Datasheet

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Camera

BC800Z

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AI-Powered Hybrid Light Camera for Adjustable Zoom

The Synology BC800Z is a 4K varifocal camera with IP66, IP67, and IK10 durability ratings, offering excellent image quality and edge license plate recognition. It features a 3840×2160 resolution at 30 FPS for detailed and smooth video capture, a horizontal field of view ranging from 112° to 47° for flexible area coverage, and superior night vision with a 1/1.8" starlight sensor and hybrid white/IR light for clear images in low-light conditions. This robust camera is ideal for a variety of surveillance scenarios.

- **Ultra HD 4K with Optical Zoom**
  High-quality imaging with a 3840×2160 resolution and an adjustable viewing angle ranging from 112.1° to 47.5°

- **Superior Night Vision Performance**
  1/1.8" starlight sensor and hybrid white/IR LEDs for up to 31m (101 ft) of color night vision

- **Edge License Plate Recognition**
  Directly supports on-camera License Plate Recognition without requiring additional licenses

- **Weather and Impact Resistant**
  Outdoor-ready camera with IP66/67 and IK10 ratings, protected from dust, rain, and impacts

- **Edge AI Detection and Search**
  On-camera People and Vehicle Counting, Smoke Detection, Intrusion Detection, Instant Search, and Auto Tracking

Marvelous 4K, day and night

Premium imaging with an adjustable zoom for detailed capture in all lighting conditions

- 4K/8MP (3840×2160) resolution at 30 FPS for exceptional image quality

- A 4.38 - 9.33 mm automatic focusing and motorized zoom lens provides adjustable viewing angle ranging from 112.1° to 47.5°

- High Dynamic Range (HDR) ensures clear, detailed images in both shadows and bright areas despite high contrast light conditions

- Hybrid white and IR LEDs provide clear, colorful night vision up to 31 meter

- IP67 and IP66 weather resistance ensure functionality in diverse conditions, from dusty winds to rainy climates

- Efficient Smart bitrate control compression technology reduces bandwidth and storage needs while preserving high-quality imaging

Smarter detection for easy monitoring

Camera-based AI capabilities and smart analytics empower your surveillance

- Identify vehicle and license plate details within a capture distance of 3 to 10 meters (9 to 32 ft), even for vehicles moving at speeds up to 20 km/h

- Supports direct People and Vehicle Counting, monitoring occupancy with aggregated entry and exit counts, and receiving alerts when capacity is reached

- People and Vehicle Detection accurately distinguishes between individuals and vehicles from other moving objects

- Smart Smoke Detection[1] with accurate, real-time alerts for early intervention

- Intrusion Detection smartly alerts when people or vehicles cross a virtual boundary from a designated direction

- Instant Search rapidly and accurately pinpoints activities involving people, vehicles, or motion in a designated area

- Auto Tracking smoothly identifies and follows people in motion, keeping them consistently centered on the screen without needing manual adjustment

- Face Recognition is available when paired with Synology DVA models[2]

- Automatic Defog improves image clarity and visibility in foggy or hazy conditions, ensuring clear footage

Simplifying management with efficient integration

Integration with Surveillance Station streamlines deployment and maintenance[3]

- Quick and simple installation process for single or batch cameras through Surveillance Station

- Automatic firmware upgrades available in batch, with or without internet

- Failover edge storage increases system reliability by automatically switching to microSD recording in case of network failure

Secure and safe, always reliable

From recording to archiving, protect your footage with our integrated safeguards

- HTTPS & SRTP support enable encrypted network and video transfer, authentication, and integrity protection

- Privacy masks can be permanently embedded into footage or applied to live view to cover sensitive areas

- The connected device list displays devices associated with each camera, ensuring security by allowing the disconnection or blocking of unrecognized devices

- The camera is NDAA and TAA compliant, meeting US government procurement regulations

- Long-term firmware support from Synology includes security patches and updates

Notes:

1. Important Notice: The smoke detection feature in the Synology BC800Z does not replace certified smoke detection solution. Synology BC800Z is not a firefighting or fire safety equipment. Users must continue to use certified smoke detection devices to meet regulatory and safety requirements. Disclaimer: The smoke detection feature in the Synology BC800Z is a video analytics tool designed to supplement traditional fire safety systems by identifying visible smoke in surveillance footage. This feature is not certified as a fire or smoke detection system under standards such as EN54 or FM Approval, and should not be relied upon as the sole method for smoke or fire detection—especially in safety-critical or regulated environments. Synology does not guarantee that this feature will detect all instances of smoke or prevent fire-related damage, loss, or injury. Users are fully responsible for maintaining adequate, compliant fire safety measures. Use of this feature is at the user's own risk.

