3DNR motion detection
- Supports privacy protection function
- Excellent compatibility
- Supports various functions
- AF 2.7-12mm / 2.8-12mm / 5-50mm Lens



**BNS-I5D00EAF / BNS-I2D00EAF**  
 - 1/2.8" 5.69 Mega Pixel STARVIS CMOS  
 - 1/2.8" 2.24 Mega Pixel STARVIS CMOS  
 - AF 2.7-12mm/2.8-12mm Lens



**BNS-I5D24EAF / BNS-I2D24EAF**  
 - 1/2.8" 5.69 Mega Pixel STARVIS CMOS  
 - 1/2.8" 2.24 Mega Pixel STARVIS CMOS  
 - 24 IR  
 - AF 2.7-12mm/2.8-12mm Lens

## 2MP IP CAMERA [Moterized]

Image Sensor	1/2.8" 2.24 Mega Pixel Sony STARVIS CMOS(IMX291)	Video compression method	H.264 MP / H.265 HP / MJPEG
effective pixels	1985(H)×1105(V) 2.19 megapixels	1st Resolution	1920X1080 / 1280X720 / 960X540 / 854X480 / 640X480 / 640X360
Scanning System	Progressive	2nd Resolution	1280X720 / 960X540 / 854X480 / 640X480 / 640X360 / 320X240
Min.illumination	Color : 0.01Lux(F1.6, DSS off) B/W : 0Lux (IR LED on)	3rd Resolution	320X240
signal to noise ratio	120dB (AGC off)	Max.frame rate	H.264 / H.265 / MJPEG all resolutions up to 30fps (optional: 60fps)
White balance	AUTO / MANUAL / DAYLIGHT / CLOUDY / TUNGSTEN / SUNSET	video streaming	H.264 / H.265 / MJPEG triple streaming, CBR/VBR
slow shutter	OFF / X2 / X4	max.number of users	Control up to 10 profiles
WDR	OFF / AUTO / MANUAL (0~255)	audio streaming	Two-way communication G.711
BLC	OFF / ON (1~3)	protocol	TCP/IP, HTTP, RTP, RTSP, UDP, DHCP, FTP, SMTP, NTP, ARP, ICMP, DDNS, Onvif
SHDR	OFF / ON (1~100)	security	User authentication, IP filtering, MAC filtering, digest authentication
2DNR	0~200	Client software	Web Browser, CMS, MobileViewer
3DNR	0~200	Language	Korean, English, French, Japanese, German
shutter speed	1/33333 ~ 1/30	SDK support	API, Onvif Profile S Compliant
anti flicker	OFF / ON	Operating temperature / humidity	-10°C~+50°C / 90% RH or less
AGC	0 ~ 20	Power	DC 12V / PoE DC 48V
Day/Night Mode	AUTO / DAY / NIGHT / EXT / SCHEDULE		
video effects	Mirror / Flip / LDC / Corridor (90, 270)		
motion detection	Yes		
Privacy	OFF / ON (4 Blocks)		
Compensation	EV -4 ~ EV +4		
Fog correction	OFF / ON		
OSD	Through Web		



# 4MP/2MP SDI Camera[STARVIS]



1/2.8" 2.16 Mega Pixel STARVIS CMOS  
1/2.8" 5.69 Mega Pixel STARVIS CMOS



**BNS-4DH04E / BNS-2DH04E**  
- 1/2.8" 5.69 Mega Pixel STARVIS CMOS  
- 1/2.8" 2.16 Mega Pixel STARVIS CMOS  
- 04 IR / Searchlight  
- 3.6mm/6mm Lens



**BNS-4DH08E / BNS-2DH08E**  
- 1/2.8" 5.69 Mega Pixel STARVIS CMOS  
- 1/2.8" 2.16 Mega Pixel STARVIS CMOS  
- 08 IR / HI-POWER  
- 2.8mm/3.6mm/6mm /2.8-12mm/5-50mm Lens



**BNS-4DH84E / BNS-2DH84E**  
- 1/2.8" 5.69 Mega Pixel STARVIS CMOS  
- 1/2.8" 2.16 Mega Pixel STARVIS CMOS  
- 84 IR  
- 2.8/3.6mm/6mm/2.8~12mm/ 5-50mm Lens



**BNS-4DU00E / BNS-2DU00E**  
- 1/2.8" 5.69 Mega Pixel STARVIS CMOS  
- 1/2.8" 2.16 Mega Pixel STARVIS CMOS  
- 2.8mm/3.6mm/6mm/2.8-12mm Lens



**BNS-4DB06E / BNS-2DB06E**  
- 1/2.8" 5.69 Mega Pixel STARVIS CMOS  
- 1/2.8" 2.16 Mega Pixel STARVIS CMOS  
- 06 IR / HI-POWER  
- 2.8mm/3.6mm/6mm/2.8~12mm Lens



**BNS-4DB08E / BNS-2DB08E**  
- 1/2.8" 5.69 Mega Pixel STARVIS CMOS  
- 1/2.8" 2.16 Mega Pixel STARVIS CMOS  
- 08 IR  
- 2.8mm/3.6mm/6mm Lens

# 4MP/2MP SDI Camera[STARVIS]

## main function

- Real-time defect detection and correction
- Privacy Mask (privacy protection function)
- Supports FULL HD 1080p, 1440p
- DEFOG (Fog Correction Function)
- 2.8mm/3.6mm/6mm/2.8~12mm/5~50mm Lens
- OSD joystick terminal provided (NTSC / PAL, 16:9 / 4:3)
- 2DNR/3DNR (digital noise reduction function)



**BNS-4DB36E / BNS-2DB36E**  
- 1/2.8" 5.69 Mega Pixel STARVIS CMOS  
- 1/2.8" 2.16 Mega Pixel STARVIS CMOS  
- 36 IR  
- 3.6mm/6mm Lens



**BNS-4DB42E / BNS-2DB42E**  
- 1/2.8" 5.69 Mega Pixel STARVIS CMOS  
- 1/2.8" 2.16 Mega Pixel STARVIS CMOS  
- 42 IR  
- 2.8mm/2.8-12mm Lens



**BNS-4DB54E / BNS-2DB54E**  
- 1/2.8" 5.69 Mega Pixel STARVIS CMOS  
- 1/2.8" 2.16 Mega Pixel STARVIS CMOS  
- 54 IR  
- 3.6mm/6mm Lens



**BNS-2DD00E / BNS-4DD00E**  
- 1/2.8" 5.69 Mega Pixel STARVIS CMOS  
- 1/2.8" 2.16 Mega Pixel STARVIS CMOS  
- 2mm/2.8mm/3.6mm/6mm/2.8-12mm Lens



**BNS-2DD24E / BNS-4DD24E**  
- 1/2.8" 5.69 Mega Pixel STARVIS CMOS  
- 1/2.8" 2.16 Mega Pixel STARVIS CMOS  
- 24 IR  
- 2.8mm/3.6mm/6mm/2.8-12mm Lens



**BNS-2DC02E / BNS-4DC02E**  
- 1/2.8" 5.69 Mega Pixel STARVIS CMOS  
- 1/2.8" 2.16 Mega Pixel STARVIS CMOS  
- 02 IR / HI-POWER  
- 2.8mm/3.6mm/6mm Lens

## 4MP SDI Camera[STARVIS]

Image Sensor	1/2.8" 5.69Mega Pixel SONY CMOS	AGC	0 ~ 10
effective pixels	2704(H) x 2104(V) = 5.69M pixels	Day/Night Mode	AUTO/COLOR/B&W/EXT
scanning system	16:9 Progressive Scan	AWB	AUTO/AUTOext/PRESET/MANUAL
Horizontal resolution	1280x720p(720p/25,30fps),1920x1080p(1080p/25,30fps)	DNR	OFF/LOW/MIDDLE/HIGH
	2560x1440p(1440p/25,30fps),2592X1944(1944P/12.5, 20fps)	definition	ON/OFF
Min.illumination	More than 0.1 lux (DSS off)	mirror mode	ON/OFF
signal to noise ratio	More than 53dB (AGC off)	reversal	ON/OFF
video output	EX-SDI	D-WDR	ON/OFF
brightness	0~20	Privacy	ON(16 Points)/OFF
shutter speed	AUTO / FLICKER / MANUAL(1/30(25) ~ 1/30000)	Motion detection	ON(4 ZONE)/OFF
SENS-UP	OFF / x2 / x4 / x8 / x16 / x32	output	1440p
AGC	0~10	FRAME RATE	1440p-25FPS / 30FPS
Fog correction	ON/OFF	CVBS	ON/OFF
BACKLIGHT	OFF/HLC/BLC/WDR	Language	ENG/KOR/CHN/JPN (MULTI LANGUAGE)

## 2MP SDI Camera[STARVIS]

Image Sensor	1/2.8" 2.16Mega Pixel Sony STARVIS CMOS	motion detection	Up to 4 zones
effective pixels	1945(H) x 1097(V) = 2.13M pixels	privacy	Up to 16 areas, colors (Y, CB, CR mixed colors) transparency 0-3
scanning system	Progressive	slow shutter	OFF, x2-x32
Min.illumination	Color : 0.01Lux(F1.6, DSS off/DSS on 0.001Lux)	automatic gain control	Level 0-10
	B/W : 0Lux (IR LED on)	shutter speed	AUTO (NORMAL/DEBLUR), MANUAL (1/30-1/30000), FLICKER
signal to noise ratio	52dB (AGC off)	white balance	AUTO, AUTOext, PRESET, MANUAL
Signal method	HD-SDI, EX-SDI v1.0, EX-SDI v2.0 (Signal Option : AHD/TVI/CVI/CVBS)	video effects	Up/down inversion ON/OFF, left/right inversion ON/OFF
resolution	1920x1080(FHD)@30fps	Language	Korean, English, Chinese (Traditional), Chinese (Simplified), Japanese
	1280x720(HD)@30fps/60fps, CVBS		
Day/Night Mode	AUTO/COLOR/B&W/EXTERN	Operating temperature / humidity	-10℃~+50℃ / 90% RH 이하
WDR	WDR On/Off (NORMAL, ROI)	Power	DC 12V
Backlight compensation	BLC On/Off, HLC On/Off (Level 0-20)		
brightness compensation	OFF/LOW/MIDDLE/HIGH		
noise removal	OFF/LOW/MIDDLE/HIGH AdaptiveDNR (2D+3D)		
fog correction	ON/OFF (AUTO/MANUAL : Level LOW/MIDDLE/HIGH)		

# 4MP/2MP Analog Camera[STARVIS]



The analog signal received from the camera module is converted to digital through a decoder. Enables real-time monitoring by compressing on a compression chip and transmitting over the network. It means camera. For stable, rapid and efficient monitoring Utilizes H.264 video compression technology.



