

AE-3588NBT | Edge AI computer | 6 TOPS| BITECH



Features:

- Fanless industrial AI edge computer for harsh environments
- Built-in NPU with expandable AI computing power up to 36 TOPS
- Native Android OS with open root access for deep customization
- Supports AI frameworks: TensorFlow, ONNX, Caffe, MXNet, Darknet
- Rich industrial I/O with isolated GPIO, CAN Bus, RS232/RS485
- Designed for 7×24 continuous operation



SKU		AE-3588NBT
Product type		
Product color		Extruded Aluminum with Heavy Duty Metal
Operating system		Android 12/ Debian 11/Ubuntu20.04 etc
HARDWARE		
CPU		RK3588, Octa core, 4x A76, 4x A55, Up to 2.4GHz
Graphic card		Mali-G610, Support OpenGL ES3.2, OpenGL2.2, 450 GFLOPS
NPU		• Built-in Neural Processing Unit (NPU) for high-efficiency AI inference • Supports multiple data precisions: IN4 / IN8 / INT16 / FP16 • Onboard AI performance up to 6.0 TOPS • Compatible with mainstream AI frameworks including Caffe, MXNet, TensorFlow, TensorFlow Lite, ONNX, Darknet • Provides AI development tools for fast model conversion and deployment
Memory		On board LPDDR4 4GB (8GB/16GB/32GB Option)
Storage		On board 128GB EMCC (256GB for option) Support SATA HDD
Network	Wi-Fi	Support Dual wifi 2.4G&5G, WIFI 6 option
	Bluetooth	BT5.2
	4G	Built-in 4G Module, Mini PCIe port Support LTE-TDD/LTE-FDD/TD-SCDMA/EDGE/GPRS/GSM option
	5G	Built-in 5G Module, Mini PCIe port Support 5G-NR-NSA/5G-NR-SA/LTE-TDD/LTE-FDD/LAA/WCDMA/MIMO/GNSS option
	Ethernet	2x LAN 10/100/1000 Mbps
Camera		1x MIPI Camera, support max 4800w
Audio		1x Speaker (2x 18W 4R), 1x Microphone, 1x Earphone
INTERFACE		
Power Button		1x Power on/off
DC		1x DC12V/5A 4.5*2.1mm or 9-36 V
Phonex terminal		1x 12PIN Phonex terminal (Power/232*1/485*1/CAN*1/GPIO*3)

I/O ports	HDMI	1x HDMI 2.1, 8K 60Hz Output 1x HDMI 2.0, 4K 60Hz Input
	USB	2x 5Gbps USB 3.2 Gen1, Type A
		2x 480Mbps USB2.0, Type A
	GPIO	4-Bit GPIO
	COM	4× RS232, 2× RS485/RS232
	CAN Bus	1× CAN Bus
	Ethernet	2x LAN 10/100/1000 Mbps
	Audio	1x 3.5mm Combo audio jack
	SIM	1x Sim Slot, Support 4G/5G LTE, Nano SIM
	TF	1x TF card slot
Systems support		
Android systems		• Native Android operating system with open root access, supporting customized product development • Enables system-level application development and deep functional customization • Supports real-time remote monitoring with automatic system recovery, designed for 24/7 unattended operation • Supports OTA remote system and application upgrades • Supports WiFi Display for wireless screen casting
Watchdog		• Software watchdog support to ensure long-term system stability
RTC		• Built-in real-time clock (RTC) with backup battery to maintain accurate system time during power loss • Integrated super capacitor design for improved power-off protection and system reliability • Supports scheduled power on/off for unattended operation and centralized device management
Compatibility		
Operation Temperature		• -10°C to +60°C
Storage Temperature		• -20°C to +70°C
Relative Humidity		• 10-80 % RH @ 70°C (Non-condensing)
Shock		15G, 11ms
Vibration		5 - 500 Hz/1 Grms
EMI		• CE certification
ESD		• Terminal ±4KV, Air ±8KV
Dimensions And Weight		
Dimensions (W x D x H)		190*126*32mm
Weight		1.3 kg
Mounting		Rack mount or Desk
Power adapter		Input: 100-240V 50/60HZ, Output: DC DIAMETER ϕ 5.5mm, 12V/5A
Physical Design		• Fanless Design • Cableless Design • Jumper-less Design • Unibody Design
Lifetime/Warranty/After sales service (For more details, Pls check our after-sales service policy document)		
Lifetime		5-7 years lifecycle for mainboard, modules, shells, ICs.
Technical support		lifetime for OS support, BIOS/Firmware updates, CAN/RS485/PLC debugging,
Warranty		24-Month for completely unit
* We deliver audited consistency with AQL inspection, 100% 6-hour power-on burn-in under load, full SN traceability		

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BITECH provides scalable hardware platform solutions with optional SDK and OS customization for fast system integration