2022

Milesight

BETTER INSIDE, MORE IN SIGHT

V9.0

www.milesight.com

PRODUCT BROCHURE

AI NETWORK VIDEO SURVEILLANCE

H.265+ 4K AI

AI Network Camera

Clear Vision • Accurate Detection • Proactive Action
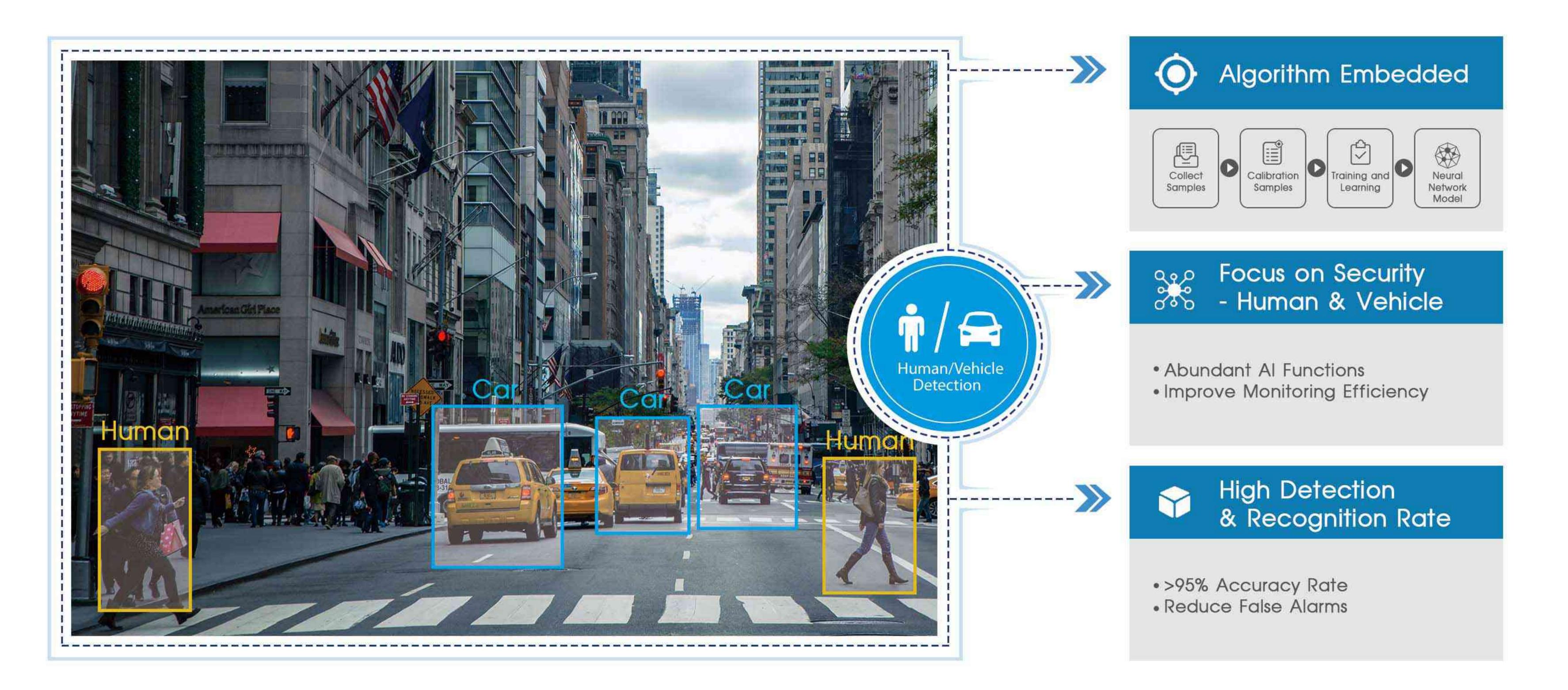
Intelligence

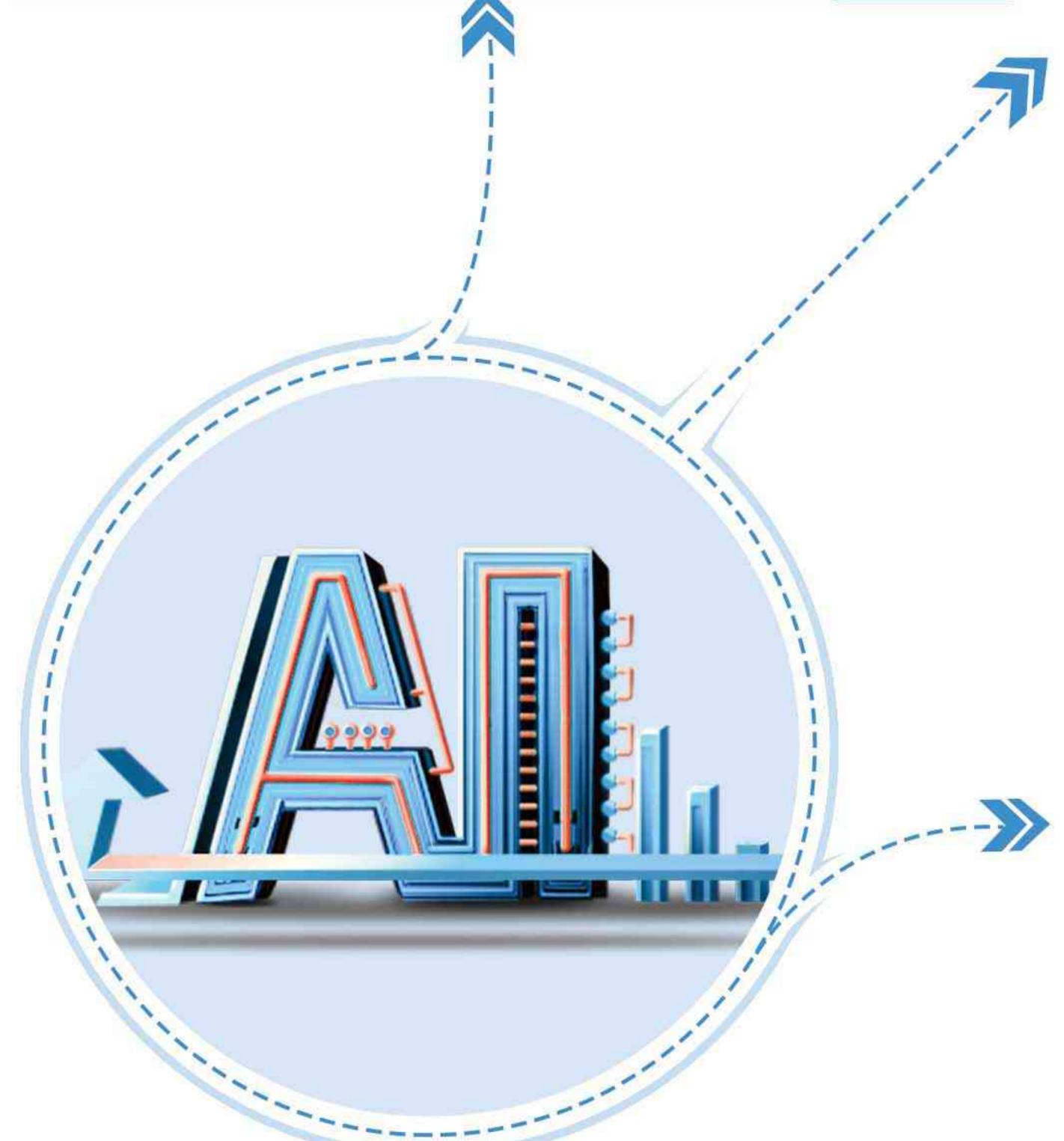| Behavior Analysis	PTZ/Fisheye Auto Tracking, Loitering, Object Left, Object Removed
Passing	Region Entrance, Region Exiting, Line Crossing
Detection	Motion Detection, Advanced Motion Detection, Tamper Detection, Face Detection
Statistics for Market Intelligence	Heat Map, People Counting

AI Empowers Security

Powered by AI chip, Milesight AI Network Camera is capable of recognizing vast attributes of human, vehicle, and object pattern recognition models. As human and vehicle related events are of the utmost importance in monitoring, the filtering is supported to better optimize the efficiency.

Algorithm Embedded

Collect Samples → Calibration Samples → Training and Learning → Neural Network Model

Focus on Security - Human & Vehicle

Human/Vehicle Detection

• Abundant AI Functions
• Improve Monitoring Efficiency

High Detection & Recognition Rate

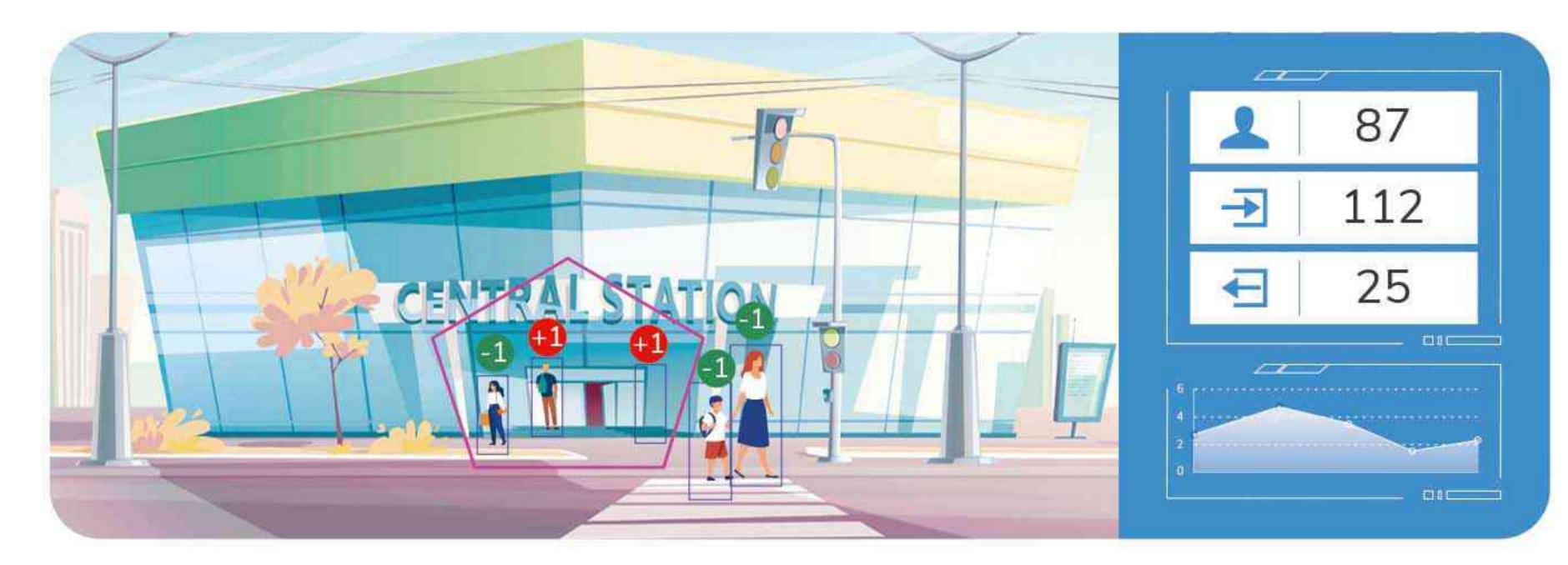• >95% Accuracy Rate
• Reduce False Alarms

AI Video Analytics

Milesight AI Camera Series can intelligently filter objects to focus on human and vehicle detection in multiple events such as Region Entrance, Region Exiting, Loitering, Advanced Motion Detection, etc.

Region Entrance | Region Exiting | Object Left | Object Removed
Advanced Motion Detection | Tamper Detection | Line Crossing | Loitering
Human/Vehicle Detection
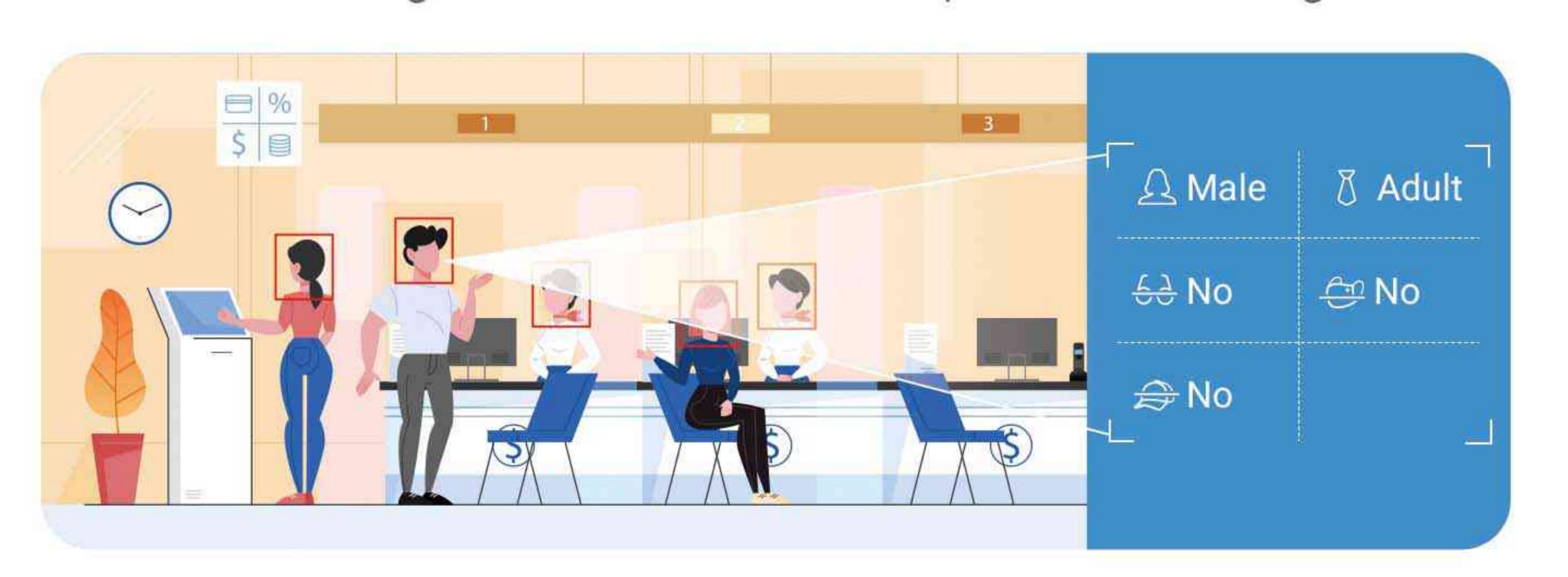

Regional People Counting

High accuracy and real-time regional people counting based on AI algorithm, with statistic reports for further analysis, helps to make fast decisions on security management and increase the operational efficiency of the business.