2. Face Recognition and other advanced analytics are available with Synology DVA Series video recorders. Learn more

3. Please use the latest version of Surveillance Station.

Hardware Overview

Front	Bottom

No.	Name	No.	Name
1.	Microphone	5.	Desiccant
2.	Light sensor	6.	Reset button
3.	Status Indicator	7.	MicroSD card slot
4.	White light and IR LEDs	8.	Waterproof membrane

Technical Specifications

Optical

Image Sensor	1/1.8"
IR LED wavelength	850 nm
Max. IR distance	38m (124.7ft) (0.001lux)
White LED	31m (101.7ft)
Shutter Speed	1/16000 s to 1/30 s
Day & Night	Automatically removable infrared-cut filter

Lens

Lens type	Varifocal
Focal Length	4.38 to 9.33 mm
Field of View	112.1° to 47.5° H 58.0° to 26.6° V 137.5° to 54.6° D
DORI	• Wide: D: 46m, O: 18m, R: 9.2m, I: 4.6m • Tele: D: 165m, O: 65m, R: 33m, I: 16m
Aperture	F1.3 to F2.15

Video

Max. video resolution	3840×2160 @ 30 FPS
Multi-exposure HDR	v
DNR	• 3DNR • 2DNR

Audio

Microphone	v

I/O

Ethernet	RJ45 10M/100M Ethernet port X 1
Reset	v
On-Board Storage	MicroSD card slot X 1 Supported file format: exFAT Note: microSD card is not included

Power Supply

IEEE 802.3af Type 1 Class 3 or 12V DC

Note	• Compatible power adapter: 12V 2.5A (Ø2.1mm) • The product does not include a PoE switch. A 12V DC power adapter is not included, except in specific regions. Please purchase separately.

General

Form Factor	Bullet
Dimension	Ø105 × 272 mm (Ø4.13 × 10.71")
Weight	1310 g (2.89 lbs)

Temperature

Operating Condition	Starting temperature: -30°C to 60°C (-22°F to 140°F) Operating temperature: -30°C to 60°C (-22°F to 140°F) (IR off) Operating temperature: -30°C to 55 °C (-22°F to 131°F) (IR on) Operating humidity: 5%~95% (non-condensing)
Storage Condition	Storage temperature: -30°C to 60°C (-22°F to 140°F) Storage humidity: 5%~95% (non-condensing)

Certification

Regulatory Compliance	FCC, CB, IC, CE, UKCA, BSMI, VCCI, RCM, JATE
Environment	REACH, ROHS, WEEE
Waterproof	• IP66 • IP67
Vandal	IK10
NDAA Compliant	v
TAA Compliant	v

Warranty

5-year

Packaging Content

- Main Unit X 1
- Installation card X 1
- Hex key X 1
- Desiccant X 1
- Mounting template sticker X 1
- Regulatory compliance card X 1
- Screw pack X 1
- RJ45 cap cover X 1

Software Specifications

Video & Audio	
Main Stream	3840×2160 @ 30 FPS 1920×1080 @ 30 FPS 1280×720 @ 30 FPS 640×480 @ 30 FPS
Sub Stream	1920×1080 @ 15 FPS 1280×720 @ 30 FPS
Video Format	• H.264 • H.265
Bitrate Control	• Maximum bitrate • Variable bitrate
Audio Compression	G.711
Audio Denoise	v
Image Adjustment	• Brightness • Defog • Contrast • Sharpness • Saturation • White Balance • Exposure Control • High Dynamic Range (HDR) • 3D/2D Noise Reduction • 50/60 Hz Flicker Reduction • Day/Night mode • Overlay
Day/Night Mode	• Auto • Hybrid Light • Day • Night • Schedule

Video Orientation	- Mirror - Flip - Rotation (0°, 90°, 180°, 270°)
Privacy Mask	- Removeable/Unremovable mode - Up to 5 zones
Max RTSP Connections	3

Analytics

Event Analytics	- Audio Detection - Tampering Detection - Motion Detection
People & Vehicle	- People Detection - Vehicle Detection - Crowd Detection - Loitering Detection
Counting	People and Vehicle Counting
Intrusion	One way or Two way
License Plate Recognition	Yes
Smoke Detection	Yes
Instant Search	- Motion - Vehicle - People
Auto Tracking	People

Security

IP Filter	• Auto Block • Allow/Block list
Connection Management	v
Firmware Update	• Automatically update to the important version • Automatically update to the latest version • Manual upload
Signed Firmware	v
HTTPS	v
SRTP	v

Storage Management

Storage	microSD Card & Synology NAS
SD Card Recording Mode	• Event Analytics • Disconnected with NAS

Camera Web Interface	
Liveview	v
Network	- Auto Block - Allow/Block list - Connection Management - Fixed IP/DHCP
System	- Reset - Restart - Manual Firmware Upgrade - DST - Time Zone
Camera Log Export	v
Protocol Support	HTTP, HTTPS, TLS v1.2, TCP/IP, UDP, IPv4, UPnP, RTSP, NTP, DHCP, SSL, RTP, SRTP
Supported Browsers	Google Chrome
Supported Language	English, Deutsch, Français, Italiano, Español, Dansk, Norsk, Svenska, Nederlands, Русский, Polski, Magyar, Português do Brasil, Português Europeu, Türkçe, Český, ภาษาไทย, 日本語, 한국어, 繁體中文, 简体中文