



## Features

- IBASE iCONTROL intelligent energy-saving & Observer Hardware remote monitoring technologies
- AMD Ryzen™ 3000 Series Processor with Vega Graphics Processors
- 2x DDR4 2400MHz SO-DIMM, Max. 64GB
- 1x DisplayPort for 2nd Gen AMD APU
- 1x PCI-E x16 (default) or 2x PCI-E x8 (optional with riser card)
- 6x USB3.1, 2x COM, 1x Gigabit LAN
- 1x M.2 (E-key), 1x Mini PCI-E socket (full-size), 1x SIM slot

1 CPU Modules

2 Disk-Size SBCs

3 Motherboards

4 CPU cards

## Specifications

CPU Socket	AMD AM4
CPU	AMD Ryzen™ Embedded 3000 Series on board
PCH	AMD X470
Memory Types	2x DDR4 SO-DIMM memory slots; Max. 64GB
BIOS	AMI
Watchdog Timer	256 levels
H/W Monitor	YES
Storage Device Interface	N/A
Expansion Slots	1x PCI-E (x16) slot supports single at x16 (PCI-E2) for AM4 Pure CPU series 1x PCI-E (x16) slot supports single at x8 (PCI-E2) for AM4 APU series
Mini Type Slots	1x Mini PCI-E (full-sized) 1x M.2 socket (Key-E) 1x SIM card slot
Graphics Controller	AMD Radeon™ Vega GPU integrated
Video Output	1x DisplayPort (1.2) for AM4 APU series
Ethernet	1x Realtek RTL8111H
I/O Chip	Fintek F81439
Serial Port	COM #1 (RS232/422/485) (jumper-less selection) COM #2~COM #4 (RS232 only)
USB 2.0	N/A
USB 3.0	6x USB 3.1 Gen1
Serial ATA	3x SATA III
Audio	built-in HD audio + Realtek ALC662 codec
TPM	N/A
Others	2x 5-pin-header x1 for Digital I/O(5-in/5-out), 1x COM port header / DF-11 2x5 box header x2 for COM3/4 (RS232 only) 1x CPU Fan Connector (4-pin) 2x Chassis fan connectors (4-pin) (Smart fan Speed Control) 1x ATX standard 24-pin type & 4-pin type (+12V only) 1x USB 2.0 Headers (Support 2 USB 2.0 ports) 2-pin connector for RTC battery iSMART
Dimensions (L x W)	170mm x 170mm (6.7" x 6.7")

Power Consumption	AMD Ryzen™ Embedded AM4 CPU/APU 3.0GHz w/ 2x 8GB DDR4-2400 +12V: 2.55A
Operating Temperature	0°C~60°C (32°F~140°F)
Storage Temperature	-20°C~80°C (-4°F~176°F)
Relative Humidity	90% (non-condensing @60°C)

## Ordering Information

MBD301	AMD Ryzen™ Desktop (X470) Mini-ITX motherboard, with 6x USB3.1, 2x COMs, 1x Gigabit LAN, iSMART, +12V DC-in
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## Dimensions and Drawing