	87
	112
	25

Face Detection

Face Detection function detects human faces in the monitoring scene and captures the snapshots. Further, the Face Attributes Recognition and Face Privacy Mode are supported after detecting the faces, which can not only cater to the scenarios that need fast and accurate face detection, but also fit well for the applications that require high-level privacy protection.

• **Face Attributes Recognition**
  Support a variety of face attributes recognition, such as glasses, masks, age, gender, etc.
• **Face Privacy Mode**
  Mosaic the recognized faces automatically in the monitoring scene.

Male	Adult
No	No
No	

Advanced Heat Map

• Improve Store Layout
• Maximize Exposure of Products
• Reach Your Target Customer Precisely
• Drive Better Business Insights with Reports

PTZ/Fisheye Auto Tracking

• Real-time Target Tracking
• Zoom in for Details
• All-round Monitoring Without Blind Spots

Distinctiveness

Smart License Plate Recognition

3D Radar Technology

Milesight leverages 3D radar technology that uses radio waves to determine the velocity, range, or angle of objects to realize direction detection, speed detection and traffic flow detection.
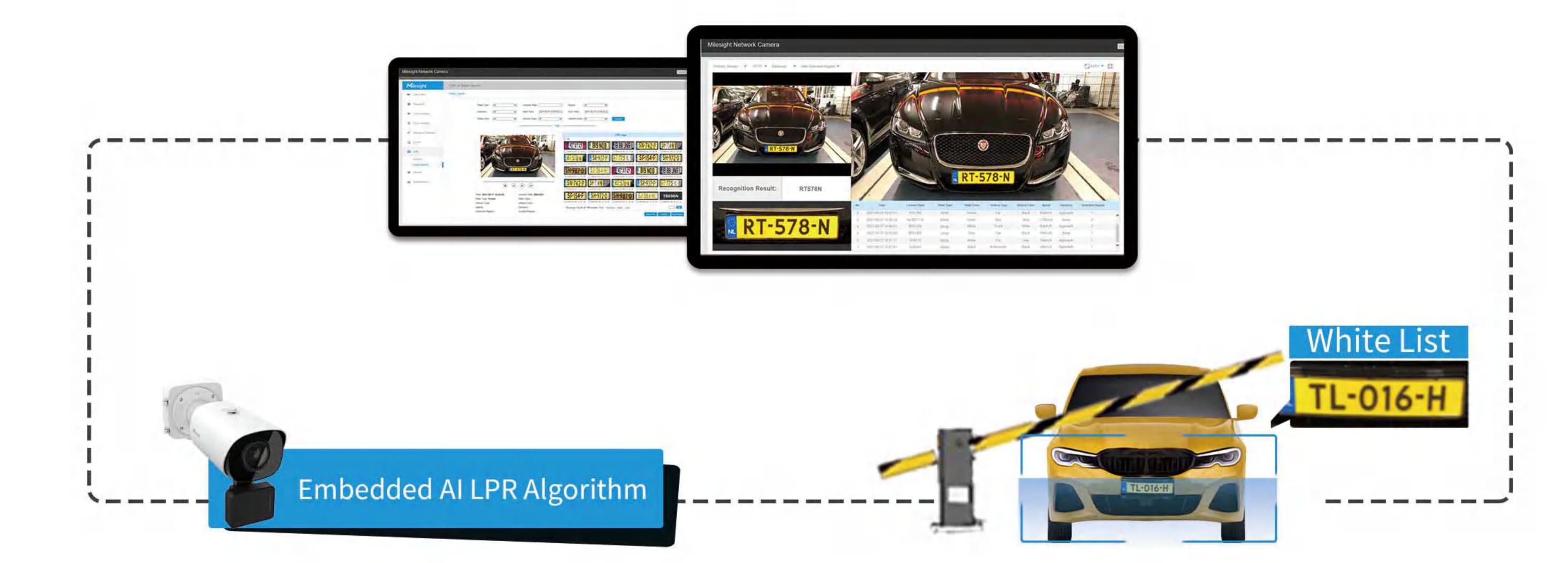
3D Radar

3D Radar Localization

Up to 90m Detection Distance

Up to 200km/h Speed Capture

More than 95% High Recognition Accuracy

Up to 4 Lanes Monitoring

Up to 32 Vehicles Detected at One Time

AI-powered LPR Algorithm

Milesight AI-powered LPR Algorithm can not only recognize vehicle plates in real-time with high accuracy but also identify more vehicle features, like vehicle type, color, etc., which can be further searched by LPR Smart Search function, generating powerful security and traffic insights.

White List
TL-016-H

Embedded AI LPR Algorithm

Black/White List Management

Milesight LPR cameras can automatically identify license plates information on whitelists or blacklists and take real-time actions, which is perfect for entry and exit systems.

Broad Regional and Country Support

Milesight LPR cameras are supported to capture and recognize vehicle plates from multiple countries and regions including Mid-East, Africa, Asia-Pacific, America, Europe, Russian-speaking countries.

Integrated ANPR Solution

Milesight LPR cameras are fully compatible with Milesight back-end management system and support third-party integration with CGI/APIs, increasing the operational efficiency.

5G & IoT for Ultimate Intelligent Surveillance

In addition to AI deep learning, Milesight further combines the cutting-edge 5G and IoT technology in the 5G AIoT Camera to make it a powerful security hybrid for remote video surveillance systems, making high definition video feeds available with near-elimination of latency. Aggregating video insights, data from IoT devices enable situational awareness and analytics-driven insights.

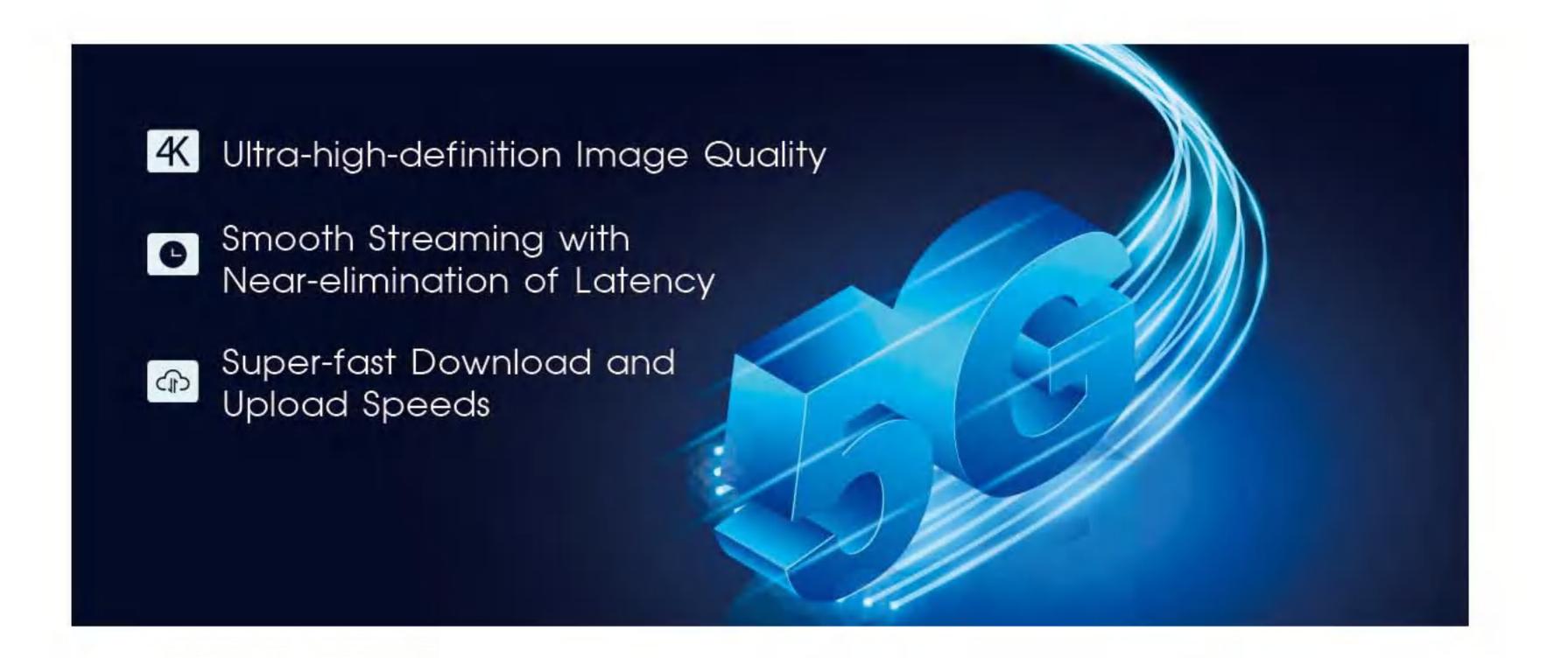## Cutting-edge 5G Wireless Transmission

5G Higher Mobility

The built-in 5G module makes Milesight 5G AIoT Camera a truly all-in-one system with higher mobility, supporting 5G network connection and wireless transmission while eliminating extra implement and management compared with add-on routers, and easing the complexity of cable and fiber connections.

Base Station

5G Higher Bandwidth & Lower Latency

5G Higher Bandwidth facilitates the video surveillance with ultra-high-definition image quality up to 4K even 8K, meantime, realizes super-fast download and upload speeds. While the Lower Latency boosts camera responsiveness and real-time monitoring with almost no lagging time.

4K Ultra-high-definition Image Quality

Smooth Streaming with Near-elimination of Latency

Super-fast Download and Upload Speeds
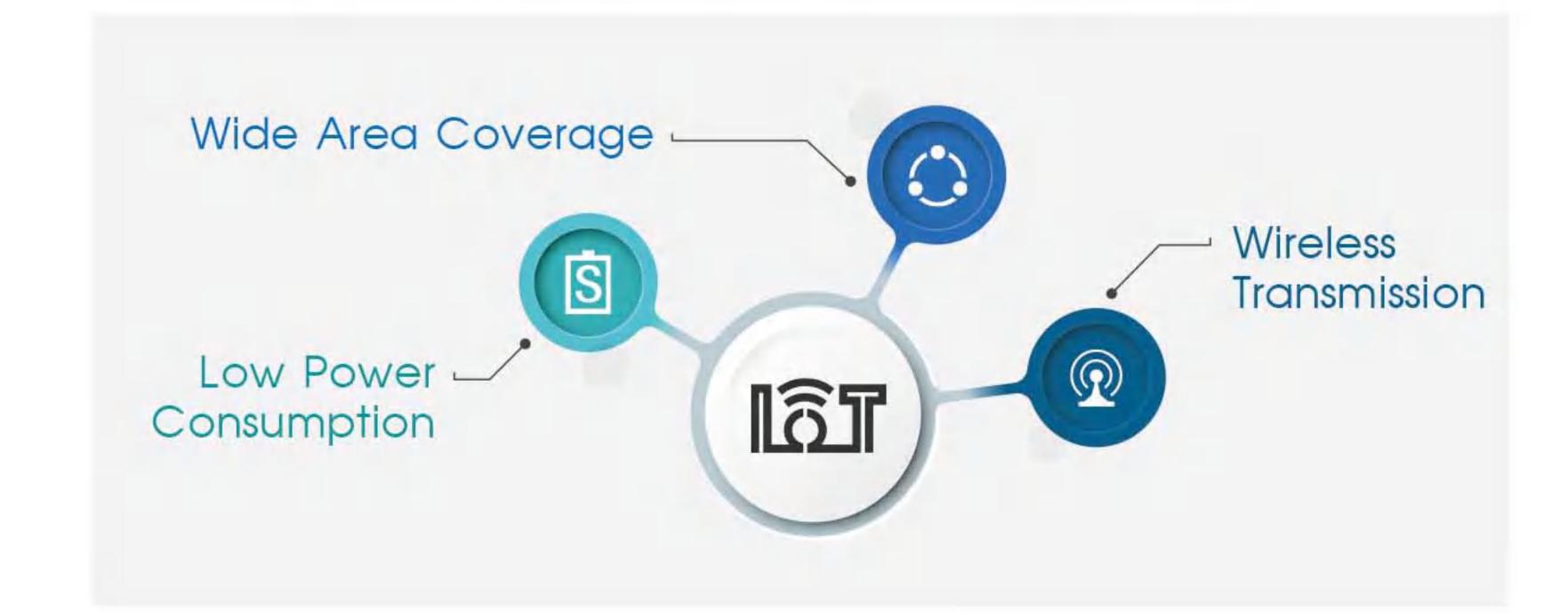
5G Higher Scalability

Enjoying a high degree of flexibility and scalability, 5G can not only achieve the deployment of a massive number of connected devices but also mission-critical applications. Moreover, 5G will further open up the use cases for edge computing, benefiting video analytics running on the edge to deliver advanced video analytics solutions.
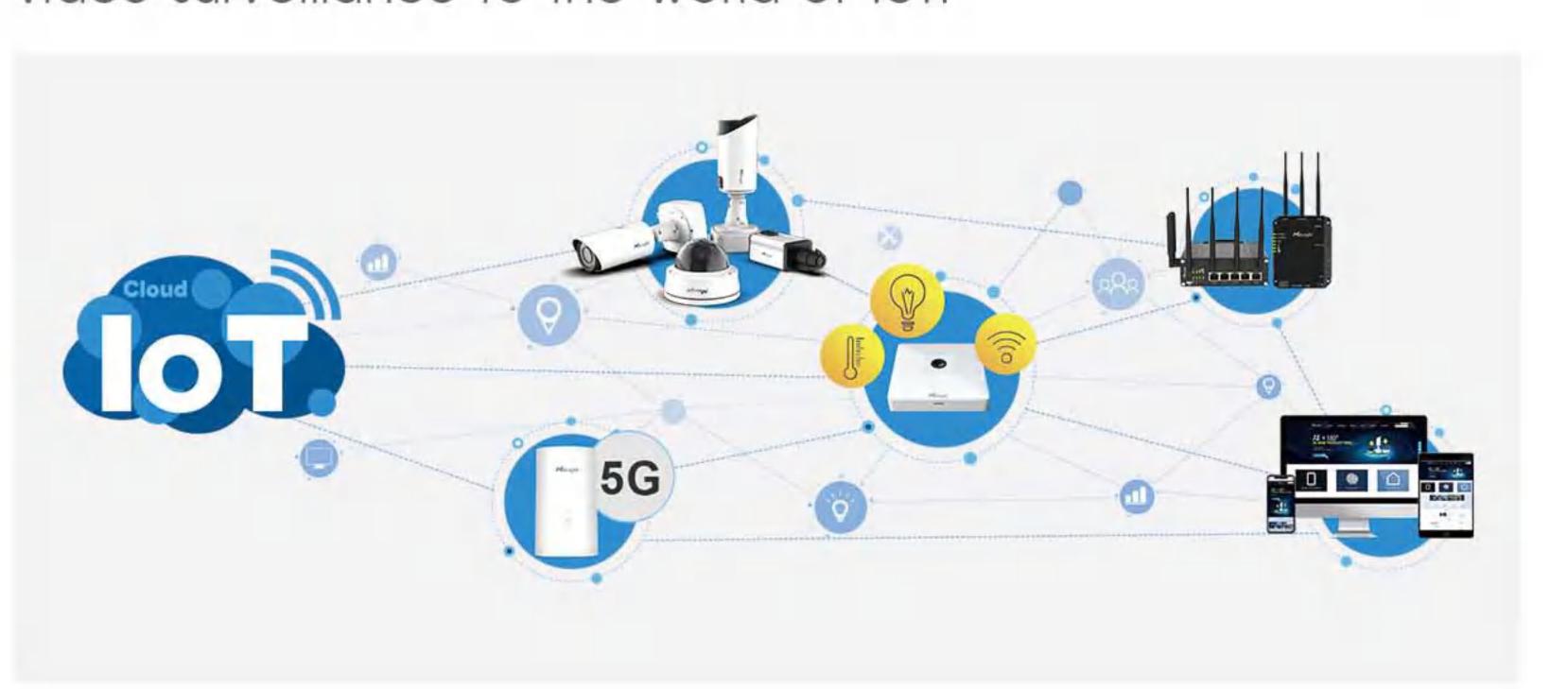
Emerging IoT Transmission

Embedded IoT Technology

Milesight embedded LPWAN technology, one of the fastest-growing IoT communication strategies, empowers wireless and relatively long-distance connection with lower power consumption. And now, the industry-leading IoT technology via LoRaWAN® is applied in Milesight 5G AIoT Camera.