**BNS-4AH04E / BNS-2AH04E**  
 - 1/2.8" 5.69 Mega Pixel STARVIS CMOS  
 - 1/2.8" 2.16 Mega Pixel STARVIS CMOS  
 - 04 IR / searchlight  
 - 3.6mm/6mm Lens



**BNS-4AH08E / BNS-2AH08E**  
 - 1/2.8" 5.69 Mega Pixel STARVIS CMOS  
 - 1/2.8" 2.16 Mega Pixel STARVIS CMOS  
 - 08 IR / HI-POWER  
 - 2.8mm/3.6mm/6mm /2.8-12mm/5-50mm Lens



**BNS-4AH84E / BNS-2AH84E**  
 - 1/2.8" 5.69 Mega Pixel STARVIS CMOS  
 - 1/2.8" 2.16 Mega Pixel STARVIS CMOS  
 - 84 IR  
 - 2.8mm/3.6mm/6mm/2.8-12mm/5-50mm Lens



**BNS-4AB06E / BNS-2AB06E**  
 - 1/2.8" 5.69 Mega Pixel STARVIS CMOS  
 - 1/2.8" 2.16 Mega Pixel STARVIS CMOS  
 - 06 IR / HI- POWER  
 - 2.8mm/3.6mm/6mm/2.8-12mm Lens



**BNS-4AB08E / BNS-2AB08E**  
 - 1/2.8" 5.69 Mega Pixel STARVIS CMOS  
 - 1/2.8" 2.16 Mega Pixel STARVIS CMOS  
 - 08 IR / HI- POWER  
 - 2.8mm/3.6mm/6mm Lens



**BNS-4AB36E / BNS-2AB36E**  
 - 1/2.8" 5.69 Mega Pixel STARVIS CMOS  
 - 1/2.8" 2.16 Mega Pixel STARVIS CMOS  
 - 36 IR  
 - 3.6mm/6mm Lens

# 4MP/2MP Analog Camera [STARVIS]



**CMOS** 1/2.8" 2.16 Mega Pixel STARVIS CMOS  
 1/2.8" 5.69 Mega Pixel STARVIS CMOS

▶ main function

- 1/2.8" Sony STARVIS CMOS Sensor
- FULL HD 4M 15fps/30fps support / 5M 20fps support (4MP)
- Supports FULL HD 1080p 30fps (2MP)
- Simple mode change (AHD / TVI / CVBS)
- Privacy Mask (privacy protection function)
- Real-time defect detection and correction
- Analog CVBS output (NTSC / PAL, 16:9 / 4:3)
- OSD joystick terminal provided (optional)
- Supports various functions
- DEFOG (Fog Compensation Function)
- 2.8mm/3.6mm/6mm/2.8-12mm lens



**BNS-4AD00E / BNS-2AD00E**  
 - 1/2.8" 5.69 Mega Pixel STARVIS CMOS  
 - 1/2.8" 2.16 Mega Pixel STARVIS CMOS  
 - 2mm/2.8mm/3.6mm/6mm/2.8-12mm Lens



**BNS-4AD24E / BNS-2AD24E**  
 - 1/2.8" 5.69 Mega Pixel STARVIS CMOS  
 - 1/2.8" 2.16 Mega Pixel STARVIS CMOS  
 - 24 IR  
 - 2.8mm/3.6mm/6mm/2.8-12mm Lens



**BNS-4AC02E / BNS-2AC02E**  
 - 1/2.8" 5.69 Mega Pixel STARVIS CMOS  
 - 1/2.8" 2.16 Mega Pixel STARVIS CMOS  
 - 02 IR / HI-POWER  
 - 2.8mm/3.6mm/6mm Lens

## 4MP Analog Camera[STARVIS]

Image Sensor	1/2.8" 5.69Mega Pixel SONY CMOS	shutter speed	AUTO, FLK
effective pixels	2616(H) x 1964(V) = 5.14M pixels	white balance	AWB, ATW, AWC → SET
		video effects	Up/down inversion ON/OFF, left/right inversion ON/OFF, LSC
scanning system	Progressive	Language	English, Chinese (Traditional), Chinese (Simplified), German, French Italian, Spanish, Polish, Russian, Portuguese, Dutch, Turkish
Min.illumination	Color : 0.01Lux(F1.6, DSS off) B/W : 0Lux (IR LED on)		UTC
signal to noise ratio	50dB (AGC off)	Operating temperature / humidity	-10℃~+50℃ / 90% RH or less
Signal method	AHD/TVI (4M/5M), CVBS		Power
resolution	AHD 2592×1944@20/12.5fps, 2560×1440(WQHD)@30/15fps	Day/Night Mode	AUTO, COLOR, B/W, EXT (SMART IR)
	TVI 2592×1944@20/12.5fps, 2560×1440(WQHD)@30fps,		
CVBS			
WDR	D-WDR (AUTO, OFF)	Backlight compensation	BLC On/Off Level : LOW/MIDDLE/HIGH
noise removal	2DNR : OFF/LOW/MIDDLE/HIGH 3DNR : OFF/LOW/MIDDLE/HIGH		
automatic gain control	Level 0-15		

## 2MP Analog Camera [STARVIS]

Image Sensor	1/2.8" 2.16Mega Pixel Sony STARVIS CMOS	slow shutter	x2-x30, SENS-UP : OFF, AUTO : x2-x32
effective pixels	1945(H)×1097(V) 2.13M pixels	automatic gain control	Level 0-15
scanning system	Progressive	shutter speed	AUTO, MANUAL (1/30-1/50000), FLK
Min.illumination	Color : 0.01Lux(F1.6, DSS off/DSS on 0.001Lux)	Language	English, Chinese (Traditional), Chinese (Simplified), German, French Italian, Spanish, Polish, Russian, Portuguese, Dutch, Turkish
	B/W : 0Lux (IR LED on)		
signal to noise ratio	53dB (AGC off)	white balance	AWB, ATW, AWC → SET, INDOOR, OUTDOOR, MANUAL
OSD	Camera name On/Off (up to 15 letters/numbers/symbols)	UTC	Pelco- C
Signal method	AHD/TVI (2.1M/1.3M), CVBS	video effects	Up/down inversion ON/OFF, left/right inversion ON/OFF FREEZE, NEG, IMAGE, LSC
resolution	1920 x 1080(FHD)@30fps, 1280 x 720(HD)@30fps, CVBS	Operating temperature / humidity	-10℃~+50℃ / 90% RH or less
Day/Night Mode	AUTO, COLOR, B/W, EXT (SMART IR)	Power	DV 12V
WDR	D-WDR (AUTO, ON : Level 0-8, OFF)		
Backlight compensation	BLC On/Off Level: LOW/MIDDLE/HIGH HSBLC On/Off Level: 0-255 area designation		
Noise removal	2DNR : OFF/LOW/MIDDLE/HIGH 3DNR : OFF/LOW/MIDDLE/HIGH		
fog correction	OFF/AUTO area designation		
motion detection	Up to 4 zones		
privacy	Up to 4 zones		



# 4MP/2MP Analog Camera [Moterized]



Compared to existing products by adopting Sony's high-sensitivity image sensor, Provides excellent identification even in dark environments at night. The use of a moterized lens automatically optimizes focus when adjusting zoom. Auto, manual mode and auto focus button, and automatic focus when switching between day and night. Provides the ability to adjust.



**BNS-4DAH04EAF/BNS-2DAH04EAF**  
 - 1/2.8" 5.69 Mega Pixel Sony STARVIS CMOS  
 - 1/2.8" 2.16 Mega Pixel Sony STARVIS CMOS  
 - 04 IR / searchlight  
 - AF 2.8-12mm Lens



**BNS-4DAH08EAF / BNS-2DAH08EAF**  
 - 1/2.8" 5.69 Mega Pixel Sony STARVIS CMOS  
 - 1/2.8" 2.16 Mega Pixel Sony STARVIS CMOS  
 - 08 IR / HI-POWER  
 - AF 2.8-12mm / 5-50mm Lens



**BNS-4DAH84EAF/BNS-2DAH84EAF**  
 - 1/2.8" 5.69 Mega Pixel Sony STARVIS CMOS  
 - 1/2.8" 2.16 Mega Pixel Sony STARVIS CMOS  
 - 84 IR  
 - AF 2.8-12mm / 5-50mm Lens



**BNS-4DAB06EAF / BNS-2DAB06EAF**  
 - 1/2.8" 5.69 Mega Pixel Sony STARVIS CMOS  
 - 1/2.8" 2.16 Mega Pixel Sony STARVIS CMOS  
 - 06 IR / HI-POWER  
 - AF 2.8-12mm Lens



**BNS-4DAB08EAF/BNS-2DAB08EAF**  
 - 1/2.8" 5.69 Mega Pixel Sony STARVIS CMOS  
 - 1/2.8" 2.16 Mega Pixel Sony STARVIS CMOS  
 - 08 IR / HI-POWER  
 - AF 2.8-12mm / 5-50mm Lens



**BNS-4DAB42EAF/BNS-2DAB42EAF**  
 - 1/2.8" 5.69 Mega Pixel Sony STARVIS CMOS  
 - 1/2.8" 2.16 Mega Pixel Sony STARVIS CMOS  
 - 42 IR  
 - AF 2.8-12mm Lens

