

# Milesight AI Box

Equipped with numerous algorithms for deep learning and analysis, the AI Box is a cost-effective AI computing product, which is able to recognize detected objects precisely and immediately. Therefore, the AI Box is a solution platform for the creation of deep learning capable of realizing AI applications, such as Face Recognition, Human-Vehicle Control and Perimeter Alert, etc.



## DATASHEET

### KEY FEATURES

#### Scalability of Connectivity

- Fully integrate with Milesight network cameras and 3<sup>rd</sup> party network cameras.
- Support H.265/H.264, offering better compression and substantially improving video quality.

#### Ease of Use

- Compatible with existing Milesight VMS system, meets the need for optimally and purposefully expanded and upgraded.
- Centralized management of diverse attributes at Milesight VMS Enterprise.
- HTML5 Web-based configuration.
- Easy configuration and quick system start-up.

#### Intelligent Applications

<p><b>Clientele Classification &amp; Identity Management</b></p> <p>Face-human &amp; Recognition, Structure Analysis, such as Face, Body and Vehicle, etc.</p>	<p><b>Perimeter Alert Management</b></p> <p>Tripwire, Intrusion, Park, Exit, Wander and Over Wall Detection.</p>	<p><b>Behavioral Alert Management</b></p> <p>Fall, Smoke, Call, Watch Phone, Run, Sleep, Detection, etc.</p>
<p><b>Over-crowd Management</b></p> <p>Regional People Counting, Entrance &amp; Exit People Counting.</p>	<p><b>Objects Management</b></p> <p>Sundry Detect, Goods Forget, Goods Guard.</p>	



Model	BX108-A
<b>System Parameters</b>	
Main Processor	High-performance embedded microprocessors
Operating System	Embedded Linux
<b>Device Access</b>	
Video Stream Input	Video Resolution: 1920 x 1080 (1080P), 2560 x 1440 (4MP), 3840 x 2160 (8MP)
Video Decoding Type	H.264/H.265
<b>Smart Functions</b>	
<p>Working mode: multi-algorithm parallel, configurable by channel</p>	<ul style="list-style-type: none"> <li>● Face-Human &amp; Recognition: (full load maximum 8 channels): face capture, face recognition, face attributes, human body capture, human attributes, face-person binding.</li> <li>● Structure Analysis: (full load max 8 channels): <b>Image capture:</b> face, human body, motor vehicle, non-motor vehicle <b>Attribute output:</b> face, human body, motor vehicle, non-motor vehicle <b>Association relationship:</b> face-person binding, person-non-motor vehicle binding</li> <li>● Diagnosis_Alarm: (full load maximum 8 channels): Image_Cover_Alert</li> <li>● Perimeter_Alarm (fully loaded 8 channels, 4 sub-rules per channel): Park, Exit, Wander, Over_Wall, Intrusion, Tripwire, Climb</li> <li>● Behavioral_Alarm (fully loaded 8 channels, 4 sub-rules per channel): Fall, Smoke, Call, Watch Phone, Run, Sleep, On/Off Duty, Gather, Fight, Person_Over, Person_Less, Hold_Weapon</li> <li>● Goods_Alarm (fully loaded 8 channels, 2 sub-rules per channel): Sundry_Stack, Goods_Guard, Goods_Forget</li> <li>● Headcount_Alarm (fully loaded 8 channels, 2 sub-rules per channel): Head_Count, Cross_Line</li> </ul> <p><b>Note:</b> Functional compatibility of AI Box with Milesight VMS Enterprise depends on the specific version implementation.</p>
Report	Support face capture, face recognition, face attributes, human body, motor vehicle, non-motor vehicle attributes, and alert alarm analysis results reporting.
Accuracy	<p>Face: face capture rate <math>\geq 99\%</math>, false capture rate <math>&lt; 1\%</math>, recognition pass rate: <math>&gt;99.5\%</math>, recognition false rate: <math>&lt; 0.5\%</math>.</p> <p>Human body: human body capture rate <math>\geq 95\%</math>, false catch rate <math>&lt; 1\%</math>.</p> <p>Motor vehicle: motor vehicle capture rate <math>\geq 90\%</math>, false catch rate <math>&lt; 1\%</math>.</p> <p>Non-motor vehicle: non-motor vehicle capture rate <math>\geq 95\%</math>, false catch rate <math>&lt; 1\%</math>.</p>
<b>Interface Parameters</b>	
Network Interface	2, 100M/1000M adaptive Ethernet, RJ45 interface
Alarm Input Interface	4-way switch
Alarm Output Interface	4-way switch
Audio Output	1-way
Audio Input	1-way
Front USB Interface	1 x USB 2.0 and 1 x USB 3.0
Rear USB Interface	2 x USB 2.0