Wide Area Coverage

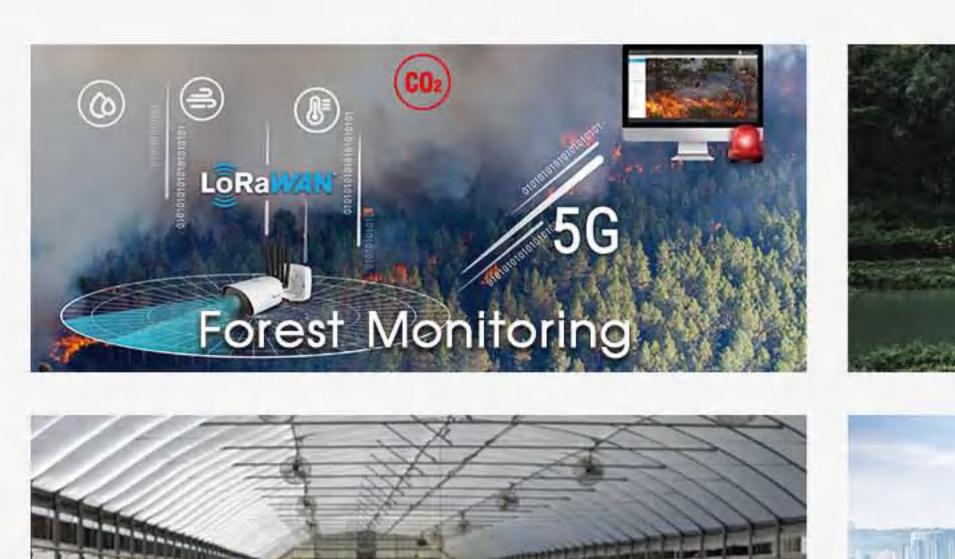Wireless Transmission

Low Power Consumption

Sufficient Capacity

The sufficient capacity of IoT technology enables Milesight 5G AIoT Camera to connect potentially millions of devices, covering the integration with billions of IoT devices and realizing the mission-critical applications, making a leap from video surveillance to the world of IoT.

Application Scenarios

Milesight leverages cutting-edge technologies, including Sensory System, IoT technology, 5G, AI deep learning, to realize an intelligent and highly integrated 5G AIoT solution, which is beyond just data collection also draws actionable insights, catering for the scenarios which are not suitable for laying wired network and have high demanding for device stability.

Forest Monitoring

Water and River System Monitoring

Smart Agriculture

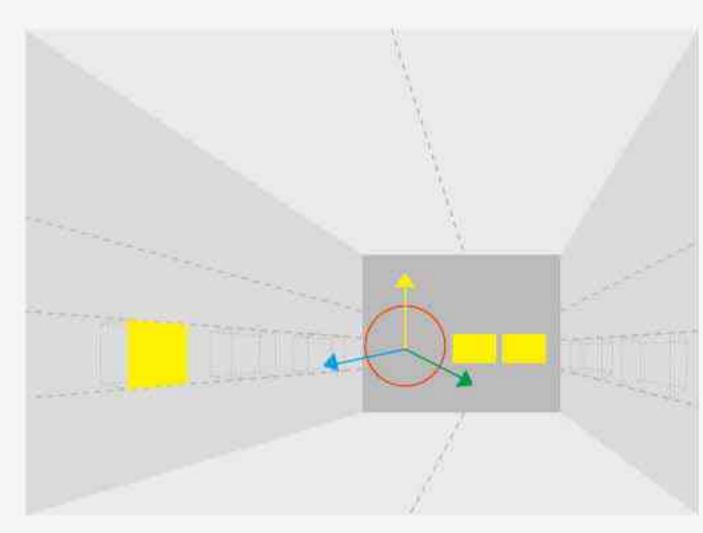Smart City

PTZ to Move Your World

Pan, Tilt and Zoom Tasks

- Up to 360° Endless Pan & 95° Tilt
- Pan Speed up to 450°/s & Tilt Speed up to 360°/s
- Flexible Zoom Options from 5X to 42X
- Ideal for Wide-area and Long-distance Surveillance

PTZ Privacy Mask

PTZ Privacy Mask features a 3D coordinate system to protect people's privacy. It can keep the specified area masked through manual operations from monitoring no matter how cameras pan/tilt/zoom.

3D Positioning & Keyboard Control

3D Positioning and Keyboard Control allow users to easily adjust the angle of cameras' view and zoom ratio by just using a mouse or a keyboard to get more details from region of interest.

Zoom in
Zoom out
Pan/Tilt/Zoom

Panoramic View for All-round Surveillance

Stunning Dewarping Ability

The embedded dewarping algorithm can smoothly and fast alter original spherical images into plane images to offer users a complete overview of a wide area without distortion.
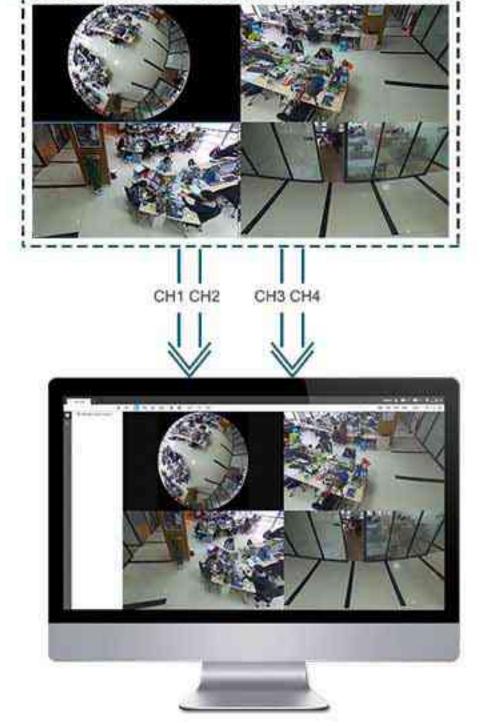
On-board/Client-side Dewarping

Milesight fisheye cameras support two ways of dewarping, bringing users great flexibility during operation.

- **On-board Dewarping**:
  Easy integration with third-party VMS
- **Client-side Dewarping**:
  Flexible viewing modes in Live View and Playback

9 Display Modes:

Two Compatible Modes

- **Bundle-stream Mode - For Better Compatibility**
  Bundle all channels into one stream and send it to NVR or VMS.

- **Multi-Channel Mode - For Easy Operation**
  Send all the original channels to NVR or VMS, allowing separate configurations of each channel.
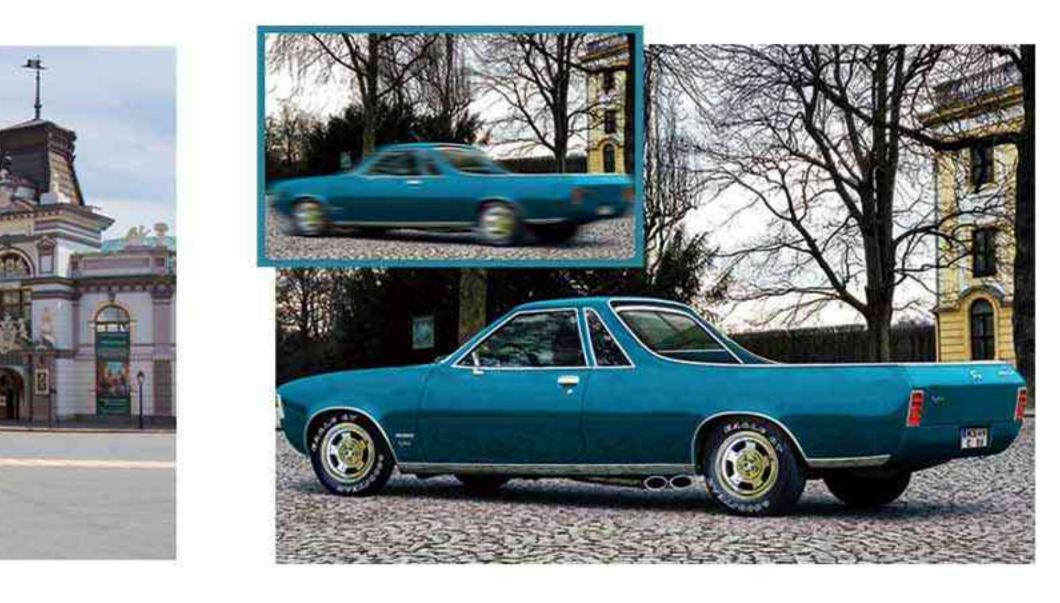
Primary Stream   Secondary Stream   CH1 CH2   CH3 CH4

Image

Outstanding Viewing Experience

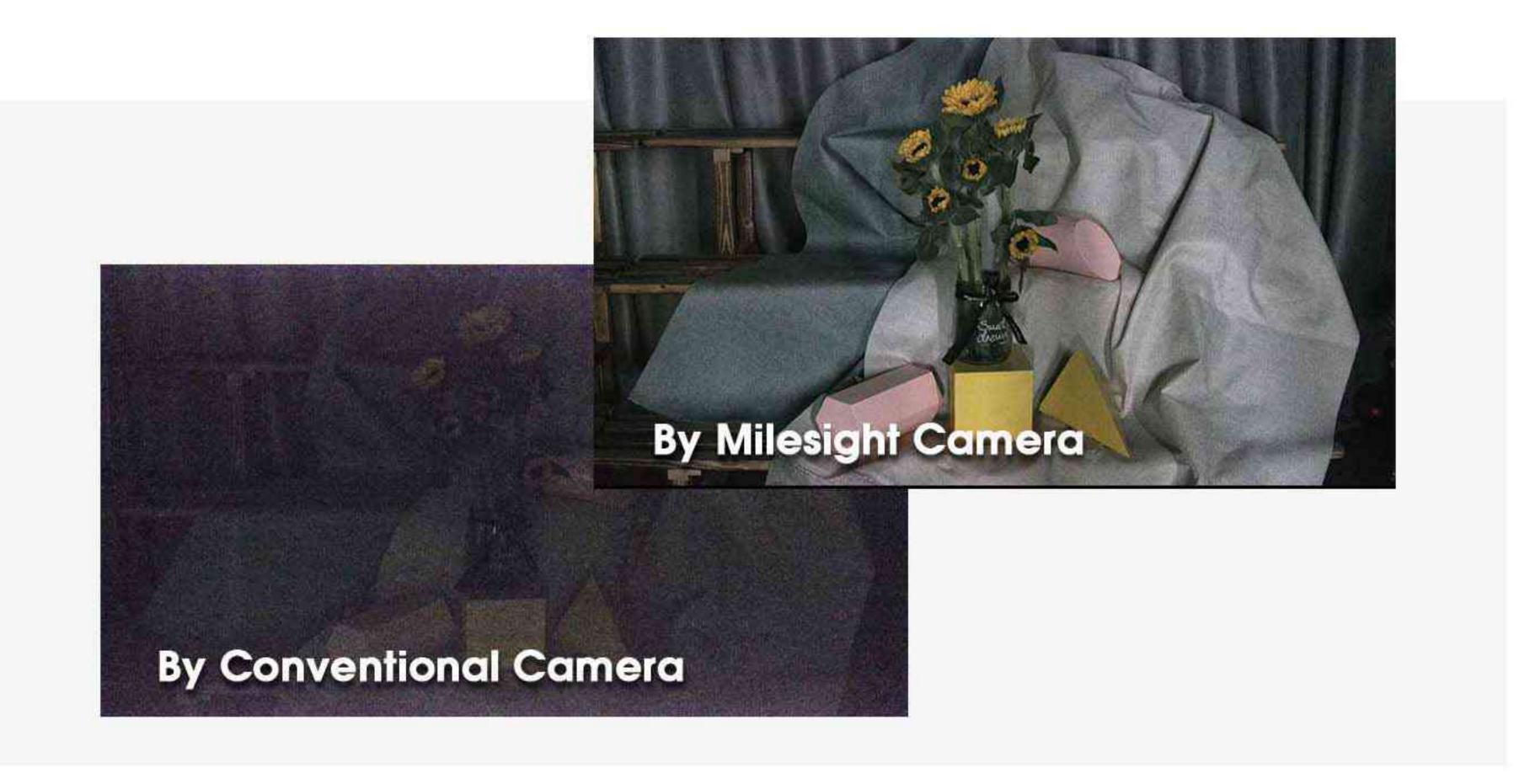4K/12MP High Resolution | 180°/360° Wide Angle Viewing | 3X to 42X Optical Zoom | 60fps/90fps/100fps High Frame Rate

Clear Vision at Night

0.001Lux Starlight

Equipped with Sony Starlight sensor, Milesight cameras can deliver full-color images even in extremely low-light situations without the need of any supplementary light sources.