## 4MP Analog CAMERA [Moterized]

Image Sensor	1/2.8" 5.69Mega Pixel Sony STARVIS CMOS	DNR	OFF / LOW / MIDDLE / HIGH
effective pixels	2704(H)x2104(V)= 5.69 megapixels	definition	0~10
scanning system	16:9 Progressive Scan	mirror mode	ON / OFF
Horizontal resolution	1280x720p(720p/25,30fps),1920x1080p(1080p/25,30fps)	D-WDR	ON / OFF
	2560x1440p(1440p/25,30fps),2592x1944(1944p/12.5,20fps)	Shade correction	ON / OFF
Min.illumination	More than 0.1 lux (DSS off)	Privacy	ON(16 Points)/ OFF
signal to noise ratio	Morer than 53dB (AGC off)	Motion detection	ON(4 ZONE)/ OFF
video output	AHD/TVI (4M/5M),CVBS	reversal	ON / OFF
brightness	0~20	FRAME RATE	1440p - 25FPS / 30FPS
shutter speed	AUTO / FLICKER / MANUAL(1/30(25)~ 1/30000)	CVBS	ON / OFF
SENS-UP	OFF / x2 / x4 / x8 / x16 / x32	output	1440p
AGC	0~10	Language	ENG / KOR / CHN / JPN (MULTI LANGUAGE)
Fog correction	ON / OFF		
BACKLIGHT	OFF/ HLC/ BLC/ WDR		
Day/Night Mode	AUTO / COLOR / B&W /EXT		
AWB	AUTO / AUTOext / PRESET / MANUAL		

# 4MP/2MP Analog Camera [Moterized]



CMOS 1/2.8" 2.16 Mega Pixel STARVIS CMOS  
 1/2.8" 5.69 Mega Pixel STARVIS CMOS

▶ main function

- 1/2.8" Sony STARVIS CMOS Sensor
- Simple mode change (AHD / TVI / CVBS)
- Privacy Mask (privacy protection function)
- Real-time defect detection and correction
- Autofocus motorized zoom lens
- 2DNR/3DNR digital noise reduction function
- Analog CVBS output (NTSC / PAL, 16:9 / 4:3)
- OSD joystick terminal provided (optional)
- Supports various functions
- DEFOG (Fog Compensation Function)
- AF 2.8-12mm/5-50mm Lens



**BNS-4DAD00EAF / BNS-2DAD00EAF**  
 - 1/2.8" 5.69 Mega Pixel STARVIS CMOS  
 - 1/2.8" 2.16 Mega Pixel STARVIS CMOS  
 - AF 2.8-12mm Lens



**BNS-4DAD24EAF / BNS-2DAD24EAF**  
 - 1/2.8" 5.69 Mega Pixel STARVIS CMOS  
 - 1/2.8" 2.16 Mega Pixel STARVIS CMOS  
 - 24 IR  
 - AF 2.8~12mm Lens

## 2MP Analog Camera [Moterized]

Image Sensor	1/2.8" 2.16Mega Pixel Sony STARVIS CMOS	slow shutter	x2-x30, SENS-UP : OFF, AUTO : x2-x32
effective pixels	1945(H)x1097(V) 2.13 megapixels	automatic gain control	Level 0-15
scanning system	Progressive	shutter speed	AUTO,MANUAL (1/30-1/50000), FLK
Min.illumination	Color : 0.01Lux(F1.6, DSS off/DSS on 0.001Lux)	Languages	English, Chinese (Traditional), Chinese (Simplified), German, French Italian, Spanish, Polish, Russian, Portuguese, Dutch, Turkish
	B/W : 0Lux (IR LED on)		
signal to noise ratio	53dB (AGC off)	white balance	AWB, ATW, AWC→SET, INDOOR, OUTDOOR, MANUAL
OSD	Camera name On/Off (up to 15 letters/numbers/symbols)	UTC	Pelco- C
Signal method	AHD/TVI (2.1M/1.3M),CVBS	video effects	Up/down inversion ON/OFF, left/right inversion ON/OFF FREEZE, NEG, IMAGE, LSC
resolution	1920 x 1080(FHD)@30fps, 1280 x 720(HD)@30fps, CVBS	Operating temperature / humidity	-10 °C ~ +50 °C / Below 90% RH or less
Day/Night Mode	AUTO, COLOR, B/W, EXT (SMART IR)	Power	DV 12V
WDR	D-WDR (AUTO, ON : Level 0-8, OFF)		
Backlight compensation	BLC On/Off Level: LOW/MIDDLE/HIGH HSBLC On/Off Level: 0-255 area designation		
Noise removal	2DNR : OFF/LOW/MIDDLE/HIGH 3DNR : OFF/LOW/MIDDLE/HIGH		
fog correction	OFF/AUTO area designation		
motion detection	Up to 4 zones		
privacy zone	Up to 4 zones		

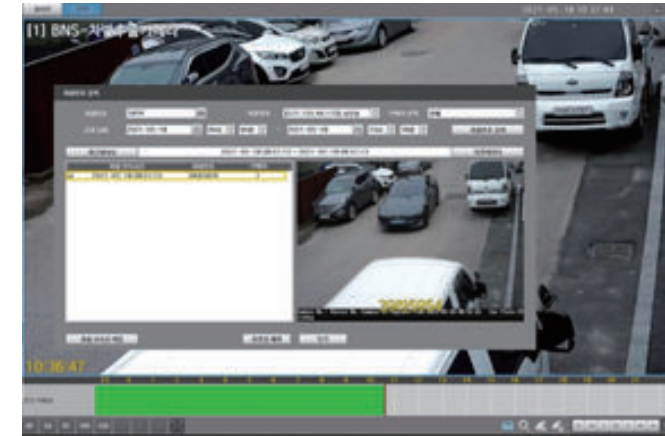
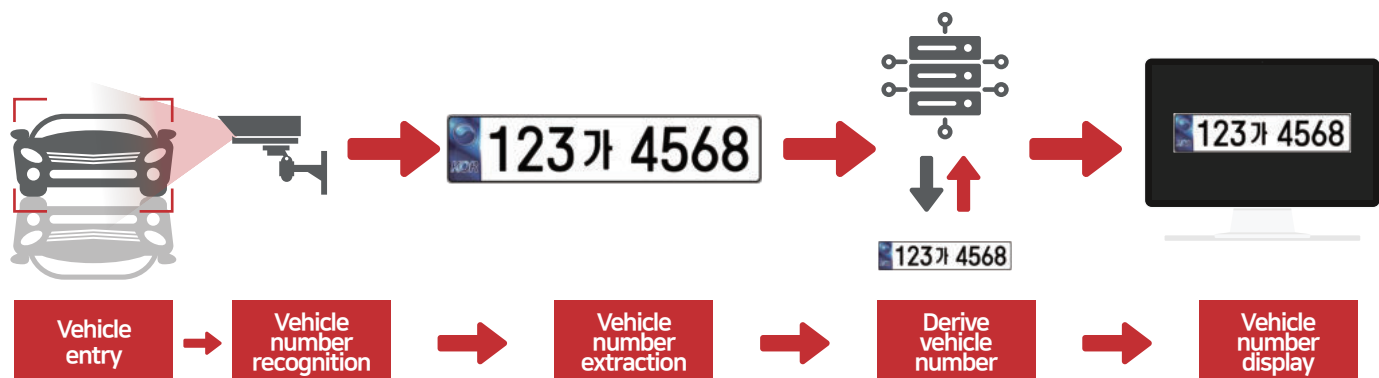
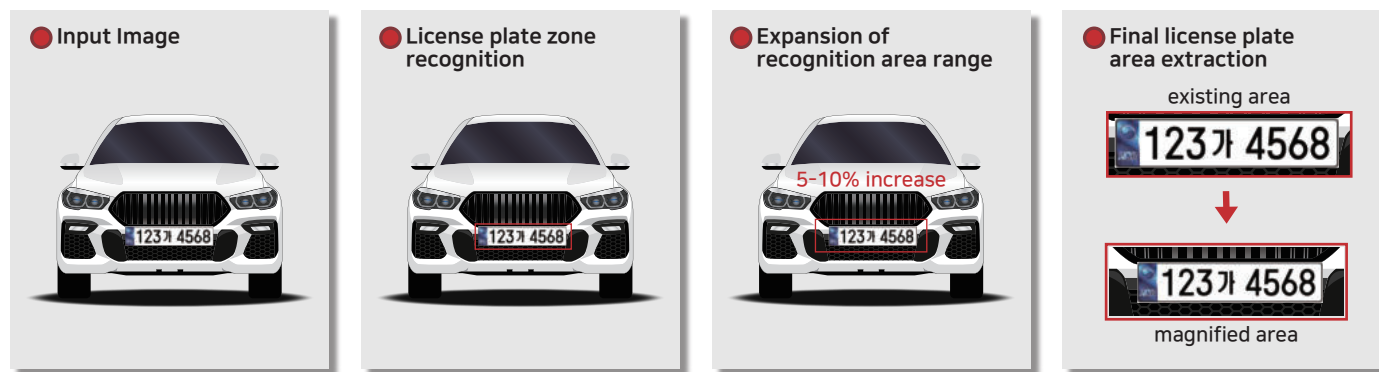
# Vehicle number extraction solution

Analysis, vehicle registration number storage, video storage, and screen display of information are carried out simultaneously, and search along with the video is possible.

It can be applied in a variety of ways to various fields such as roads, urban crime prevention, and apartments.



