

AP-AR1DS03 | Flagship 6.0 TOPS RK3588 Edge AI Panel PC



Features:

- RK3588, Octa Core 4*A76, 4*A55, up to 2.4GHz
- IP65 front Panel bezel, 10-Points touchscreen
- Wide voltage: 9–36V DC input, Phoenix terminal, remote power on/off;
- Fanless, cable-less, jumper-less, and unibody aluminum alloy design with multi-mount (wall, side, VESA).
- Support **Ubuntu**, Embedded software



SKU		AP-AR1DS03
Product type		Industry PANEL PCs (Fanless, IP65 rated front bezel)
Product color		Extruded Aluminum with Heavy Duty Metal
Operating system		Android 12 / Ubuntu 22.04 / Debian 11
PROCESSOR/RAM/STORAGE		
Processor Name		RK3588, Octa core, 4x A76, 4x A55, Up to 2.4GHz
GPU		Mali-G610, Support OpenGL ES3.2, OpenGL2.2, 450 GFLOPS Support OpenGL ES3.2, OpenVG1.1M, OpenCL2.2, 40GFLOPS
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
Display Type		10.1" FHD 1920*1080 or HD 1280*800 @ 60 Hz, 16: 10, Brightness: 400-1000 nits
Touchscreen		1 × I²C interface Supports multi-point resistive touch Supports multi-point capacitive touch USB touch interface Supports multi-point infrared touch Supports multi-point capacitive touch Supports multi-point nano-film touch Supports multi-point SAW (Surface Acoustic Wave) touch
RAM		On board LPDDR4 4GB (8GB/16GB /32GB option)
Storage	EMCC	EMCC 32GB (64GB/128GB/256GB/512GB option)
	TF	TF, SATA HDD
Graphics		
Graphic card		ARM G52 MC3
Display		1x LVDS/eDP/MIPI-DSI
CONNECTIVITY AND COMMUNICATIONS		

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
INTERFACE		
I/O ports	USB	2x USB2.0
	Display	1x HDMI 2.0 in, 4K@60Hz, 1x HDMI 2.1 out, 8K@60Hz
	COM	2x RS232, 2x RS232/RS485
	LAN	Intergrated 2x LAN 10/100/1000
	GPIO	1x 8 bit GPIO
	SIM	1x SIM Slot, support Mini PCIe 4G/5G LTE, support e SIM card
Expension		1x UART, 1x I ² C, 1x CAN
Power		
Power input		1x DC 9-36 v, ϕ 5.5x 2.5 mm
		1x Phonex termial
		1x Remote Power On/Off, 2-pin Terminal Block
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		• Built-in system software watchdog
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
Environment		
Operation Temperature		• -10°C to +60°C * PassMark BurnInTest: 100% CPU, 2D/3D Graphics (without thermal throttling) * With extended temperature peripherals; Ambient with air flow * According to IE61000-3-2, IE61000-3-3
Storage Temerature		-20°C to +70°C
Relatiove Humidity		• 95% RH @ 70°C (Non-condensing)
Shock		15G, 11ms
Vibration		5 - 500 Hz/1 Grms
EMC		• CE, UKCA, FCC, ICES-003 Class A • EN61000-6-4, EN61000-6-2 (24VDC Input Only)
EMI		• CISPR 32 Conducted & Radiated: Class A • EN/BS EN 55032 Conducted & Radiated: Class A • EN/BS EN IEC 61000-3-2 Harmonic current emissions: Class A • EN/BS EN61000-3-3 Voltage fluctuations & flicker • FCC 47 CFR Part 15B, ICES-003 Conducted & Radiated: Class A

EMS	• EN/IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV
	• EN/IEC 61000-4-3 RS: 80 MHz to 1000 MHz: 10 V/m
	• EN/IEC 61000-4-4 EFT: AC Power: 2 kV; DC Power: 1 kV; Signal: 1 kV
	• EN/IEC 61000-4-5 Surges: AC Power: 2 kV; Signal: 1 kV
	• EN/IEC 61000-4-6 CS: 10V
	(**Compliant with the standard when utilizing shielded ethernet cable.)
	• EN/IEC 61000-4-8 PFMF: 50 Hz, 30A/m
	• EN/IEC 61000-4-11 Voltage Dips & Voltage Interruptions: 1 cycles at 60 Hz
Dimensions And Weight	
Dimensions (W x D x H)	210x 150x 70 mm
Weight	1.8 kg
Mounting	• Wall / VESA Mount / Open frame
Physical Design	• Fanless Design • Cableless Design • Jumper-less Design • Unibody Design

Shenzhen Bitech Co., Ltd | sales@bitechipc.com | whatsapp: +86 13538164607

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