By Milesight Camera

By Conventional Camera

Smart IR II Technology

Smart IR II Technology can adjust the IR illumination intensity automatically as the camera zooms in and out, providing a uniform IR coverage and clear images even in complete darkness.
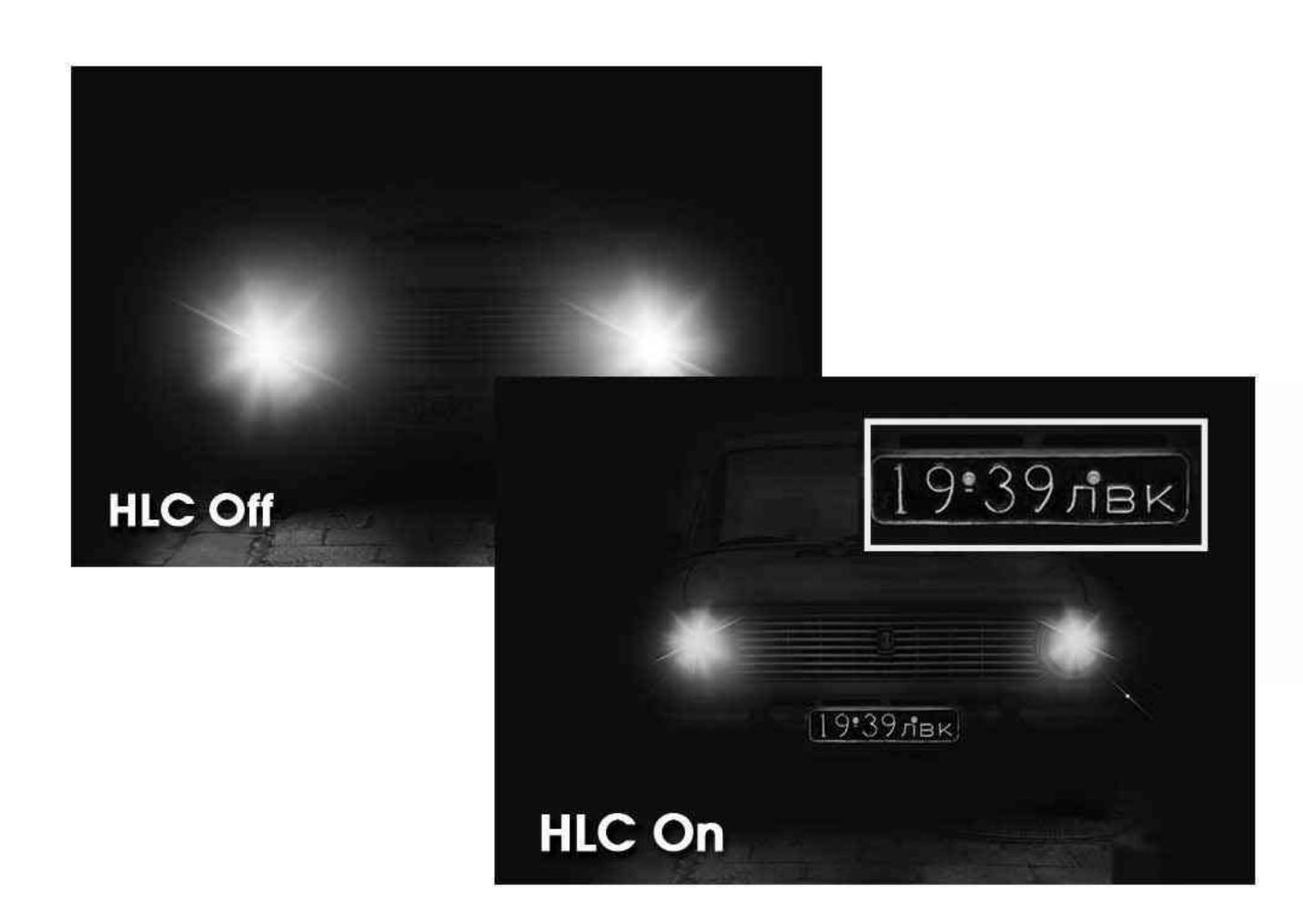
Excellent Details Under Backlighting

3 in 1 Super WDR Pro-140dB

Milesight Super WDR Pro technology reaching up to 140dB combines 3 frames with multiple exposures to get the optimal images in high contrast lighting situations.

Regular WDR

3 in 1 Super WDR Pro

HLC (Highlight Compensation)

HLC compensates for overexposure from strong source of light and prevents blinding of cameras especially at night time from headlights, enhancing license plate readability.

HLC Off

19:39 ЛВК

HLC On

BLC (Backlight Compensation)

BLC optimizes underexposure in the foreground and background of the video by correcting different exposure regions of the scene with varying levels of light.

Advanced Technologies

High-quality Deblur

Speed up the shutter speed under certain gain range to remove blurring artifacts caused by high-speed motion.

Deblur On | Deblur Off

P-Iris Control

Adjust automatically and precisely the iris opening in response to changes in light levels, offering optimal image quality with good depth of field.

P-Iris On | P-Iris Off

Comprehensive Defogging

Provide clear images in hazy and foggy weather with the built-in fan and heater as well as embedded defogging algorithm.

Defog On | Defog Off

Corridor Mode

Rotate images 90 degree clockwise or anti-clockwise to offer a better viewing experience in tall and narrow surveillance scenarios.

90°

Corridor Mode off | Corridor Mode on

EIS Electronic Image Stabilization

Detect cameras' vibration and automatically adjust frames to align with motion information, enabling cameras to record steady videos.

EIS on | EIS off

Simplicity

Online Upgrade

Users can update cameras' firmware by just one simple click in the web interface to get and explore the latest new firmware version.

User-friendly UI Design

New upgraded Milesight UI is designed with unique user-friendly logic to deliver a more orderly and more efficient user interface.

Interoperability

Extensive Compatibility with the Third-party

Offer more flexibility to users by deepening communication with different security system through CGI.

ONVIF Profile G/Q/S/T

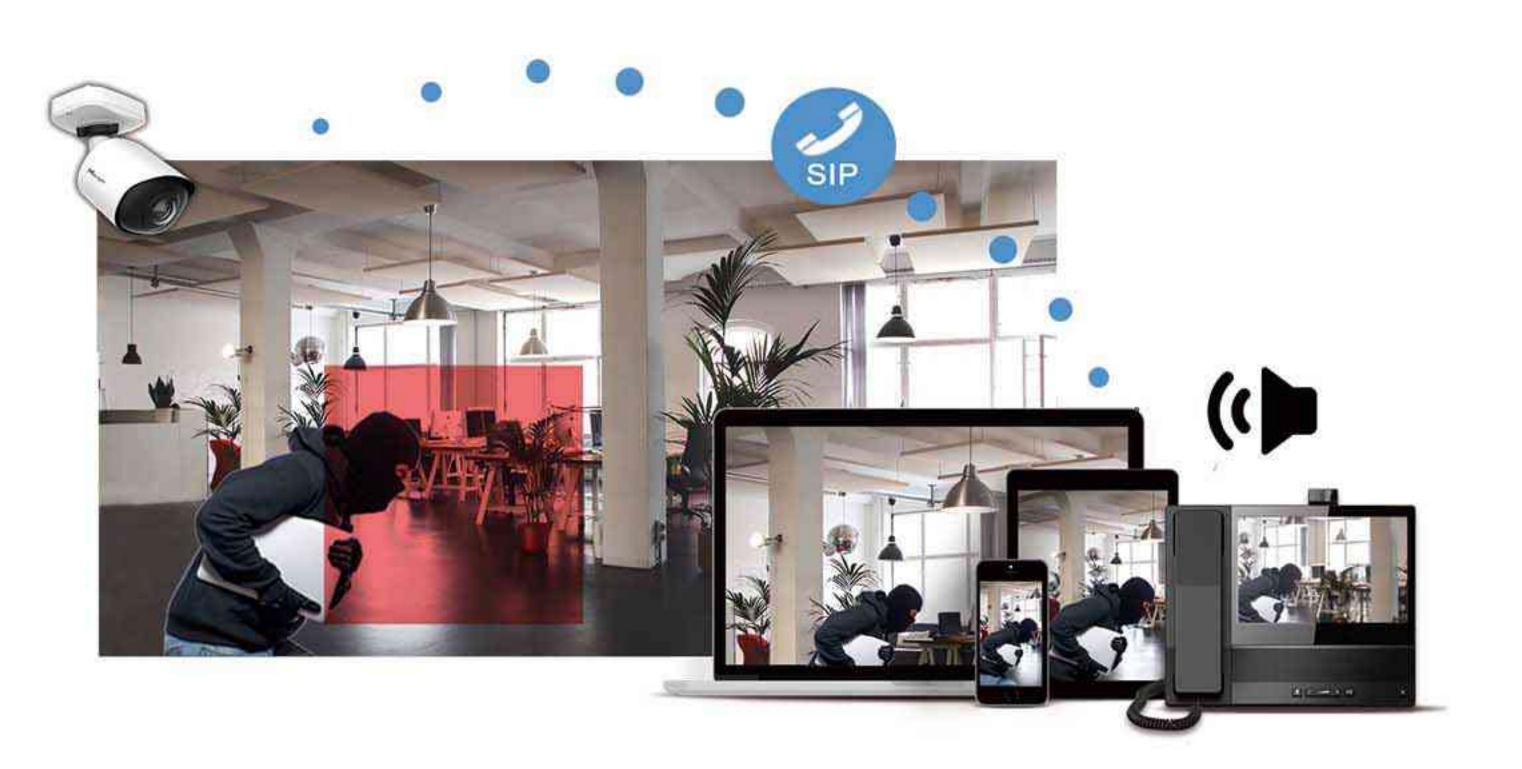Easy to be integrated into security systems on the basis of the ONVIF protocols by supporting ONVIF profile G/Q/S/T.
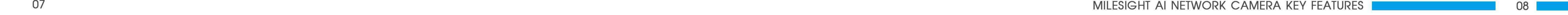
GQST
Onvif

IPv6 Compatible

Provide a greater number of total unique Internet addresses and an improved level of security of data packets.

IPv6

SIP/VoIP

Support SIP function which can integrate with various VoIP telephony systems to build a complete communication system.

Cybersecurity

HTML5 Streaming Ready

The barrier-free connection between Milesight cameras and browsers is built with HTML5 streaming to access to all configurations and functions without downloading extra plug-in.
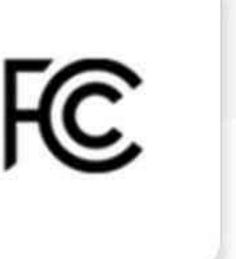
Digital Watermark Encryption

Every individual bit of the video exported from Milesight cameras is embedded with watermark information which could only be checked under Milesight back-end devices to avoid video tampering and ensure the security of data transmission.
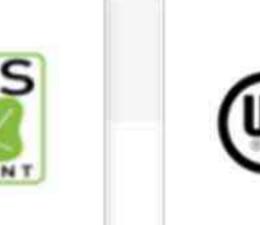
Security Certification

Milesight is an ISO9001 authorized company and Milesight products are certificated with CE, FCC, LVD, RoHS, etc., meeting the daunting and demanding requirements of global security industry.
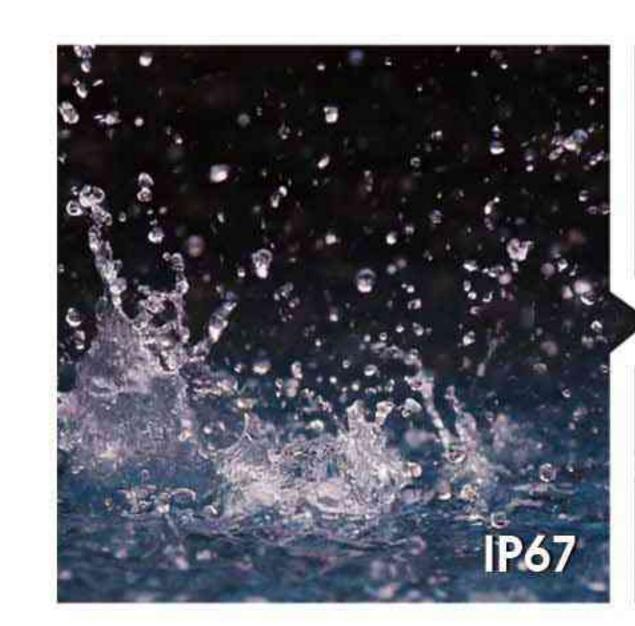
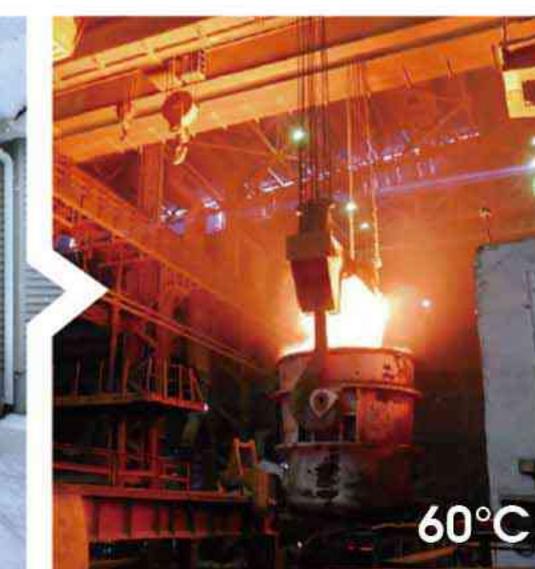CE   FCC   LVD   RoHS COMPLIANT   UL LISTED   EN-50155   ISO