## License plate area extraction process



Replay possible after searching for vehicle number



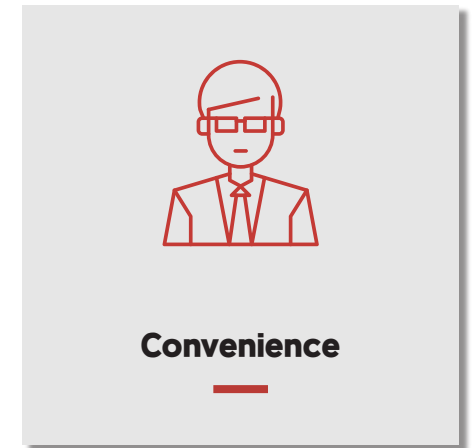
Generate moving vehicle event log on real-time screen



Simultaneous recognition of scratches and damage to entering and exiting vehicles  
High-speed vehicle recognition possible



Can be linked to rate adjustment machines, circuit breakers, etc.  
Excel input can be saved



Simple setup on the recorder

## Construction and application examples



roadways and highways



Underground parking lot entrance/exit



# 5MP/2MP IP Camera [LPR]



CMOS 1/2.8" 5.69 Mega Pixel STARVIS CMOS  
1/2.8" 2.24 Mega Pixel STARVIS CMOS



▶ main function

- 2616X1964 (5MP) Sony STARVIS CMOS Sensor
- 1985X1105 (2MP) Sony STARVIS CMOS Sensor
- PoE support (IEEE802.3af)
- Onvif Profile S compatible
- H.264, H.265, MJPEG / triple streaming support
- 18IR + 24IR HIPOWER
- Supports various functions
- Fog correction, backlight correction, 2DNR/3DNR,
- Excellent compatibility
- DC 5-50mm AF Lens
- Supports functions such as motion detection and privacy protection

# 5MP/2MP IP Camera [LPR]



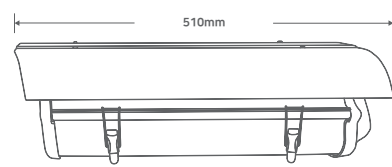
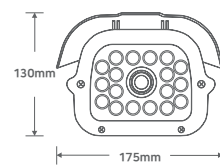
CMOS 1/2.8" 5.69 Mega Pixel STARVIS CMOS  
1/2.8" 2.24 Mega Pixel STARVIS CMOS



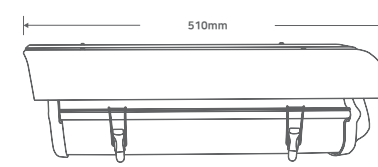
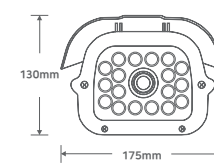
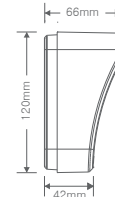
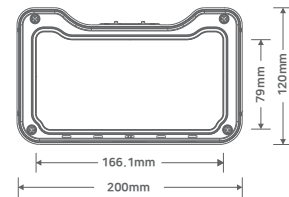
▶ main function

- 2616X1964 (5MP) Sony STARVIS CMOS Sensor
- 1985X1105 (2MP) Sony STARVIS CMOS Sensor
- PoE support (IEEE802.3af)
- Onvif Profile S compatible
- H.264, H.265, MJPEG / triple streaming support
- 18 IR HI-POWER
- Supports various functions
- Fog correction, backlight correction, 2DNR/3DNR
- Excellent compatibility
- DC 5-50mm Lens
- Supports functions such as motion detection and privacy protection

- Camera



- External light emitter



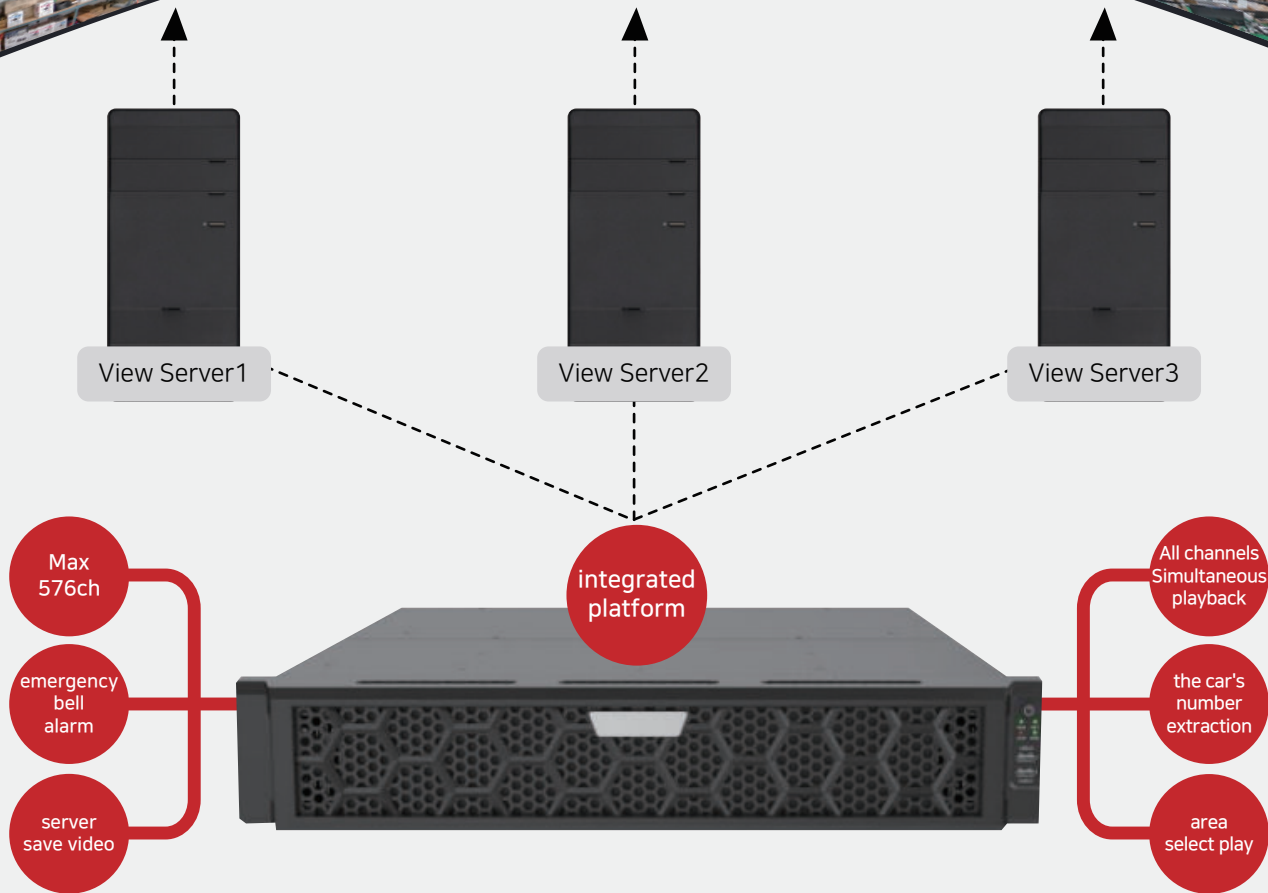
	BNS-I5H18EAF	BNS-I2H18EAF
Image Sensor	1/2.8" 5.69Mega Pixel CMOS	1/2.8" 2.24Mega Pixel CMOS
effective pixels	2616(H)x1964(V) 5.14Mega Pixel	1985(H)x1105(V) 2.19Mega Pixel
scanning system	Progressive	Progressive
Min.Illumination	Color : 0.01Lux(F1.6, DSS off) B/W : 0Lux (IR LED on)	Color : 0.01Lux(F1.6, DSS off) B/W : 0Lux (IR LED on)
signal to noise ratio	50dB (AGC off)	53dB (AGC off)
white balance	AUTO / MANUAL / DAYLIGHT / CLOUDY / TUNGSTEN / SUNSET	AUTO / MANUAL / DAYLIGHT / CLOUDY / TUNGSTEN / SUNSET
slow shutter	OFF / X2 / X4	OFF / X2 / X4
WDR	OFF / AUTO / MANUAL (0~255)	OFF / AUTO / MANUAL (0~255)
BLC	OFF / ON (1~3)	OFF / ON (1~3)
SHDR	OFF / ON (0~100)	OFF / ON (0~100)
2DNR	0~200	0~200
3DNR	0~200	0~200
shutter speed	1/33333 ~ 1/30	1/33333 ~ 1/30
anti flicker	OFF / ON	OFF / ON
AGC	0 ~ 20	0 ~ 20
Day/Night Mode	AUTO / DAY / NIGHT / EXT / SCHEDULE	AUTO / DAY / NIGHT / EXT / SCHEDULE
video effects	Mirror / Flip / LDC / Corridor (90, 270)	Mirror / Flip / LDC / Corridor (90, 270)
Motion detection	Yes	Yes
Privacy protection area	OFF / ON (4 Blocks)	OFF / ON (4 Blocks)
Compensation	EV -4 ~ EV +4	EV -4 ~ EV +4
Fog correction	OFF / ON	OFF / ON
OSD	Through Web	Through Web
Video compression method	H.264 MP / H.265 HP / MJPEG	H.264 MP / H.265 HP / MJPEG
1st Resolution	2592X1944 / 2592X1520 / 2592X1458 / 2304X1296 / 1920X1080 / 1280X720	1920X1080 / 1280X720 / 960X540 / 854X480 / 640X480 / 640X360
2nd Resolution	1920X1080 / 1280X720 / 1024X768 / 960X540 / 854X480 / 640X480 / 640X360	1280X720 / 960X540 / 854X480 / 640X480 / 640X360 / 320X240
3rd Resolution	640X480 / 640X360 / 352X240	320X240
Max.frame rate	H.264 / H.265 / MJPEG all resolutions up to 30fps	H.264 / H.265 / MJPEG 모든 해상도 최대 30fps
video streaming	H.264 / H.265 / MJPEG triple streaming, CBR/VBR	H.264 / H.265 / MJPEG 트리플 스트리밍, CBR/VBR
Max.number of users	Control up to 10 profiles	최대 10개 프로파일 제어
audio streaming	Two-way communication G.711	양방향 통신 G.711
protocol	TCP/IP, HTTP, RTP, RTSP, UDP, DHCP, FTP, SMTP, NTP, ARP, ICMP, DDNS, Onvif	TCP/IP, HTTP, RTP, RTSP, UDP, DHCP, FTP, SMTP, NTP, ARP, ICMP, DDNS, Onvif
security	User authentication, IP filtering, MAC filtering, digest authentication	User authentication, IP filtering, MAC filtering, digest authentication
client software	Web Browser, CMS, MobileViewer	Web Browser, CMS, MobileViewer
Language	Korean, English, French, Japanese, German	Korean, English, French, Japanese, German
SDK support	API, Onvif Profile S Compliant	API, Onvif Profile S Compliant
Operating temperature/humidity	-10°C~+50°C / 90% RH or less	-10°C~+50°C / 90% RH or less
Power	DC 12V / PoE DC 48V	DC 12V / PoE DC 48V

