Intelligent Box MegCube-B4X series

MegCube is a high-performance, cost-effective AI analytics product series designed for edge computing applications. It features over 100 proprietary Megvii-developed algorithms and adopts an algorithm-defined hardware architecture, enabling flexible algorithm deployment and distribution. The hardware delivers up to 32 TOPS @INT4 computing power. Support work with pangu, hongtu platform, enables quick implementation of AI applications such as One Face Pass, integrated human/vehicle management, intelligent security.



MegCube-B4X

- MegCube-B4X04-311-(MI)-N0
- MegCube-B4X08-311-(MI)-N0
- MegCube-B4X16-311-(MI)-N0

Feature

◆ Rich Algorithm: Built-in face recognition and video structured analysis algorithms, expandable with industry-specific algorithm packages. Configurable on demand to flexibly adapt to various scenarios

◆ Intelligent Algorithm: multiple industry algorithms available for selection and on-demand deployment

◆ Algorithm auto-optimization: Supports filtering duplicate false alarms to improve algorithm accuracy.

◆ High Performance: 300,000-face mega database, Maximum capacity:16 channels of 2MP video streams OR 32 channels of capture devices.

◆ Open interface: Provides rich algorithm APIs based on WSAPI/WEBAPI protocols for flexible integration with your application platforms.

◆ Open Resource: Offers containerized deployment capability to host your lightweight applications on the device.

◆ Reuse device:: Supports GA/T 1400, RTSP, GB/T 28181 standard protocols for easy intelligent upgrade of existing camera systems.

◆ Easy deployment: Supports desktop placement and wall mounting, simple installation, plug-and-play operation

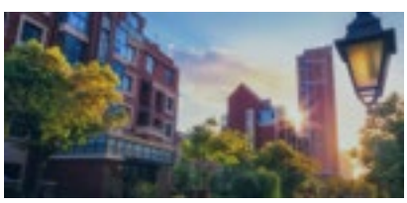
Application



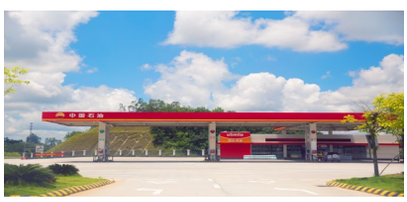
Commercial Building



Smart Campus



Smart Community



Gas Station



Smart City



Smart Construction

Parameter

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System Parameter		
Model	MegCube-B4X04-311-N0	MegCube-B4X08/16-311-N0
CPU	High-performance embedded microprocessor AX630A （4core Cortex A53 1.3G）	
NPU	32Tops@INT4 Supports mixed precision	
Codec Capabilities	- H.264/H.265 decoder: 16-channel 1080P (1920×1080) @25fps hardware decoding - JPEG decoding: 3840×2160 @80fps - Max encoding: 3840×2160 @60fps - H.264/H.265 multi-stream real-time encoding: 3840×2160 @30fps + 1080p @30fps ×3 - JPEG capture: 3840×2160 @80fps	
Memory	4GB DDR4	8GB DDR4
EMMC	16GB	32GB
Built-in SDD	1T SDD (only for –'MI' model)	1T SDD(only for –'MI' model)
Operating System	Embedded linux	
Access Capabilities		
Video Stream input	H.264/H.265	
Video Resolution	1920 x 1080（2MP）、2560 x 1440（4MP）、3840 x 2160（8MP） - Max input: 4 channels @8MP, 8 channels @4MP, 16 channels @2MP	
Video Decoding	Supports up to 4/8/16 channels of 1080P video streams	
Face Database	100,000	300,000
Event Record	10,000 capture, 10,000 recognition	50,000 capture, 10,000 recognition
Preloaded Algorithms		
Face Recognition	Capture, comparison, stranger detection	
Structure	Face, human body, motor vehicles, non-motor vehicles, and license plate capture, with face-person binding and person-non-motor vehicle binding. Supports human attribute analysis including upper/lower garment colors, styles, backpack status, and safety helmet detection. Supports motor vehicle classification (type, color, brand, travel direction) and non-motor vehicle categorization.	
Expandable Algorithms（Flexible Options）		
Perimeter Alert	No Parking Violation/Unauthorized Vehicle Departure/Loitering/Fence climbing/Intrusion/Boundary violation/Climbing	
Behavior	Running/Falling Down/Smoking/Phone Call Detection/Mobile Phone Usage/Sleeping on Duty/Off duty/ Overstaffing/ Understaffing/Crowd Gathering/ Scuffle/Weapon Detection/ Solitary Person Detection	
Goods detection	Debris Accumulation/Abandoned Object/Unattended Item Monitoring/New Debris Detection, Video Occlusion Detection	
People Counting	Regional people count/ enter-exit people count	
Clear Kitchen	Rodent Detection/ Uncovered Trash Bin Detection/ Ununiformed Chef Detection/ Uncapped Chef Detection/ Unmasked Personnel Detection/ Ungloved Hand Detection/ Unattended Open Flame Detection	
Fire	Smoke/ Fire / Firefighting Equipment Detection	
Work Safety	No Safety Helmet/ No Work Uniform/ No Safety Harness/ No Reflective Vest/ Flame/ Smoke/ Firefighting Equipment/ Liquid Leakage/ No Face Mask/ Dump trucks not sprayed/Bare soil uncovered/exposed skin	
Smart Community	Flame Detection/Smoke Detection/Firefighting Equipment Inspection/Overflowing Garbage/Exposed Trash/ Falling Object Detection	
Smart City Management	Outside stores/Traveling vendors/Road occupation operations/Debris accumulation/Accumulation of debris/Exposed garbage/Outdoor advertising/Road water accumulation/Debris Vehicle identification/Dump truck tarpaulin not covered	
Gas Station	Flame detection/Smoke detection/Fire protection facility detection/Static wire alarm/Oil unloading pipe detection/Oil pipe breakage/Engine side cover opening/Oil leakage/Oil Tanker Detection	

Interface Parameters	
Network Ports	2 × 100M/1000M adaptive Ethernet (RJ45) - Network LEDs: Green (stable connection), Yellow (data transmission)
Alarm input	2
Alarm output	2
Audio Output	1
Audio Input	1
Rear USB Ports	1*USB2.0，1*USB3.0
RS485	1
RS232	1
Reset button	1
Run Indicator（RUN）	Bi-color (Red+Green): Red (abnormal), Green (normal)
Environmental Requirements	
Operating Temperature	-20°C to +60°C
Storage Temperature	-10°C to +60°C
Humidity	10% to 90% RH (non-condensing)
Other	
Power Supply	DC12V±10%，2A
Dimensions (L×W×H)	179*150*42（mm）
Unit Weight	0.8KG
Package Weight	1KG