Structure

Full Protection

Milesight cameras are engineered with IP67-rated and IK10-rated housing to guarantee a stable and reliable operation. It can withstand extreme temperatures as low as -40°C and as high as 60°C, ably avoid lightning strikes and electrical surges with 6KV surge protection in harsh climates. Also complying with the EN50155 standard, Milesight Vandal-proof Mini Dome Network Camera is able to offer excellent anti-vibration performance even in applications on board trains, trams, and metros.
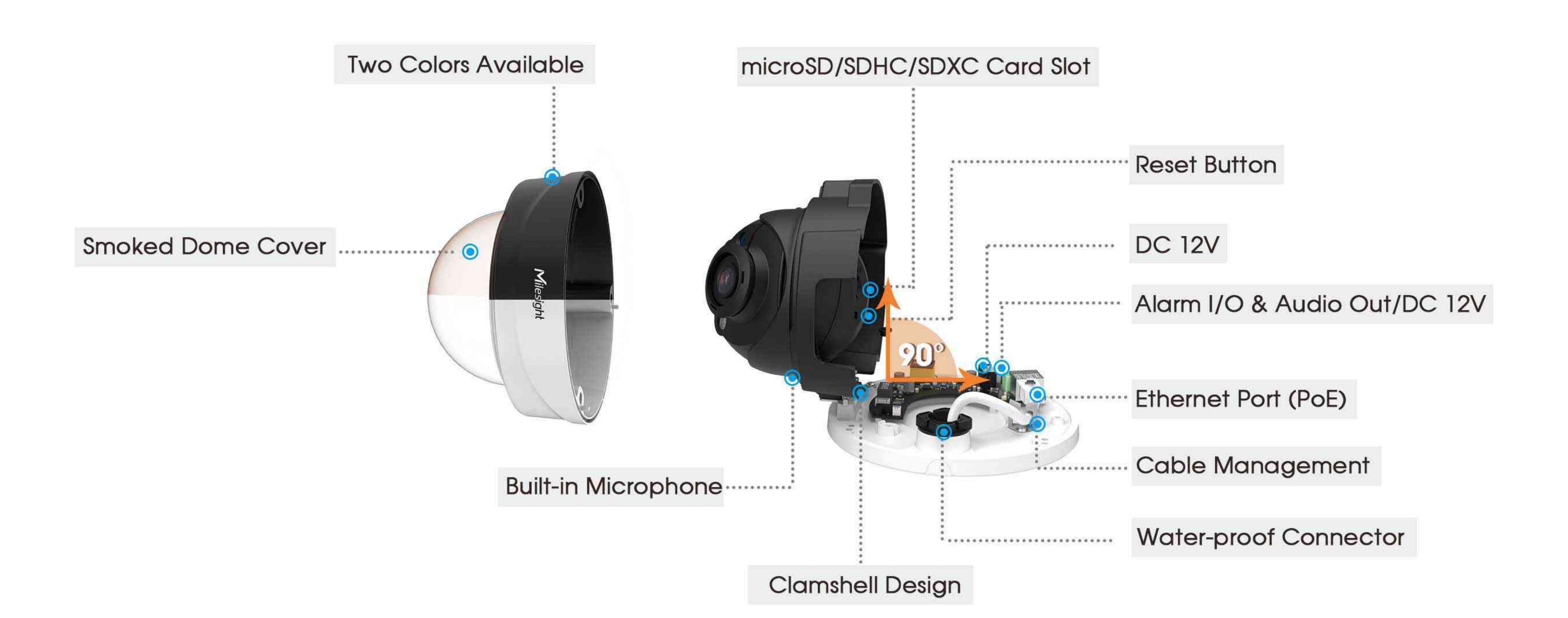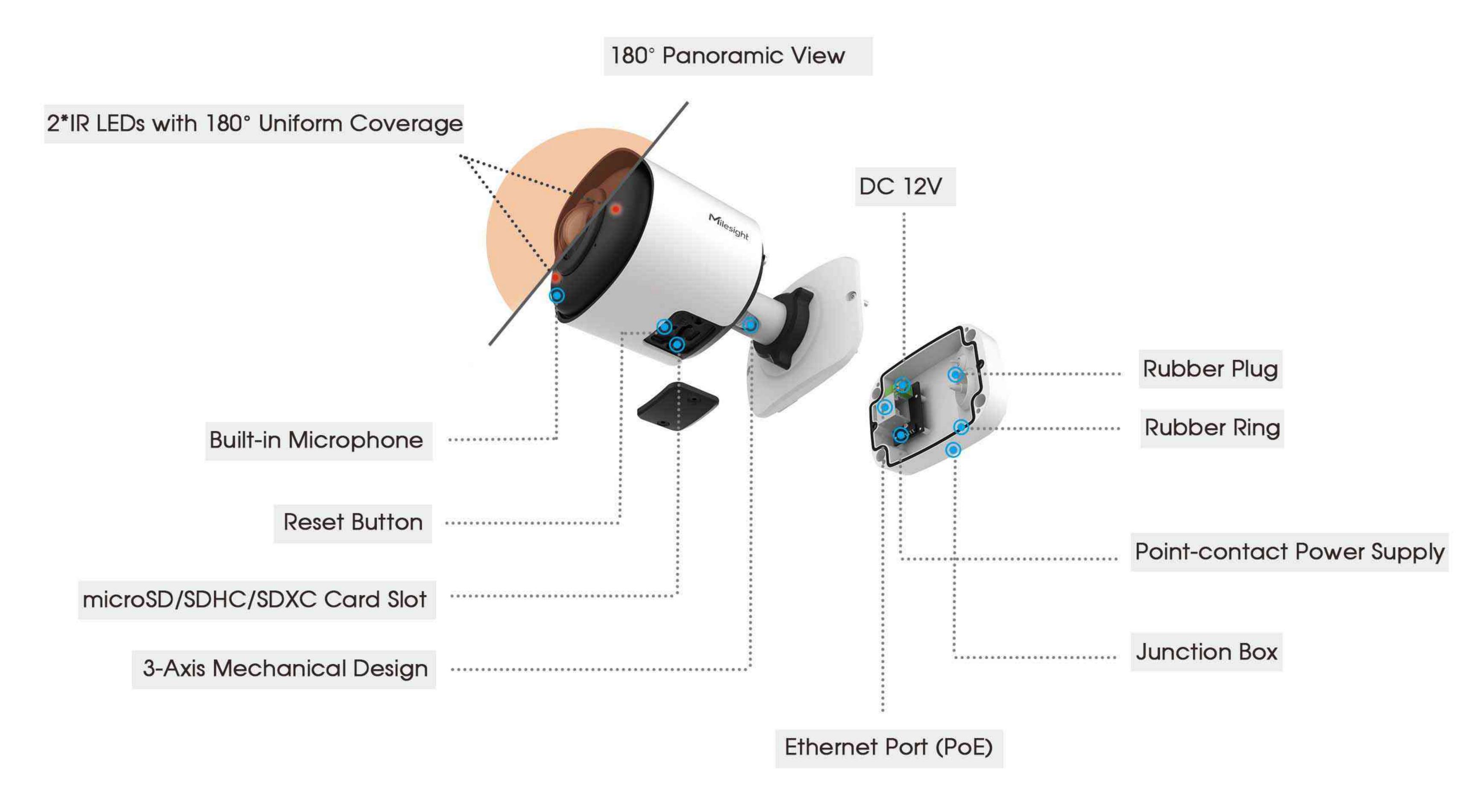
IP67 → IK10 → -40°C → 60°C → 6KV → EN50155

Two Colors Available
microSD/SDHC/SDXC Card Slot
Reset Button
Smoked Dome Cover
DC 12V
Alarm I/O & Audio Out/DC 12V
90°
Ethernet Port (PoE)
Cable Management
Built-in Microphone
Water-proof Connector
Clamshell Design
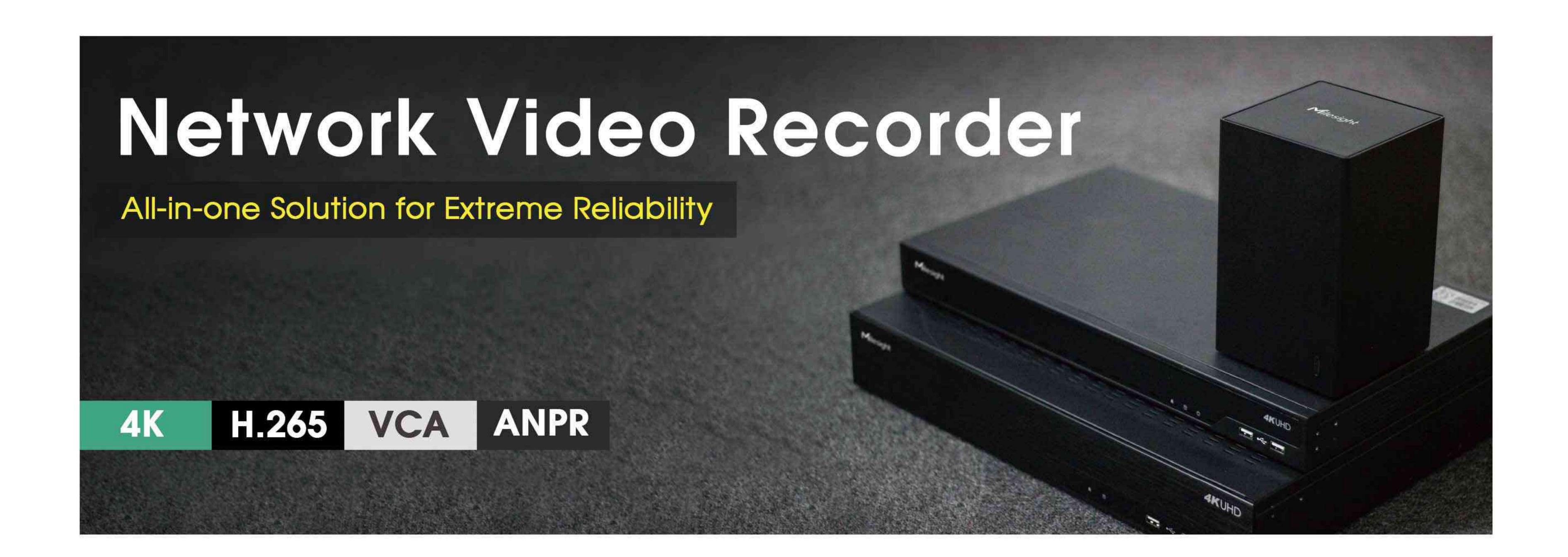
(Milesight AI Motorized Pro Dome Camera)

MILESIGHT CLASSIC DESIGN

180° Panoramic View
2*IR LEDs with 180° Uniform Coverage
DC 12V
Rubber Plug
Rubber Ring
Built-in Microphone
Reset Button
Point-contact Power Supply
microSD/SDHC/SDXC Card Slot
Junction Box
3-Axis Mechanical Design
Ethernet Port (PoE)

(Milesight AI 180° Panoramic Mini Bullet Camera)

Network Video Recorder

All-in-one Solution for Extreme Reliability

`4K` `H.265` `VCA` `ANPR`
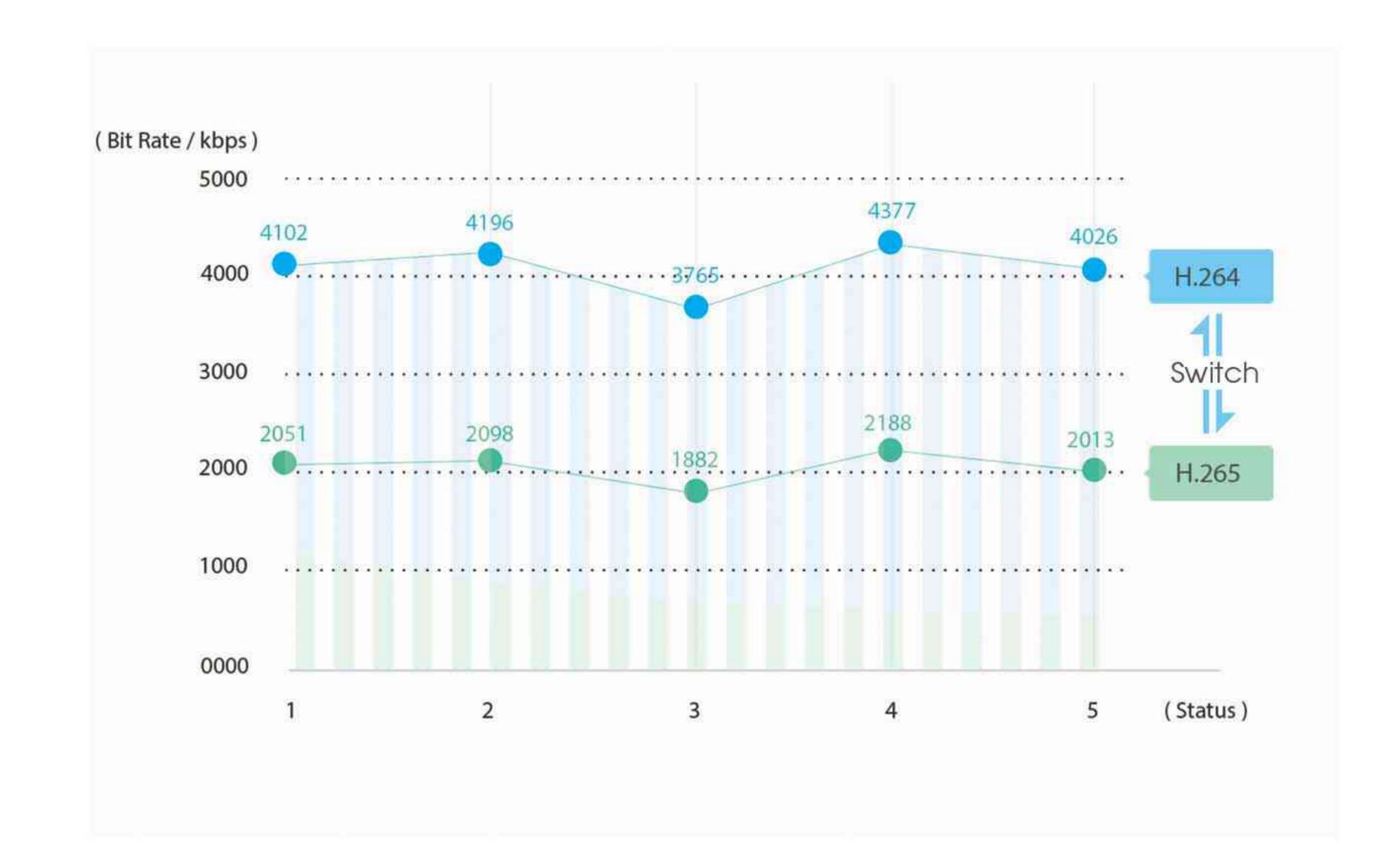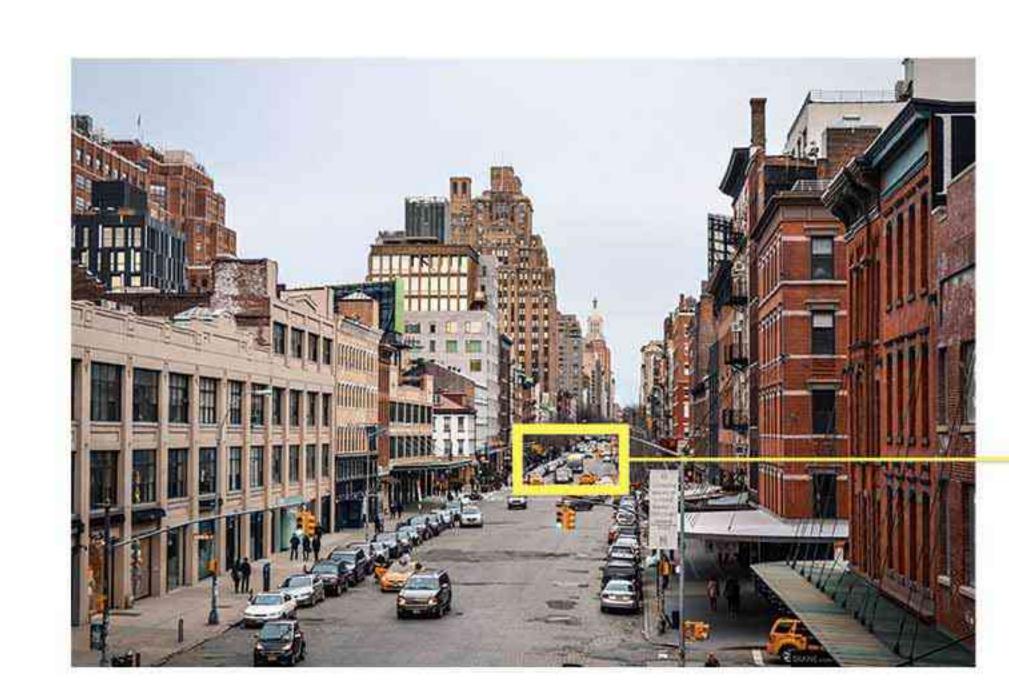
Display

H.265 Compression Technology

Milesight NVRs utilize the latest H.265 codec to use up to 50% less network bandwidth and storage space compared with H.264, while supporting to switch between H.264 and H.265 automatically.