	BNS-I5H18EV	BNS-I2H18EV
Image Sensor	1/2.8" 5.69Mega Pixel CMOS	1/2.8" 2.24Mega Pixel CMOS
effective pixels	2616(H)x1964(V) 5.14Mega Pixel	1985(H)x1105(V) 2.19Mega Pixel
scanning system	Progressive	Progressive
Min.Illumination	Color: 0.01Lux (F1.6, DSS off) B/W: 0Lux (IR LED on)	Color: 0.01Lux (F1.6, DSS off) B/W: 0Lux (IR LED on)
signal to noise ratio	50dB (AGC off)	53dB (AGC off)
white balance	AUTO / MANUAL / DAYLIGHT / CLOUDY / TUNGSTEN / SUNSET	AUTO / MANUAL / DAYLIGHT / CLOUDY / TUNGSTEN / SUNSET
slow shutter	OFF / X2 / X4	OFF / X2 / X4
WDR	OFF / AUTO / MANUAL (0~255)	OFF / AUTO / MANUAL (0~255)
BLC	OFF / ON (1~3)	OFF / ON (1~3)
SHDR	OFF / ON (0~100)	OFF / ON (0~100)
2DNR	0~200	0~200
3DNR	0~200	0~200
shutter speed	1/33333 ~ 1/30	1/33333 ~ 1/30
anti flicker	OFF / ON	OFF / ON
AGC	0 ~ 20	0 ~ 20
Day/Night Mode	AUTO / DAY / NIGHT / EXT / SCHEDULE	AUTO / DAY / NIGHT / EXT / SCHEDULE
video effects	Mirror / Flip / LDC / Corridor (90, 270)	Mirror / Flip / LDC / Corridor (90, 270)
Motion detection	Yes	Yes
Privacy protection area	OFF / ON (4 Blocks)	OFF / ON (4 Blocks)
Compensation	EV -4 ~ EV +4	EV -4 ~ EV +4
Fog correction	OFF / ON	OFF / ON
OSD	Through Web	Through Web
Video compression method	H.264 MP / H.265 HP / MJPEG	H.264 MP / H.265 HP / MJPEG
1st Resolution	2592X1944 / 2592X1520 / 2592X1458 / 2304X1296 / 1920X1080 / 1280X720	1920X1080 / 1280X720 / 960X540 / 854X480 / 640X480 / 640X360
2nd Resolution	1920X1080 / 1280X720 / 1024X768 / 960X540 / 854X480 / 640X480 / 640X360	1280X720 / 960X540 / 854X480 / 640X480 / 640X360 / 320X240
3rd Resolution	640X480 / 640X360 / 352X240	320X240
Max.frame rate	H.264 / H.265 / MJPEG all resolutions up to 30fps	H.264 / H.265 / MJPEG all resolutions up to 30fps
video streaming	H.264 / H.265 / MJPEG triple streaming, CBR/VBR	H.264 / H.265 / MJPEG triple streaming, CBR/VBR
Max.number of users	Control up to 10 profiles	Control up to 10 profiles
audio streaming	Two-way communication G.711	Two-way communication G.711
protocol	TCP/IP, HTTP, RTP, RTSP, UDP, DHCP, FTP, SMTP, NTP, ARP, ICMP, DDNS, Onvif	TCP/IP, HTTP, RTP, RTSP, UDP, DHCP, FTP, SMTP, NTP, ARP, ICMP, DDNS, Onvif
security	User authentication, IP filtering, MAC filtering, digest authentication	User authentication, IP filtering, MAC filtering, digest authentication
client software	Web Browser, CMS, MobileViewer	Web Browser, CMS, MobileViewer
Language	Korean, English, French, Japanese, German	Korean, English, French, Japanese, German
SDK support	API, Onvif Profile S Compliant	API, Onvif Profile S Compliant
Operating temperature/humidity	-10°C~+50°C / 90% RH or less	-10°C~+50°C / 90% RH or less
Power	DC 12V / PoE DC 48V	DC 12V / PoE DC 48V



# BNS PC server type video storage device

BNS' PC server-type video storage device can store and distribute multi-channel video on a single server. Supports up to 576ch through channel expansion through license. Various solutions can be linked without restrictions.



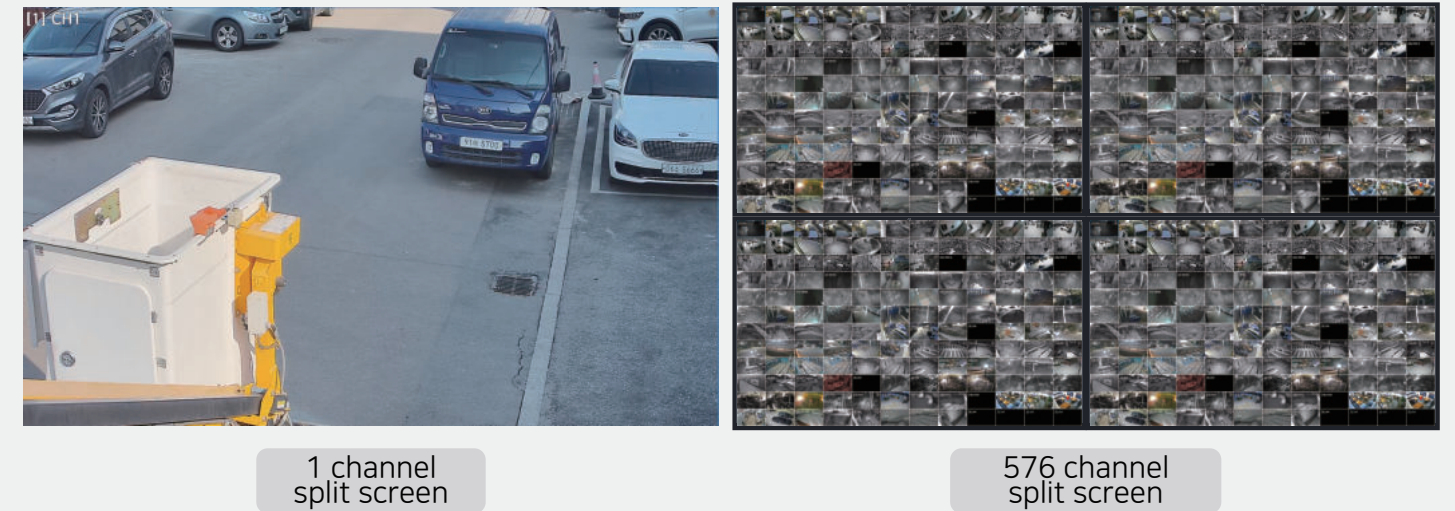
- Real-time recording and simultaneous playback of all channels
- 4K resolution display and recording
- Multi-monitor output
- 12 HDDs (up to 240TB) RAID 1,5
- Supports abnormal sound source and fire detection functions
- Supports remote setup and upgrade
- E-map support
- Fisheye camera integration NVR dewarping support
- CMS, mobile app support
- Event pop-up for intelligent detection
- Emergency bell and elevator linkage support
- Supports GPS time synchronization
- IP camera automatic registration, ONVIF compatible
- 512Mbps network bandwidth
- H.264 / H.265
- MP4 backup support

# Real-time live and playback of multi-regional video

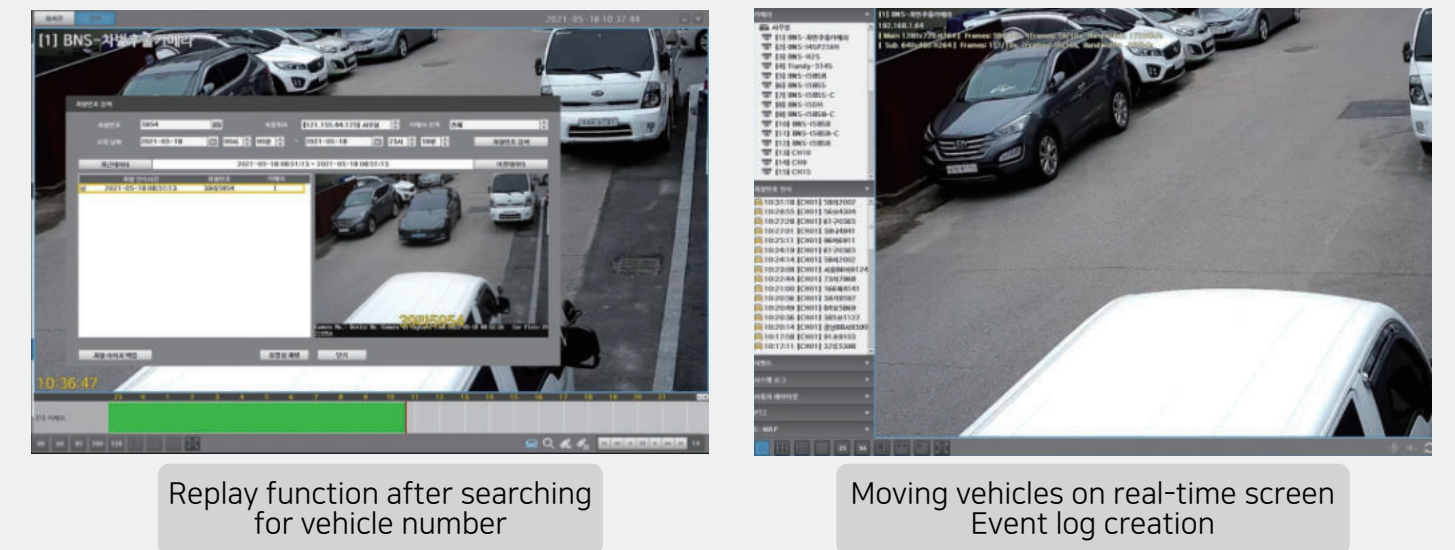


By selecting the channel of your desired region, you can live and play screens from multiple regions simultaneously on one monitor.