RS485	2-way
Reset Button	1
Power Indicator (PWR).	1
Run Indicator (RUN).	1
<b>System capabilities</b>	
Face Recognition	Employee passage at the entrance; List control and identification of key personnel, alarm, stranger identification, etc.
Video Structured	Capture of face, human body, motor vehicle and non-motor vehicle, etc., attribute analysis.
Network Protocols	TCP/UDP/HTTP/MULTICAST/DHCP/FTP/NTP/HTTPS/RTSP, etc.
Dual Network Ports	Supports three modes: multiple access setting, load balancing, and primary/standby mode.
Log Queries	It can query, search and display the capture information of face, human body, motor vehicle and non-motor vehicle.
<b>Environmental requirements</b>	
Operating Temperature	-30°C ~ +70°C
Storage Temperature	-30°C ~ +70°C
Relative Humidity	10% ~ 90%RH, non-condensing
<b>Other</b>	
Power Supply	DC12V±10%, 3.33A
Structure	Metal chassis
Dimensions (L/D)	229×193×49 (mm)
Warranty	1-year NBD (Next Business Day) with onsite parts delivery service.

## Rule Setting

Algorithm Pocket	Algorithm Pockets Management						
	Face-Human	Diagnosis	Structure	Perimeter	Behavior	Goods	Headcount
<b>BX108-A</b>	8*1	8*1	8*1	8*4 sub-rules	8*4 sub-rules	8*2 sub-rules	8*2 sub-rules
<b>Sub-rules</b>	-	-	-	Park, Exit, Wander, Over_Wall, Intrusion, Tripwire, Climb	Fall, Smoke, Call, Watch Phone, Run, Sleep, On/Off Duty, Gather, Fight, Person_Over, Person_Less, Hold_Weapon	Sundry_Stack, Goods_Guard, Goods_Forget	Head_Count, Cross_Line

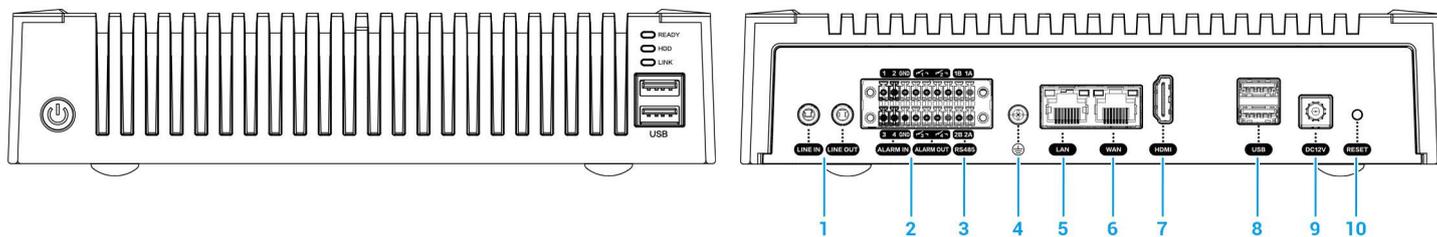
### Note:

- ① One AI Box supports up to 8 algorithm pockets for stacked use at the same time.
- ② Each channel supports overlaying 4 different algorithm pockets, but does not support simultaneous deployment of "Face-Human & Recognition" and "Structure\_Analysis" algorithms. For example, if users choose channel 1 to open four algorithm pockets at the same time, Structure\_Analysis, Perimeter\_Alarm(with 4 sub-rules), Behavioral\_Alarm(with 4 sub-rules), and Headcount\_Alarm(with 2 sub-rules), and channel 2 to open the above four algorithm pockets at the same time, at which time the AI Box's computing power is full.



## Interfaces

BX108-A



- |                               |           |
|-------------------------------|-----------|
| 1. Audio input and output     | 6. WAN    |
| 2. Alarm input and output     | 7. HDMI   |
| 3. RS485                      | 8. USB    |
| 4. Grounding connection cable | 9. Power  |
| 5. LAN                        | 10. Reset |

## Device Connection Topology