(Bit Rate / kbps)

5000					
4000	4102	4196	3766	4377	4026
3000					H.264
2000	2051	2098	1882	2186	2013
1000					H.265
0000	1	2	3	4	5 (Status)

Switch

4K High Resolution

With 4K local video output, Milesight NVRs can provide ultra high resolution with no missing any single detail during video monitoring.

UHD Video Display

Equipped with solid 4K decoding and display capabilities, Milesight NVRs can synchronously decode up to 4-CH 4K UHD and 16-CH 1080P with the finest details to guarantee real-time video monitoring.

Multi-video Output

● **Independent Outputs**
Multiple outputs to display various channels independently.

● **Synchronous Outputs**
The same channel to be displayed at different locations synchronously.
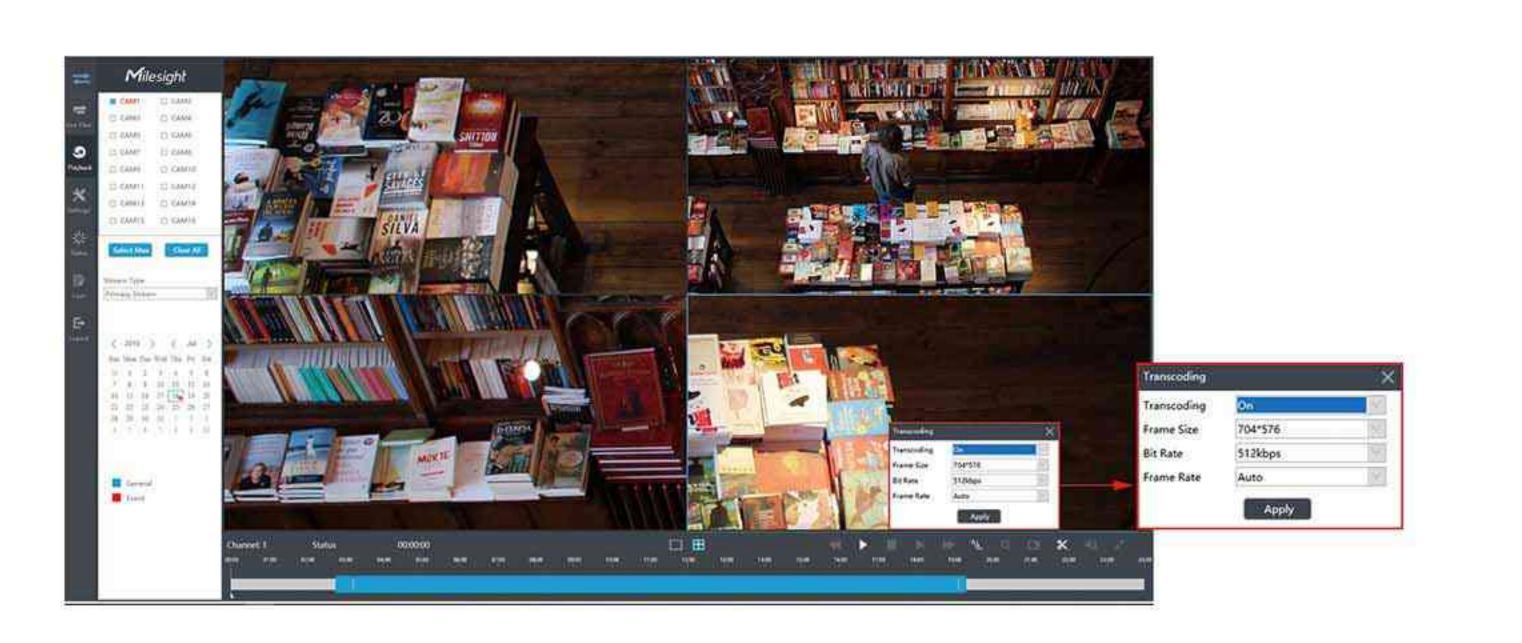
Output 1   Output 2

Flexibility

Plug and Play

Milesight PoE NVRs offer a true plug-and-play with the built-in independent PoE switches, where cameras can be easily connected without a lot of network infrastructure work, ensuring users to begin the efficient monitoring in no time.
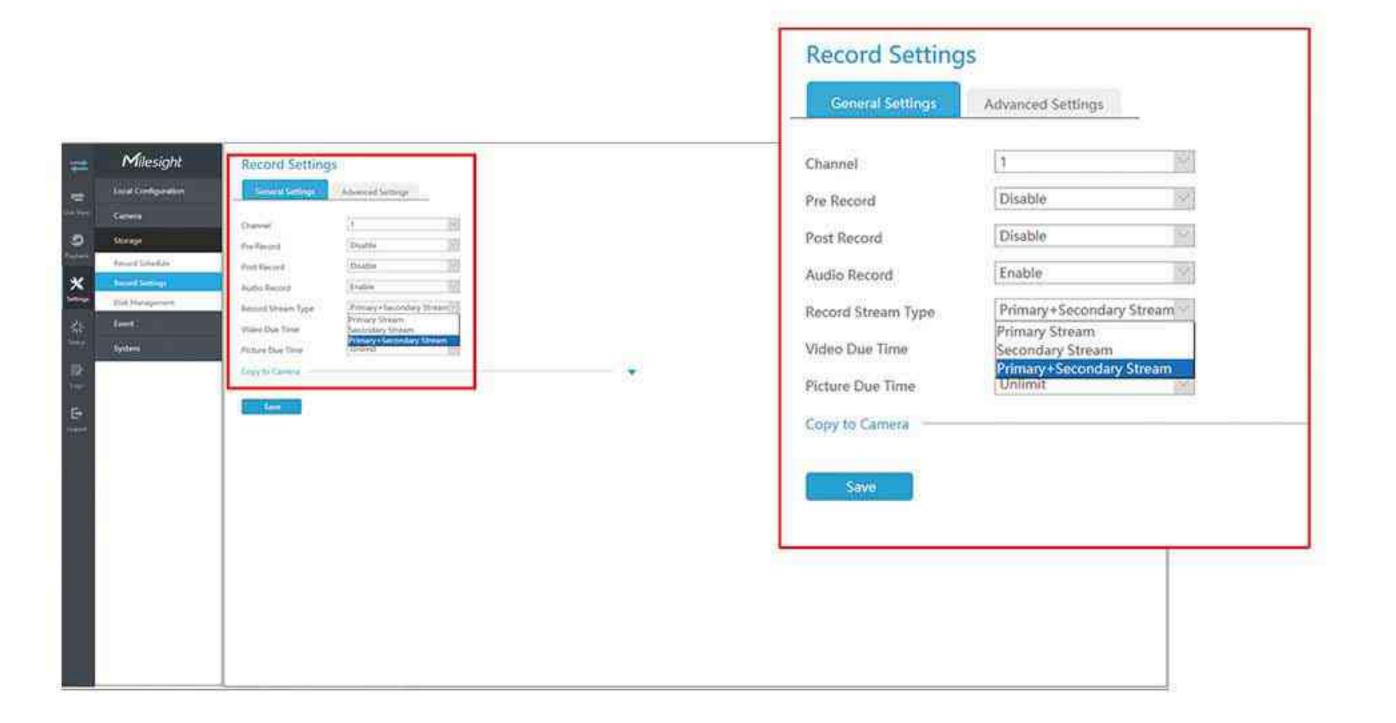
Flexible Storage Options

Flexible storage options including HDD and NAS in Milesight NVRs offer users greater flexibility to address the needs for versatile storage.

Transcoding

Based on the CPU capabilities, Transcoding guarantees fluid video experience especially for remote playback even in a poor network connection by reducing the stream data via lowering resolution, bit rate, or frame rate.

Dual Stream Recording

Supporting Primary Stream and Secondary Stream recording simultaneously, Dual Stream Recording makes it possible for users to freely choose the desired streaming based on the bandwidth available.
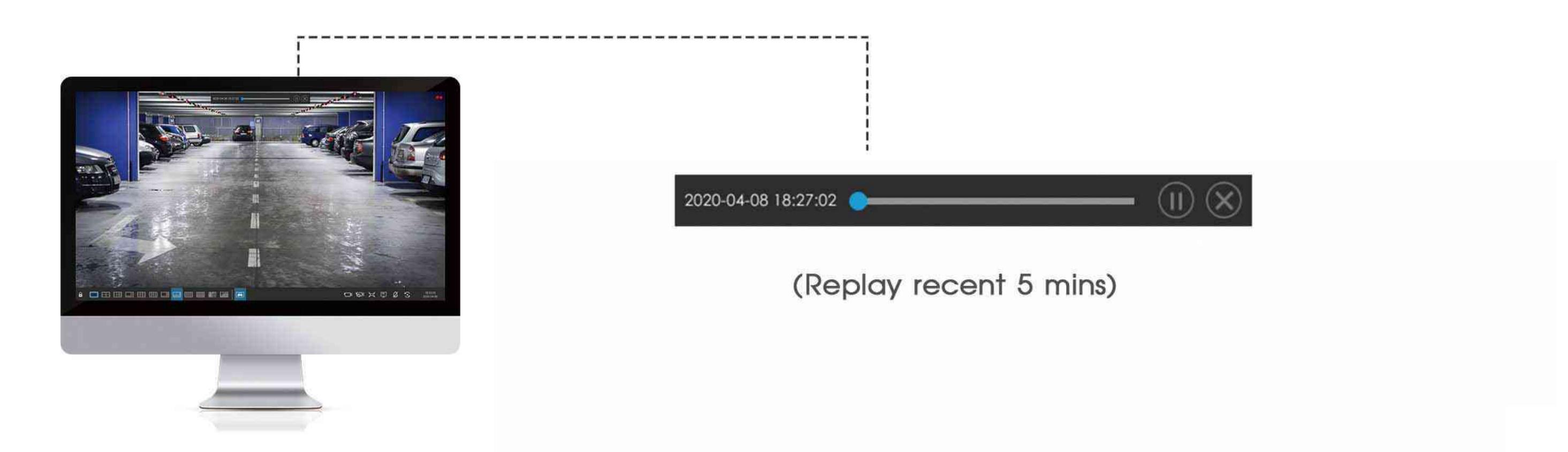
Usability

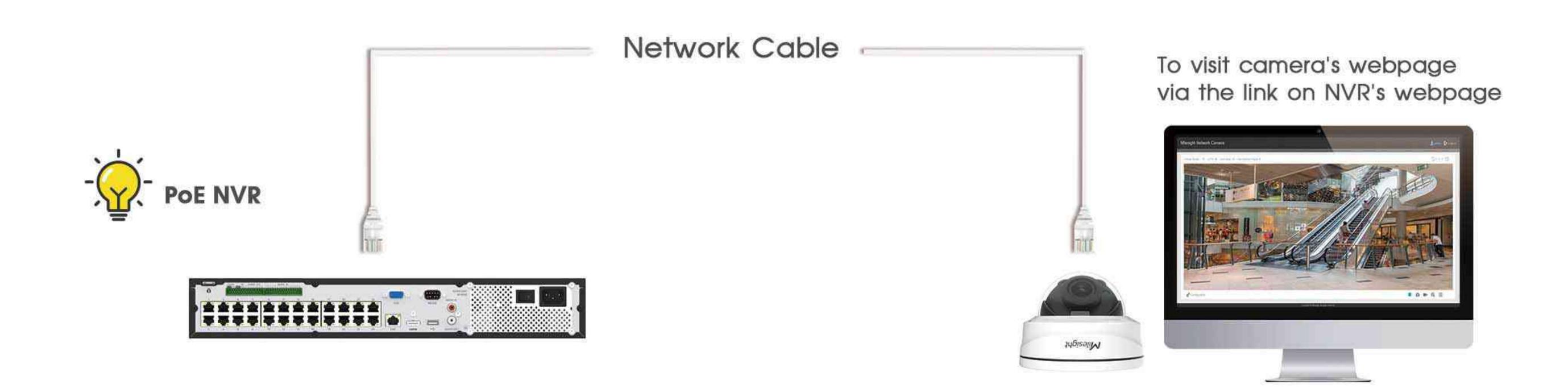| Easy Playback	Instant Playback, General Playback, Event Playback, Tag Playback, Split Playback, Picture Playback
Easy Backup	Common Backup, Event Backup, Picture Backup
File Management	File Tag, File Lock, File Export
Easy Configuration	Online Upgrade, Virtual Host, Disk Group, Intuitive UI Design

Instant Playback

Instant Playback can replay recorded video within recent 5 mins without performing search functions, facilitating the direct and timely monitoring when users need to monitor one certain camera quickly.

2020-04-08 18:27:02

(Replay recent 5 mins)

Virtual Host

Virtual Host offers an easy way to directly access the network camera connected to the PoE port by creating a link on Milesight NVR's webpage for users to visit camera's webpage.