# 1-channel to multi-channel split screen control configuration possible



# Vehicle number extraction possible





**AHD  
TVI + SD  
All Hybrid**

**BnS Corporation**  
(주)비엔에스

**N-Series  
4ch,8ch**

**BnS Corporation**  
(주)비엔에스



**BNS-A5M04S1**

**BNS-A5M08S1**

**BNS-A5M16S2**

		BNS-A5M04S1	BNS-A5M08S1	BNS-A5M16S2
video	input	4ch	8ch	16ch
	input resolution	Up to 5MP / IP 2MP		
	output resolution	UHD, QHD, FHD, XGA		
recording	speed	Max.15fps/ch		
	resolution	5MP		
audio	input	4 RCA	8 RCA	16 RCA
	output	1 HDMI,1 RCA		1 HDMI,1 RCA
interface	Sensor In / Out	4 / 1 - NC / NO		
	USB	2 x USB 2.0		
	PTZ Keyboard	RS485 - Terminal Block		
	ATM / POS	Ethernet POS		
network	interface	Ethernet 10/100		
	Compression method	H.264		
	speed	Max. 15fps (2MP)		
	resolution	2MP		
network	OS	embedded linux		
	Pre	5 sec		
	Post-Alarm	5 sec ~ 5 min		
	Recording Mode	Sequence, event, schedule		
	Data Search	Smart, Panorama, Calendar, Multi Day, Time, Event, Time Shift		
	backup interface	USB, Network		
	Alarm Action	Buzzer, PTZ Preset, E-mail, Relay, Spot, Event Popup, Callback, FTP, Push		
	user	15 people		
	network viewer	Netus,VMS,Web Viewer,Mac Viewer,SmartEyesPro (iOS,Android)		
	ONVIF	ONVIF Profile S		
storage	Primary	1 HDD	1 HDD	2 HDD
	standard (W x H x D)	298x 43 x 205mm		378 x 45 x 315mm
	weight	2kg		3Kg
general	temperature	5~40 °C		
	humidity	10~80%		
	Power	12V 2A		12V 5A
	Power Consumption	24W		60W



**BNS-N04S1-P4**

**BNS-N08S1-P4**

		BNS-N04S1-P4	BNS-N08S1-P4	
IP camera	input	4ch	8ch	
	Receiving bandwidth	40Mbps	60Mbps	
	protocol	ONVIF	ONVIF	
operating system		embedded linux	embedded linux	
display	monitor	1HDMI, 1VGA	1HDMI, 1VGA	
	Output resolution	3840x2160, 1920x1080, 1280x1024, 1280x720	3840x2160, 1920x1080, 1280x1024, 1280x720	
	Split screen	1, 4	1,4,6,8	
recording	Compression method	H.265/H.264	H.265/H.264	
	Recording resolution	8MP/6MP/5MP/4MP/3MP/ 1080p/960p/720p/D1/CIF	8MP/6MP/5MP/4MP/3MP/ 1080p/960p/720p/D1/CIF	
	Recording mode	Continuous, Event (motion, alarm, schedule), Emergency	Continuous, Event (motion, alarm, schedule), Emergency	
Search/Play	Playback speed	X1/4, x1/2, x1, x2, x4, x8, x16, x32, x64	X1/4, x1/2, x1, x2, x4, x8, x16, x32, x64	
	Search mode	Calendar, event, thumbnail, bookmark, zoom	Calendar, event, thumbnail, bookmark, zoom	
	Simultaneous playback	4ch@1080p, 1ch@4k	8ch@D1, 4ch@1080p	
HDD	Built-in	1 SATA (up to 1 HDD, 12TB)	1 SATA (up to 1 HDD, 12TB)	
back up	system	USB or network backup	USB or network backup	
	function	Dedicated player support and encryption available	Dedicated player support and encryption available	
audio	input/output	1CH RCA In / Out	1CH RCA In / Out	
	function	two-way audio	two-way audio	
network	protocol	TCP/IP, UDP, DHCP, HTTP, NTP, SMTP, RTP, RTSP, ONVIF	TCP/IP, UDP, DHCP, HTTP, NTP, SMTP, RTP, RTSP, ONVIF	
	viewer program	CMS, Mobile Viewer (iOS, Android)	CMS, Mobile Viewer (iOS, Android)	
	max remote users	8	8	
	output bandwidth	64Mbps	64Mbps	
interface	LAN	1 RJ-45 10M/100M Ethernet	1 RJ-45 10M/100M Ethernet	
	SERIAL	-	-	
	USB	Rear panel: 2 X USB2.0	Rear panel: 2 X USB2.0	
	max. power	port	4 PoE ports/100Mbps per port	8 PoE ports/100Mbps per port
		POE	Up to 30W per port/ Total 54W (13.5W per port)	Up to 30W per port/ Total 108W (13.5W per port)
standard	IEEE 802.3at, IEEE 802.3af	IEEE 802.3at, IEEE 802.3af		
Power		48V DC, 1.25A	52V DC, 1.8A	
Power Consumption		≤5 W(Without HDD)	≤5 W(Without HDD)	
Operating temperature/humidity		-10°C ~ + 55°C / ≤10%~90% RH	-10°C ~ + 55°C / ≤10%~90% RH	
Size (WxHxD)		260mm × 240mm × 44mm	260mm × 240mm × 44mm	
Weight (Without HDD)		≤1.12kg	≤1.12kg	



# N-Series 16ch PoE / Non-PoE



**BNS-N16S4-P16**

**BNS-N16S4**

IP camera	input	16ch	16ch	
	Receiving bandwidth	80Mbps	80Mbps	
	protocol	ONVIF	ONVIF	
operating system		embedded linux	embedded linux	
display	monitor	1HDMI, 1VGA	1HDMI, 1VGA	
	Output resolution	HDMI1:4K (3840 x 2160), 1920x1080,1280x1024,1280x720 VGA: 1920 x 1080, 1280 x 1024, 1280 x 720	HDMI1:4K (3840 x 2160), 1920x1080,1280x1024,1280x720 VGA: 1920 x 1080, 1280 x 1024, 1280 x 720	
	Split screen	1, 4,6,9,10,13,16	1, 4,6,9,10,13,16	
recording	Compression method	H.265/H.264	H.265/H.264	
	Recording resolution	8MP/6MP/5MP/4MP/3MP/ 1080p/960p/720p/D1/CIF	8MP/6MP/5MP/4MP/3MP/ 1080p/960p/720p/D1/CIF	
	Recording mode	Continuous, Event (motion, alarm, schedule), Emergency	Continuous, Event (motion, alarm, schedule), Emergency	
Search/Play	Playback speed	x1, x2, x4, x8, x16, x32, x64	x1, x2, x4, x8, x16, x32, x64	
	Search mode	Calendar, event, thumbnail, bookmark, zoom	Calendar, event, thumbnail, bookmark, zoom	
	Simultaneous playback	16ch@720p, 8ch@1080p,2ch@4k	16ch@720p, 8ch@1080p,2ch@4k	
HDD	Built-in	4 SATA (up to 4 HDD, 64TB)	4 SATA (up to 4 HDD, 64TB)	
back up	system	USB or network backup	USB or network backup	
	function	Dedicated player support and encryption available	Dedicated player support and encryption available	
audio	input/output	1CH RCA In / Out	1CH RCA In / Out	
	function	two-way audio	two-way audio	
network	protocol	TCP/IP, UDP, DHCP, HTTP, NTP, SMTP, RTP, RTSP, ONVIF	TCP/IP, UDP, DHCP, HTTP, NTP, SMTP, RTP, RTSP, ONVIF	
	viewer program	CMS, Mobile Viewer (iOS, Android)	CMS, Mobile Viewer (iOS, Android)	
	max remote users	8	8	
	output bandwidth	64Mbps	64Mbps	
interface	LAN	1 RJ-45 10M/100M/1000M Ethernet	2 RJ-45 10M/100M/1000M Ethernet	
	SERIAL	1 x RS485	-	
	USB	Front panel: 1 x USB2.0 Rear panel: 1 x USB3.0	Front panel: 1 x USB2.0 Rear panel: 1 x USB2.0, 1 x USB3.0	
	max. power	port	16 RJ-45 10M/100M	-
		POE	Up to 30W per port, total 150W	-
	standard	IEEE 802.3at, IEEE 802.3af	-	
Alarm In / Out	In :16ch, Out : 4ch	-		
Power		100~240 VAC	12V DC	
Power Consumption		≤15 W(Without HDD)	≤15 W(Without HDD)	
Operating temperature/humidity		-10°C ~ + 55°C / ≤10%~90% RH	-10°C ~ + 55°C / ≤10%~90% RH	
Size (WxHxD)		400mm × 362mm × 74mm	440mm × 344mm × 44mm	
Weight (Without HDD)		≤5kg	≤3.15kg	

