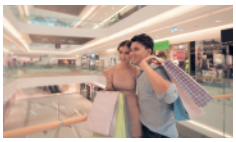
EB5 Edge AI Box

EB5 Edge AI Box is a high-performance AI edge computing device with support for 5G and Wi-Fi 6. It adopts an industrial-grade fanless design and is deeply optimized at the operating system level to maximize product performance. Embedded with the built-in edge component OSware.Edge, it provides customers with device management, video management, AI algorithm configuration, application upgrades, edge-cloud collaboration, customization and multi-cloud connectivity. EB5 delivers superior 15 TOPS of AI performance and up to 24 channels full HD video processing, which can be widely used in smart retail, smart buildings, smart factories, smart transportation and many other edge AI application scenarios.

Application Scenarios


Smart Retail


Smart Facories


Smart Building


Smart Traffic


Smart Grid

Product Features

Premium performance with super high AI computing power

For intelligent edge computing, EB5 provides 15 TOPS super high AI computing power and supports up to 24 channels of 1080P HD video decoding, which is suitable for multi-channel video streaming AI analysis scenarios such as buildings, communities, schools, factories, and retail.

Deeply optimized streaming media AI analysis service

With built-in deeply optimized streaming media AI analysis service TurboX Stream, EB5 features image zero copy, hardware acceleration, batch reasoning, algorithm sharing, and supports standard libraries such as SPL, ALG, AND MBC, making AI algorithm deployment, verification, and delivery easy and fast.

One-site management through End-edge-cloud

With the intelligent edge device and application management platform IoT Harbor, the remote monitoring and analysis of multiple EB5 operating status and resource usage can be realized to facilitate user operation and management. IoT Harbor provides RESTful APIs to support multi-cloud connection.

Flexible expansion of rich interfaces

EB5 supports 5G, Wi-Fi 6, adaptive Gigabit Ethernet connections, RS232, RS485, CAN, USB3.0 and other industrial communication interfaces. It also supports SD cards, M.2 SSD/SATA HDD expansion, covering different intelligent edge application scenarios.

Industrial design for harsh conditions

Robust industrial level quality, fanless design, ultra-low power consumption, flexible deployment, plug and play, safe and reliable, easy to cope with any complex environment challenges.

Visual configuration of AI algorithms and applications

EB5 provides a visual edge management system for device management, video previewing, algorithm configuration, alarm center, and application upgrade. It also provides RESTful APIs and supports interconnection with third-party systems.

Specifications

PlatForm	OS	Linux/Android 10
	SoC	CPU: 8 cores CPU, CPU clock speed up to 2.84GHz. Artificial Intelligence (AI) Engine 15TOPS.
		Video Processor: video decoding 8k@60FPS, video encoding 8k@30FPS
System Memory	RAM	8GB, LPDDR5
Display	Output	2 x HDMI out, 1080p@60fps
Storage	Flash	128GB UFS3.0 on board
	Expansion	SD Card, M.2 M-key CON for SSD support
I/O	USB	4 x USB 3.0 Type A , 1x USB3.1 Type C(OTG)
	Micro SD	1 x Micro SD slot
	SIM	1 x NanoSIM card slot
	Ethernet	2 x Gigabit ethernet(10/100M/1000M)
	COM Port	2 x RS232, 2x RS485
	CAN	2 x CAN bus
	DI/DO	8 DI/DO(4 DI, 4 DO)
Wireless Connectivity	Wi-Fi	802.11a/b/g/n/ac/ax, 2x2 MIMO
	5G	M.2 B-key CONN for 5G module support, 5G module is optional configuration based on customer order
	Antenna	6 x Antenna connector, 2x for WIFI, 4x for 5G(optional)
Audio	Audio	1 x MIC, 1x Earphone
Debug	Debug Port	1 x Micro USB(for debug)
Input&Indicators	Buttons	Power key, Reset key
	Leds	Power status, WIFI status, 5G Status
Others	RTC Battery	CR2032 RTC Battery
Power	DC Input	Input DC range support from 12V to 24V
Mechanical	Dimension	200mm x 235.5mm x 44mm
	Weight	2200g
	Mount	Wall Mount
Environment	Operation Temperature	-10~50°C
	Storage Temperature	-20~70°C
	Storage Humidity	10%~90%, non-condensing
	Anti-Vibration	0.5Grms @ 5 ~ 500 Hz, random
Certification		CE NB, FCC, JATE/Telec, RoHS/Reach/WEEE