Network Cable

To visit camera's webpage via the link on NVR's webpage

PoE NVR

Online Upgrade

Being customer-oriented, the firmware including the NVR itself and the connected network cameras can be all easily upgraded online remotely, ensuring the optimal user-experience during configuration.
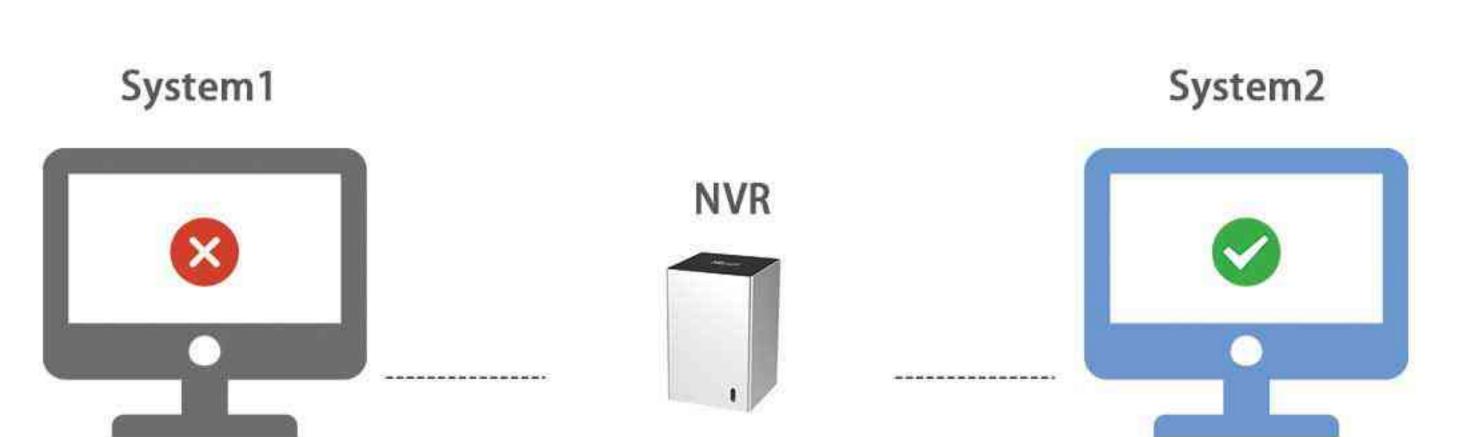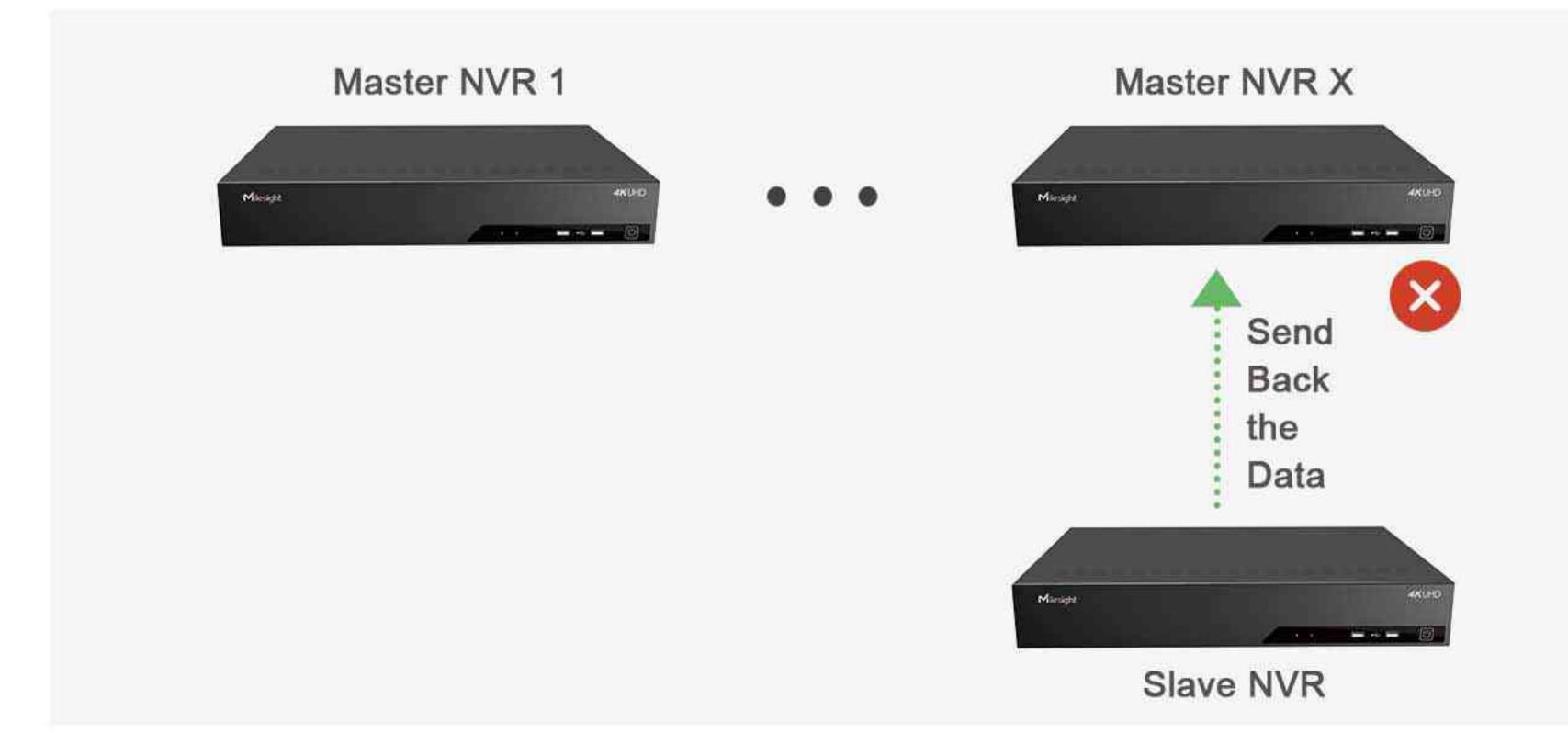
Reliability

Embedded Linux System

Safe & Stable   Energy-efficient   Powerful

Dual System

Milesight NVRs are born to possess two copies of firmware in the flash. If one of the flash sections ceases, the other firmware will take its place to work, ensuring high reliability of system running.
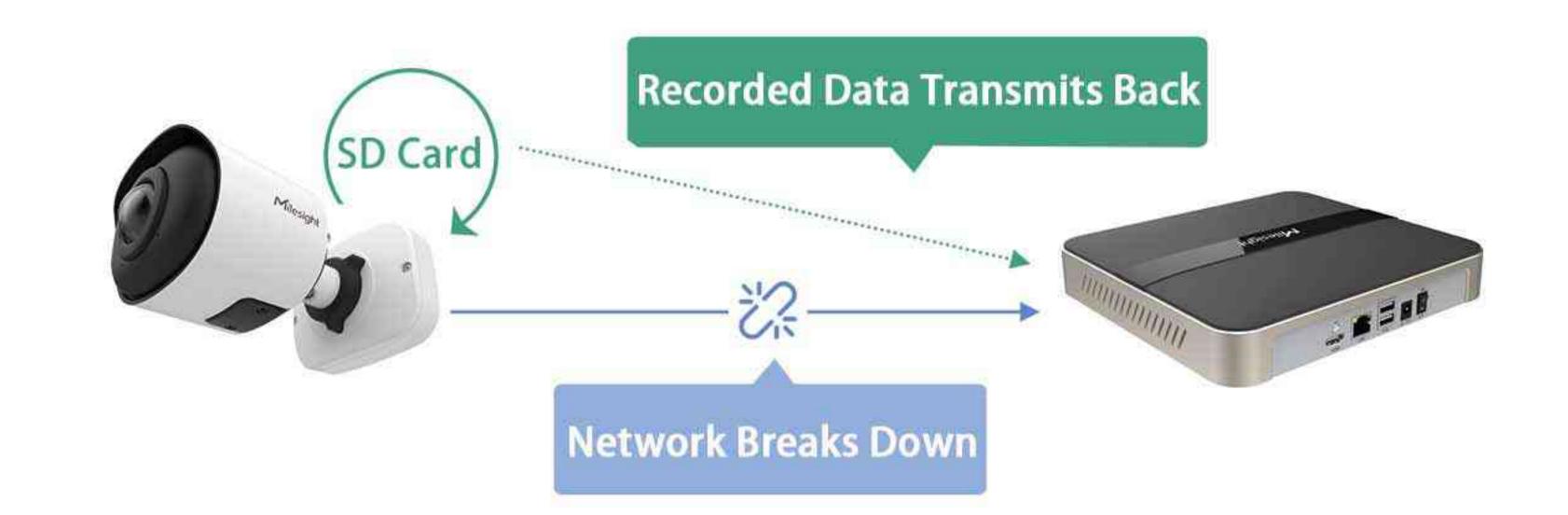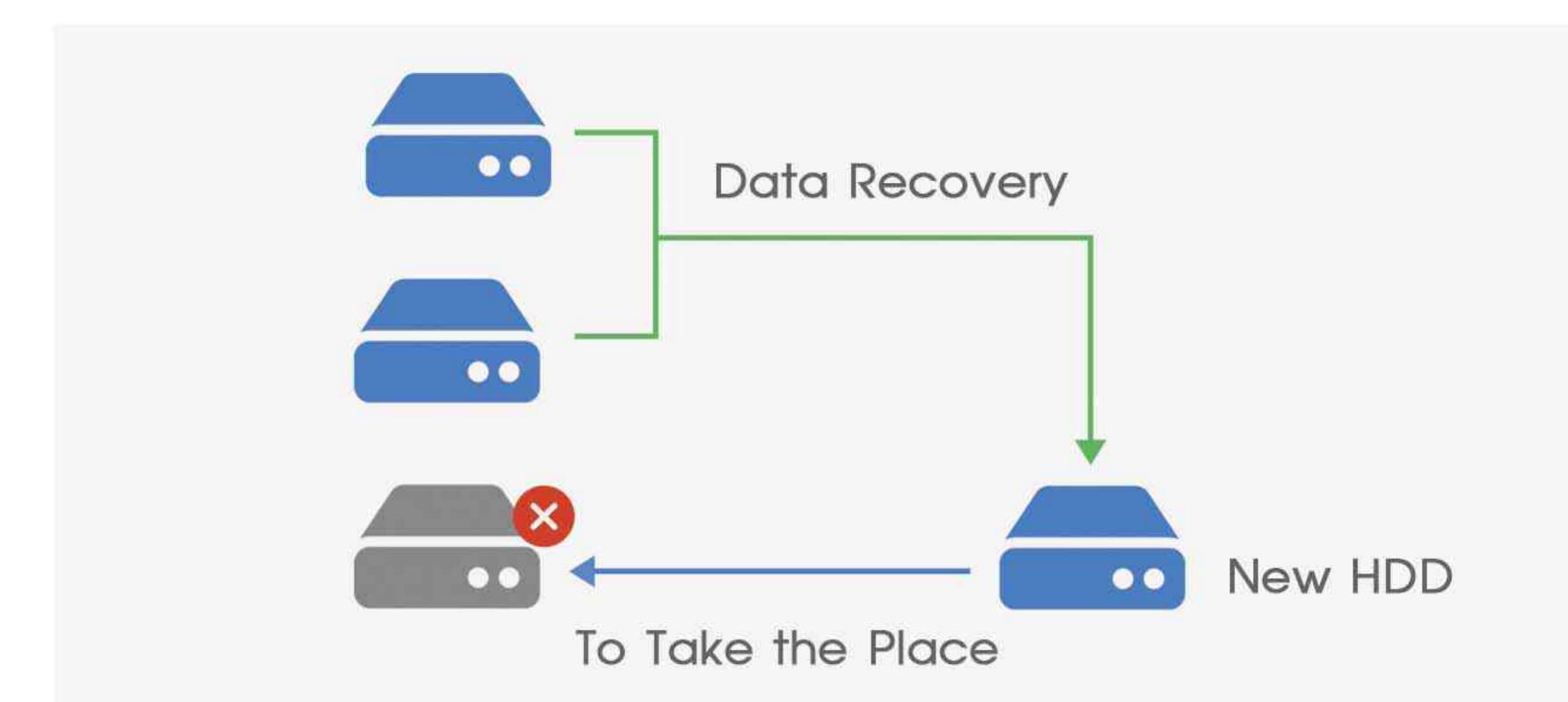
System1   NVR   System2

N+1 Hot Spare

Master NVR 1   Master NVR X

Send Back the Data

Slave NVR

Adopting N+1 Hot Spare, when any one of the master NVRs fails, the slave NVR will replace it to keep the system working on and send the data back when the master NVR recovers, ensuring the data integrity and reliability.

ANR (Automatic Network Replenishment)

As a backup operation, ANR can automatically store video data on the camera storage card when network is disconnected and retransfer the recorded video to NVR after network recovers, guaranteeing a reliable system.

Recorded Data Transmits Back

SD Card

Network Breaks Down

RAID 0/1/5/6/10

Data Recovery

To Take the Place   New HDD
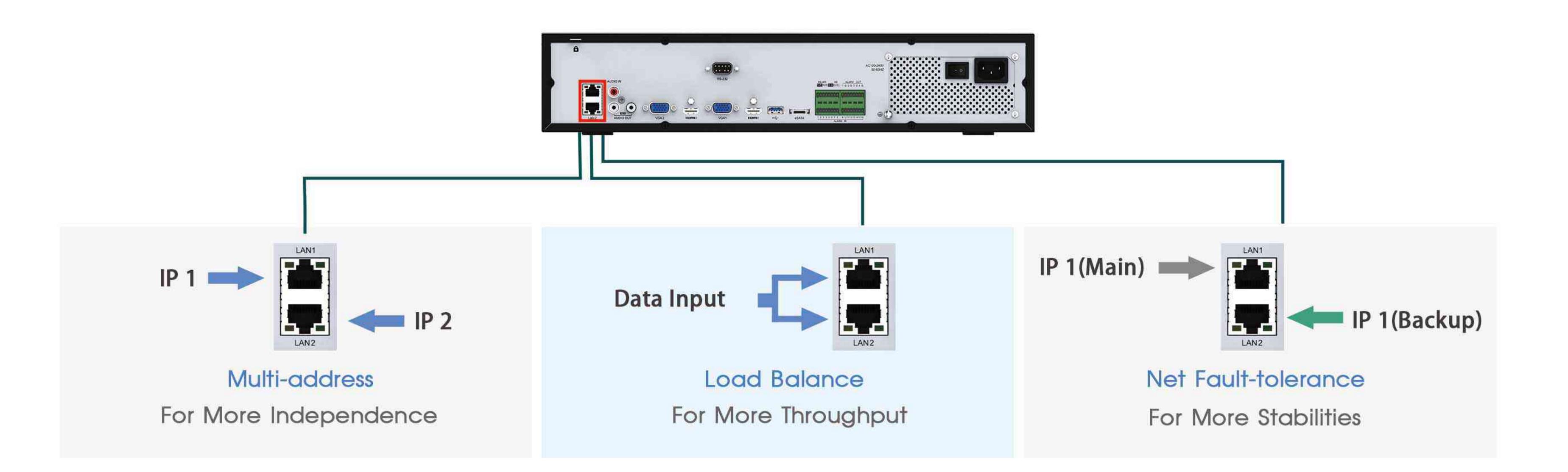
Preconfigured with industry-standard RAID levels (0/1/5/6/10), Milesight NVRs can configure the system based on the specific redundancy and performance requirements to ensure more reliable storage against data loss.

Dual Lan Giga Network Ports

IP 1 → LAN1 ← IP 2	Data Input → LAN1 / LAN2	IP 1(Main) → LAN1 / LAN2 ← IP 1(Backup)
Multi-address	**Load Balance**	**Net Fault-tolerance**
For More Independence	For More Throughput	For More Stabilities

Intelligent Management

Advanced Functions Management

Milesight NVRs provide a fully integration with all Milesight's wide range of network cameras in close loop, ensuring the seamless compatibilities especially with Milesight PTZ functions and Panoramic functions.