# N-Series 36ch,64ch



**BNS-N36S4**

**BNS-N64S8**

IP camera	input	36ch	64ch
	Receiving bandwidth	320Mbps	320Mbps
	protocol	ONVIF	ONVIF
operating system		embedded linux	embedded linux
display	monitor	2HDMI, 1VGA, dual monitor	2HDMI, 1VGA, dual monitor
	Output resolution	HDMI1/VGA:1920x1080,1280x1024,1280x720 HDMI2:4K (3840x2160), 1920x1080, 1280x1024, 1280x720	HDMI1/VGA:1920x1080,1280x1024,1280x720 HDMI2:4K (3840x2160), 1920x1080, 1280x1024, 1280x720
	Split screen	1, 4,6,9,10,13,16,25,36	1,4,6,9,10,13,16,25,36,64
recording	Compression method	H.265/H.264	H.265/H.264
	Recording resolution	12MP/8MP/6MP/5MP/4MP/3MP/ 1080p/960p/720p/D1/CIF	12MP/8MP/6MP/5MP/4MP/3MP/ 1080p/960p/720p/D1/CIF
	Recording mode	Continuous, event (motion, alarm, schedule), emergency	Continuous, event (motion, alarm, schedule), emergency
Search/Play	Playback speed	x1, x2, x4, x8, x16, x32, x64	x1, x2, x4, x8, x16, x32, x64
	Search mode	Calendar, event, thumbnail, bookmark, zoom	Calendar, event, thumbnail, bookmark, zoom
	Simultaneous playback	36ch@720p, 16ch@1080p	64ch@D1, 16ch@1080p
HDD	Built-in	8 SATA (up to 8 HDD,144TB)	8 SATA (up to 8 HDD, 144TB)
back up	system	USB or network backup	USB or network backup
	function	Dedicated player support and encryption available	Dedicated player support and encryption available
audio	input/output	1CH RCA In / Out	1CH RCA In / Out
	function	two-way audio	two-way audio
network	protocol	TCP/IP, UDP, DHCP, HTTP, NTP, SMTP, RTP, RTSP, ONVIF	TCP/IP, UDP, DHCP, HTTP, NTP, SMTP, RTP, RTSP, ONVIF
	viewer program	CMS, Mobile Viewer (iOS, Android)	CMS, Mobile Viewer (iOS, Android)
	max remote users	25	25
	output bandwidth	320Mbps	320Mbps
interface	LAN	2 RJ-45 10M/100M/1000M Ethernet	2 RJ-45 10M/100M/1000M Ethernet
	SERIAL	1 x RS232, 1 x RS485	1 x RS232, 1 x RS485
	USB	Front panel: 2 x USB2.0 Rear panel: 1 x USB3.0	Front panel: 2 x USB2.0 Rear panel: 1 x USB3.0
	Alarm In / Out	In : 16ch, Out : 4ch	In : 16ch, Out : 4ch
Power		100~240 VAC	100~240 VAC
Power Consumption		≤20 W(Without HDD)	≤20 W(Without HDD)
Operating temperature/humidity		-10°C ~ + 55°C / ≤10%~90% RH	-10°C ~ + 55°C / ≤10%~90% RH
Size (WxHxD)		442mm × 426mm × 89mm	442mm × 426mm × 89mm
Weight (Without HDD)		≤5.7kg	≤5.7kg



# N-Series PC-TYPE HOT swap



**BNS-N64S8H (with 8TB 1HDD)**



**BNS-N81S8H (with 8TB 1HDD)**

input		64ch	81ch
IP camera	Receiving bandwidth	512Mbps	
	protocol	ONVIF/ RTSP/ Custom	
operating system		linux	
display	monitor	1HDMI, 1 Display Port, 1 VGA	
	Output resolution	HDMI/ Display Port: 4K(3840x2160), 1920 x 1080, 1280 x 1024, 1280 x 720 VGA: 1920 x 1080, 1280 x 1024, 1280 x 720	
	Split screen	1, 4, 6, 9, 10, 13, 16, 25, 36, 49, 64	1, 4, 6, 9, 10, 13, 16, 25, 36, 49, 64, 81
recording	Compression method	H.265/H.264	
	Recording resolution	12MP/8MP/6MP/5MP/4MP/3MP/ 1080p/960p/720p/D1/CIF	
	Recording mode	Continuous, event (motion, alarm, schedule), emergency	
Search/Play	Playback speed	x1, x2, x4, x8, x16, x32, x64	
	Search mode	Calendar, event, thumbnail, bookmark, zoom	
	Simultaneous playback	64ch@D1, 16ch@1080p	81ch@D1, 16ch@1080p
HDD	Built-in	Hot Swap 8 SATA (up to 96TB)	
	system	USB or network backup	
back up	function	Dedicated player support and encryption available	
	audio	1CH In / Out	
audio	function	two-way audio	
	protocol	TCP/IP, UDP, DHCP, HTTP, NTP, SMTP, RTP, RTSP, ONVIF	
network	viewer program	CMS, Mobile Viewer (iOS, Android)	
	max remote users	25	
	output bandwidth	384Mbps	
interface	LAN	2 RJ-45 10M/100M/1000M Ethernet	
	SERIAL	RS485(Optional)	
	USB	Front panel: 2 x USB2.0 Rear panel: 4 x USB3.0	
Power		200~240 VAC/ Redundant (Optional)	
Power Consumption		≤20 W(Without HDD)	
operating temperature		-10°C ~ + 55°C	
operating humidity		10%~90%	
Size (WxHxD)		444mm × 670mm × 87.6mm	
Weight (Without HDD)		≤10.5kg	

# N-Series PC-TYPE HOT swap



**BNS-N100S8H (with 8TB 1HDD)**



**BNS-N128S8H (with 8TB 1HDD)**

input		100ch	128ch
IP camera	Receiving bandwidth	512Mbps	
	protocol	ONVIF/ RTSP/ Custom	
operating system		linux	
display	monitor	1HDMI, 1 Display Port, 1 VGA	
	Output resolution	HDMI/ Display Port: 4K(3840x2160), 1920 x 1080, 1280 x 1024, 1280 x 720 VGA: 1920 x 1080, 1280 x 1024, 1280 x 720	
	Split screen	1, 4, 6, 9, 10, 13, 16, 25, 36, 49, 64, 81, 100	1, 4, 6, 9, 10, 13, 16, 25, 36, 49, 64, 81, 128
recording	Compression method	H.265/H.264	
	Recording resolution	12MP/8MP/6MP/5MP/4MP/3MP/ 1080p/960p/720p/D1/CIF	
	Recording mode	Continuous, event (motion, alarm, schedule), emergency	
Search/Play	Playback speed	x1, x2, x4, x8, x16, x32, x64	
	Search mode	Calendar, event, thumbnail, bookmark, zoom	
	Simultaneous playback	100ch@D1, 16ch@1080p	128ch@D1, 16ch@1080p
HDD	Built-in	Hot Swap 8 SATA (up to 96TB)	
	system	USB or network backup	
back up	function	Dedicated player support and encryption available	
	audio	1CH In / Out	
audio	function	two-way audio	
	protocol	TCP/IP, UDP, DHCP, HTTP, NTP, SMTP, RTP, RTSP, ONVIF	
network	viewer program	CMS, Mobile Viewer (iOS, Android)	
	max remote users	25	
	output bandwidth	384Mbps	
interface	LAN	2 RJ-45 10M/100M/1000M Ethernet	
	SERIAL	RS485(Optional)	
	USB	Front panel: 2 x USB2.0 Rear panel: 4 x USB3.0	
Power		200~240 VAC/ Redundant (Optional)	
Power Consumption		≤20 W(Without HDD)	
operating temperature		-10°C ~ + 55°C	
operating humidity		10%~90%	
Size (WxHxD)		444mm × 670mm × 87.6mm	
Weight (Without HDD)		≤10.5kg	

# N-Series PC-TYPE HOT swap



**BNS-N64S8H (with 8TB 1HDD)**



**BNS-N81S8H (with 8TB 1HDD)**

input		64ch	81ch
IP camera	Receiving bandwidth	512Mbps	
	protocol	ONVIF/ RTSP/ Custom	
operating system		linux	
display	monitor	1HDMI, 1 Display Port, 1 VGA	
	Output resolution	HDMI/ Display Port: 4K(3840x2160), 1920 x 1080, 1280 x 1024, 1280 x 720 VGA: 1920 x 1080, 1280 x 1024, 1280 x 720	
	Split screen	1, 4, 6, 9, 10, 13, 16, 25, 36, 49, 64	1, 4, 6, 9, 10, 13, 16, 25, 36, 49, 64, 81
recording	Compression method	H.265/H.264	
	Recording resolution	12MP/8MP/6MP/5MP/4MP/3MP/ 1080p/960p/720p/D1/CIF	
	Recording mode	Continuous, event (motion, alarm, schedule), emergency	
Search/Play	Playback speed	x1, x2, x4, x8, x16, x32, x64	
	Search mode	Calendar, event, thumbnail, bookmark, zoom	
	Simultaneous playback	64ch@D1, 16ch@1080p	81ch@D1, 16ch@1080p
HDD	Built-in	Hot Swap 8 SATA (up to 96TB)	
	system	USB or network backup	
back up	function	Dedicated player support and encryption available	
	audio	1CH In / Out	
network	protocol	TCP/IP, UDP, DHCP, HTTP, NTP, SMTP, RTP, RTSP, ONVIF	
	viewer program	CMS, Mobile Viewer (iOS, Android)	
	max remote users	25	
interface	output bandwidth	384Mbps	
	LAN	2 RJ-45 10M/100M/1000M Ethernet	
	SERIAL	RS485(Optional)	
Power	USB	Front panel: 2 x USB2.0 Rear panel: 4 x USB3.0	
	Power Consumption	200~240 VAC/ Redundant (Optional)	
operating temperature	≤20 W(Without HDD)		
operating humidity	-10°C ~ + 55°C		
Size (WxHxD)	10%~90%		
Weight (Without HDD)	444mm × 670mm × 87.6mm		
	≤10.5kg		