PTZ Functions	PTZ Auto Tracking, PTZ Manual Tracking
Panoramic Functions	Heat Map, Fisheye Auto Tracking, Fisheye Dewarping

Smart VCA Management

Milesight NVRs support alarm configurations and event search of Milesight Smart VCA. Once suspicious events detected, the devices can trigger alarms and recordings, helping users improve video surveillance efficiency.
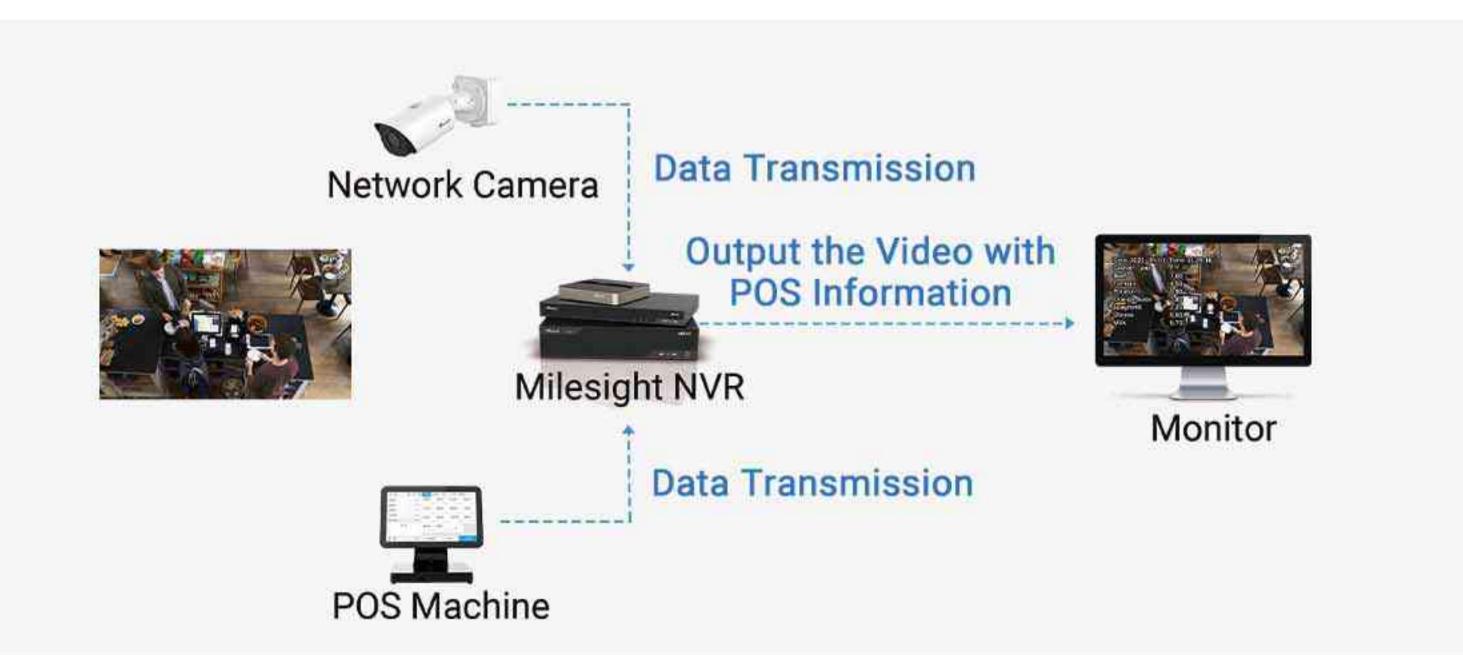

Enterprise ANPR Management

Defined as the Enterprise ANPR management system, Milesight NVRs become the central management site to easily monitor the road traffic, including the real-time preview of the car plates, smart analysis and other more detailed settings.

ALL-IN-ONE ANPR SOLUTION

Integrated POS Solution

The combination of retail transaction data with surveillance videos makes it easy to check goods settlement, miscalculation and missing calculation in the stores, supermarkets and other places, which is helpful to boost customer service and in-store competitive advantage.

Network Camera — Data Transmission — Output the Video with POS Information
Milesight NVR — Monitor
POS Machine — Data Transmission

Scalability

HTML5 Streaming Ready

HTML5 Streaming which is ready on all Milesight NVRs makes it easy for users to access NVRs via all major browsers without downloading extra plug-in.

Interoperability

Aiming to provide end-to-end video surveillance solution, Milesight NVRs can be accessed and configured remotely via Milesight CMS and APP through P2P or Port Forwarding.
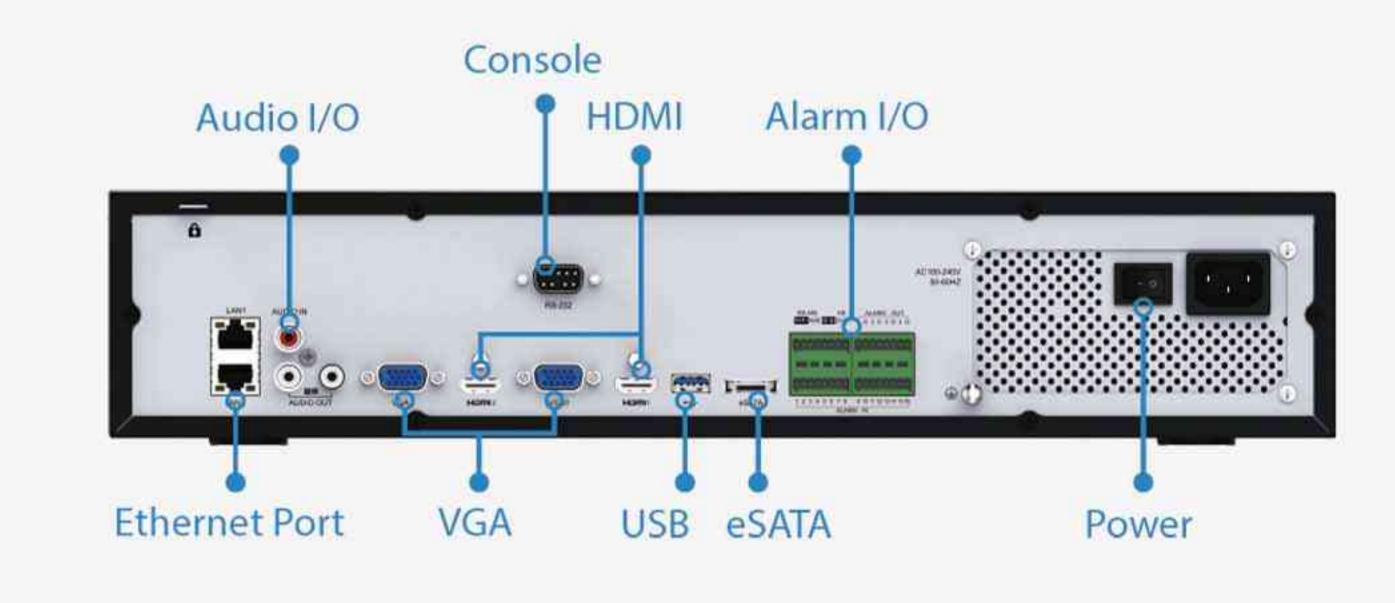
Extensive Third-party Compatibility

To provide a high ecosystem, Milesight NVRs are able to work well with third-party cameras via ONVIF protocols and CGI/API integration.

Structure

Versatile Interfaces

A whole array of ports for more value-added features.

Audio I/O | Console | HDMI | Alarm I/O
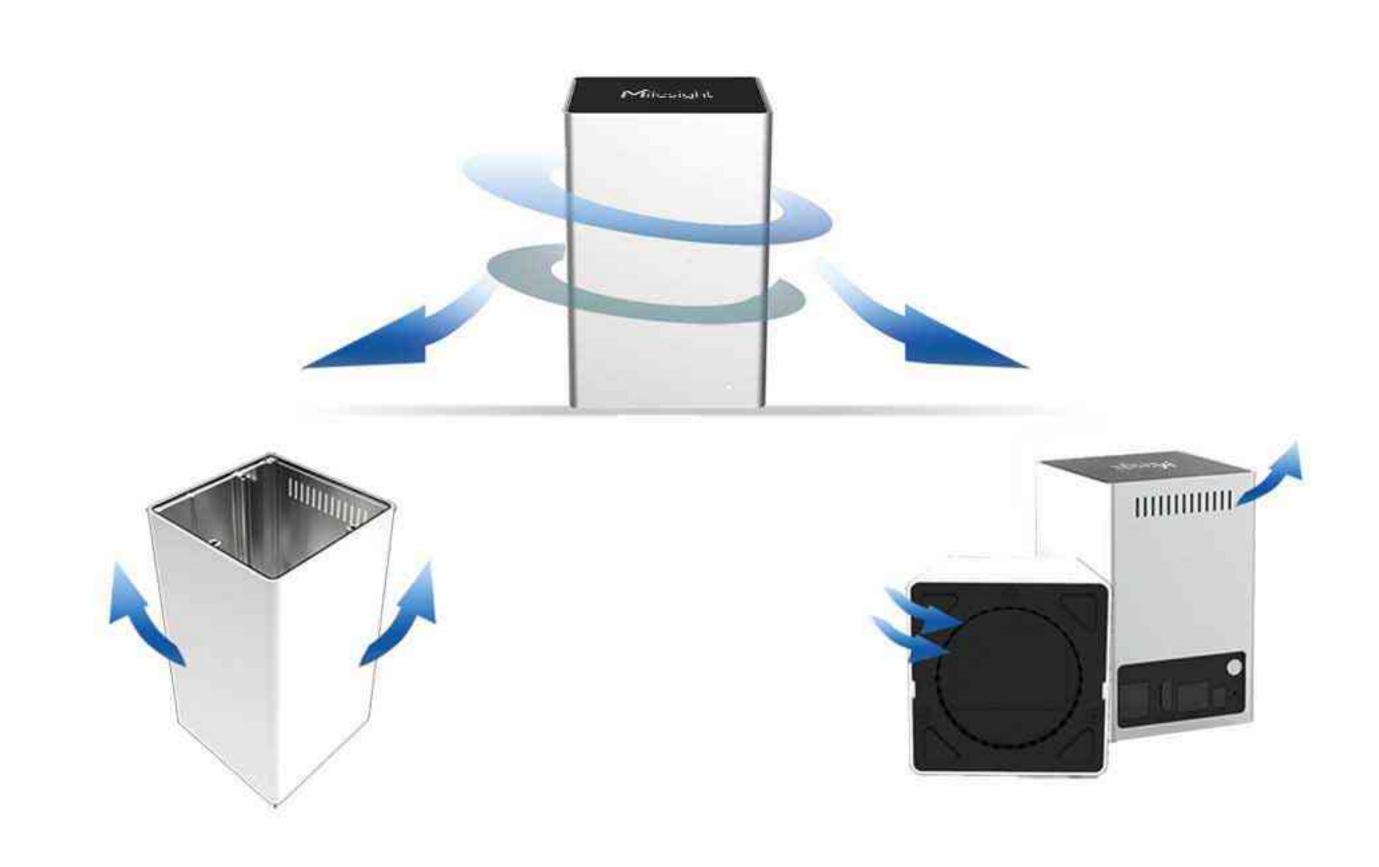Ethernet Port | VGA | USB | eSATA | Power

Aesthetics Design

Being tiny to release the full potential.

Thermal Design

Discreet structure, housing design and intelligent fan for effective heat dissipation.

HDD Installation Structure

Designed for convenient and stable hard disk installation.

Milesight VMS Enterprise

ADVANCED C/S ARCHITECTURE / LIVE VIEW / PLAYBACK / VIDEO WALL

GET IT ON
Google Play

Manage Anytime with M-VMS Mobile

M-VMS Mobile(Android)

Onvif H.265 HEVC VCA ANR

WHY MILESIGHT VMS ENTERPRISE

Great Flexibility
- Self-adaptive Layout
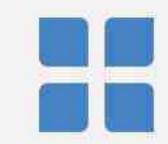- Custom Event Rule Settings
- Multi-disk Recording

Excellent Reliability
- N+M Failover
- Priority Backup of Appointed Cameras
- Lock of Important Video
- Real-time Monitoring of Running Status

High-level Security
- Customize Roles' Privileges
- Encipherment Password Protection
- Encrypted Video Files

Maximized Extensibility
- Multi Monitors for Displaying
- Scalable Video Wall

User-friendliness
- Multifunction Panels
- Intuitive Interface
- Superior UI Design

Intelligence
- AI Deep-learning Video Analytics
- LPR/ANPR Solution
- Industry-leading Radar Technology

Milesight CMS

LIVE VIEW / PLAYBACK / ELECTRONIC MAP

User-friendly design

Device spatial distribution

Centralized system administration

Remote viewing and playback

KEY FEATURES
- Central management system
- Fully integrated with Milesight network cameras and NVRs
- Comprehensive management via IP/Domain, P2P and Milesight DDNS
- H.265/H.264 video compression
- Support multiple monitors (Up to 4 monitors, 64-CH for each monitor)
- Support up to 256 devices
- Support two-layer E-map
- Milesight VCA functions
- Support advanced functions like ANPR solution, Heat Map and Auto Tracking, etc.
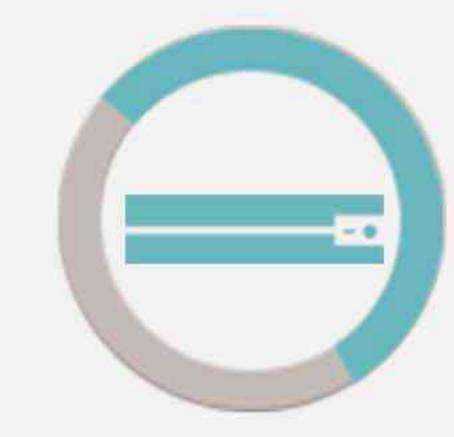- Support Crowd Management Solution

Milesight Smart Tools

SEARCH / CONFIGURATION / CALCULATION

KEY FEATURES
- Unified management for network cameras and NVRs
- Batch settings for Milesight devices
- Online batch upgrade for Milesight devices
- Fast, comprehensive and powerful calculation

⭑ IPC Tools   ⭑ NVR Tools   ⭑ Calculators Tools

Milesight M-Sight Pro APP

H.265 & H.264 / CUSTOMIZED STREAM PARAMETERS / DUAL STREAM

Android and
iOS supported

SYSTEM

Remote viewing
and playback

IPC

Centralized system
administration

NVR

KEY FEATURES

- Support Milesight Cloud Management
- Simultaneously manage Milesight network cameras and NVRs
- Support Client-side Dewarping for Fisheye Camera
- Support PTZ control and white LED control in live view
- Up to 64-CH live view and 4-CH playback
- Add device via IP/Domain, P2P and Milesight DDNS
- Transcoding to get better playback performance
- Support Alarm Video Push notification
- One click to trigger Alarm Output
- One click to quick playback & playback with NAS, SD card files and HDD files
- Backup the captured images and recorded videos locally for monitoring
- Support up to 16X digital zoom

MILESIGHT CLOUD

Milesight Cloud Management

DEVICE BINDING / DEVICE MANAGEMENT / GROUPING

- Support binding the devices with the cloud accounts via Milesight Cloud
- Device Management and Account Management
- Support sharing the devices with another cloud account
- Support for devices grouping and playing devices by group
- Support Device Transfer
- Support Log Search