# N-Series PC-TYPE HOT swap



**BNS-N100S8H (with 8TB 1HDD)**



**BNS-N128S8H (with 8TB 1HDD)**

input		100ch	128ch
IP camera	Receiving bandwidth	512Mbps	
	protocol	ONVIF/ RTSP/ Custom	
operating system		linux	
display	monitor	1HDMI, 1 Display Port, 1 VGA	
	Output resolution	HDMI/ Display Port: 4K(3840x2160), 1920 x 1080, 1280 x 1024, 1280 x 720 VGA: 1920 x 1080, 1280 x 1024, 1280 x 720	
	Split screen	1, 4, 6, 9, 10, 13, 16, 25, 36, 49, 64, 81, 100	1, 4, 6, 9, 10, 13, 16, 25, 36, 49, 64, 81, 128
recording	Compression method	H.265/H.264	
	Recording resolution	12MP/8MP/6MP/5MP/4MP/3MP/ 1080p/960p/720p/D1/CIF	
	Recording mode	Continuous, event (motion, alarm, schedule), emergency	
Search/Play	Playback speed	x1, x2, x4, x8, x16, x32, x64	
	Search mode	Calendar, event, thumbnail, bookmark, zoom	
	Simultaneous playback	100ch@D1, 16ch@1080p	128ch@D1, 16ch@1080p
HDD	Built-in	Hot Swap 8 SATA (up to 96TB)	
	system	USB or network backup	
back up	function	Dedicated player support and encryption available	
	audio	1CH In / Out	
network	protocol	TCP/IP, UDP, DHCP, HTTP, NTP, SMTP, RTP, RTSP, ONVIF	
	viewer program	CMS, Mobile Viewer (iOS, Android)	
	max remote users	25	
interface	output bandwidth	384Mbps	
	LAN	2 RJ-45 10M/100M/1000M Ethernet	
	SERIAL	RS485(Optional)	
Power	USB	Front panel: 2 x USB2.0 Rear panel: 4 x USB3.0	
	Power Consumption	200~240 VAC/ Redundant (Optional)	
operating temperature	≤20 W(Without HDD)		
operating humidity	-10°C ~ + 55°C		
Size (WxHxD)	10%~90%		
Weight (Without HDD)	444mm × 670mm × 87.6mm		
	≤10.5kg		



# Wireless Video Bridge

## long distance wireless video transmission solutions



### Long-distance wireless video transmission solution



#### Beam Forming / Beam Tracking

- 3km LoS long-distance transmission (based on outdoor use)
- Omni-directional / beamforming → long-distance transmission

#### High-capacity transmission and reception (1.7Gbps)

- Transmitter: 32CH transmission
- Receiving unit: 128CH reception
- ※ 2M (based on FHD)

#### Automatically secures channels with good signal strength

- Automatic homing of optimal channel in case of radio wave interference from nearby devices
- Seamless video transmission

#### 4x4 MU MIMO (Multi In/Out Put)

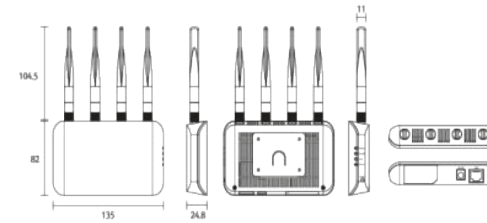
- Increased RF speed
- Two-way transmission/reception
- ※Rx + Camera available

#### Troubleshoot security/safety issues

- Prevent hacking by using WPA2, AES256



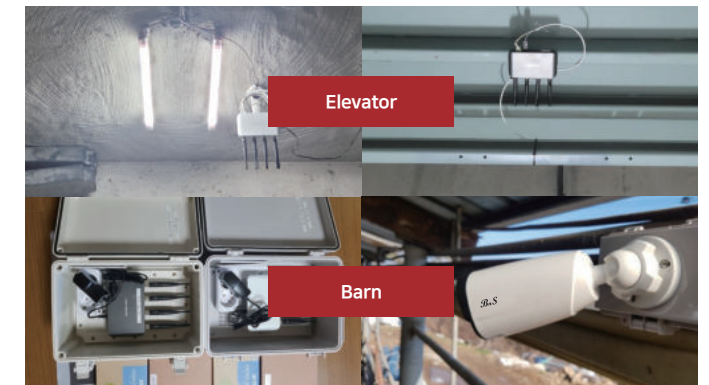
### EVB-A100 RX/TX[Indoor] EVB-A100-O RX/TX[Outdoor]



#### Yeongcheon Dam/Cheongpyeong Dam Construction Case



#### Elevator/barn construction Case



#### Wireless security system features and benefits

- Wired construction: sidewalk block, road cutting construction (labor cost and time required)
- Wireless construction: Power only construction (nearby power source)

	Cable	Wireless
construction aspect	▲	●
Cost	▲	●
construction time	▲	●
Security/Safety	■	●

※ ● (Great), ■ (Commonly), ▲ (Bad)

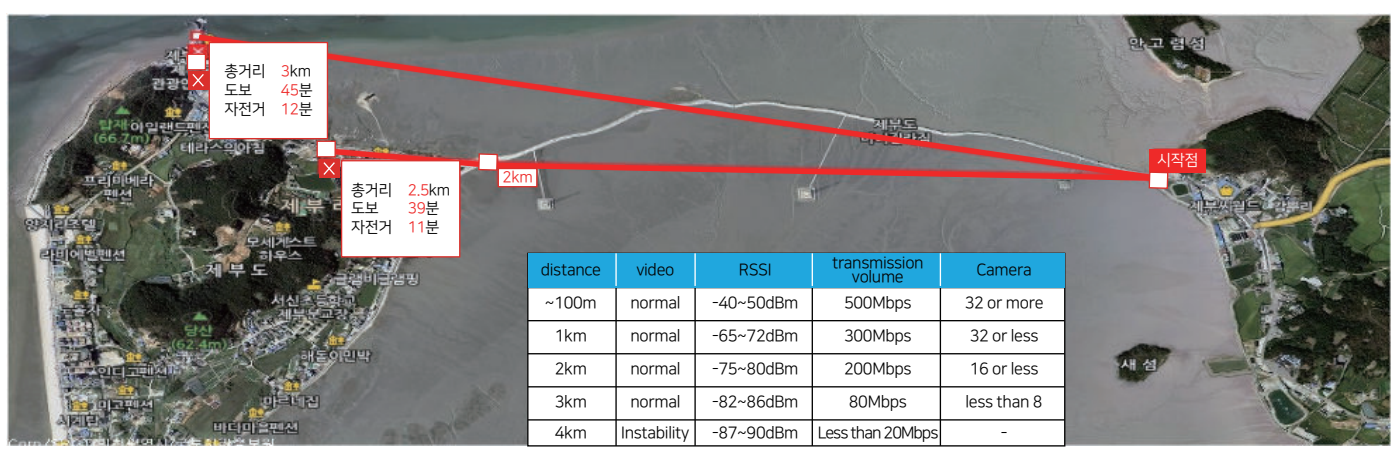




# Introduction to special features

	wireless	Third party [Existing operating system]		
		cable	wireless	
construction aspect	Easy installation Reduce installation time Even non-experts can install Easy to move to installation location administrative simplicity	Installation difficulties (mountains, factories, outdoors) Installation time required (digging, landfill, etc.) Administrative work required (installation of roads, electric poles, etc.)	Point to Point Wireless -Difficult to install	
construction cost	Reduce deployment costs - No need for coaxial or LAN cable -No installation costs required -No need to rent a forklift N:1 installed (authenticated)	Analog: Coaxial cable cost, amplifier cost IP Camera: LAN Cable Cost laying cost Construction permit fee (administrative work) Additional costs for installation and rework	1:1	
technology side	Transmission distance	3Km (LoS) ※For outdoor use	Amplifier installation per 100m, installation suggestions	2km (LoS)
	Data Rate	1.7 Gbps, 3km 25 Mbps 802.11.ac	-	300 Mbps, 2km 5 Mbps ↓, 802.11.n
	RF technology	Beamforming, 4X4 MIMO	-	-
	wireless connection	N: 1 (authenticated) Smart Channel Selection	-	1:1
	frequency	5.125 GHz ~ 5.875 GHz	-	5.28 ~ 5.805 GHz
	security	AES 256, WPA2, SSID hidden	Risk of cable cutting and hacking	WPA
	NETWORK	DHCP, Static IP	-	Static IP

## Field Test [Target: 3km transmission distance in LoS environment]



(3km location, 80Mbps)

Video	VAP	RSSI
00:26:86:F0:CC:3E	wifi0	-83dbm



(2km location, 200Mbps)

Video	VAP	RSSI
00:26:86:F0:CC:3E	wifi0	-77dbm



(50m location, 500Mbps)

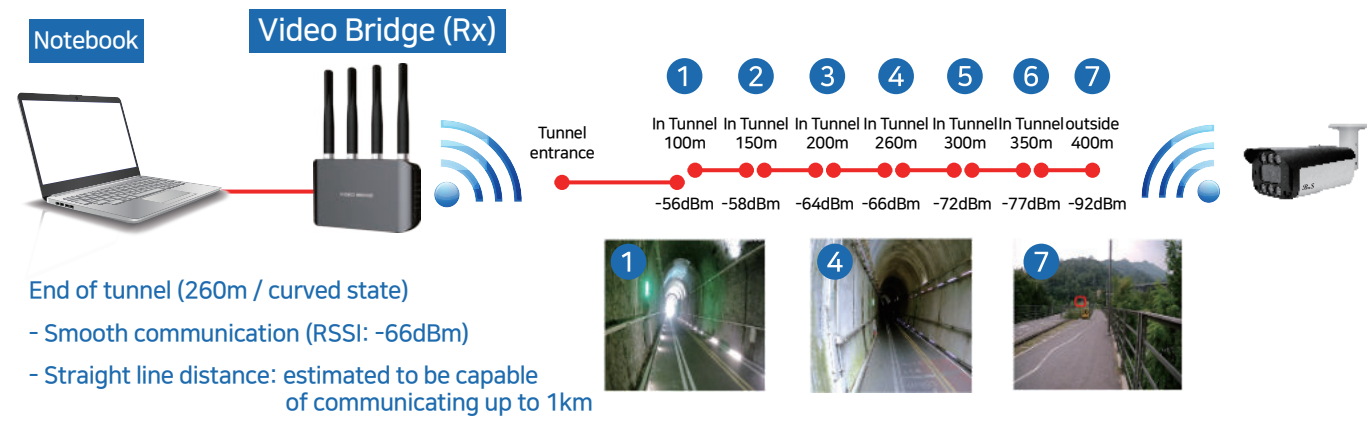
Video	VAP	RSSI
00:26:86:F0:CC:3E	wifi0	-34dbm

# Construction example

## Dam wireless bridge construction case



## Tunnel wireless bridge construction case





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*Corporation*

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