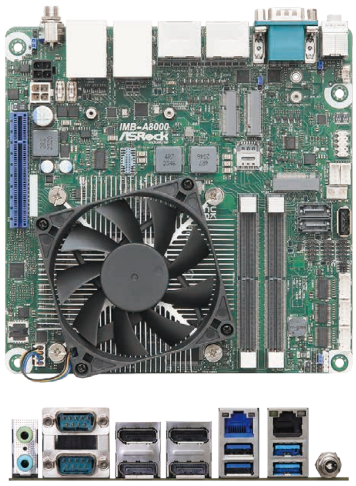
ASRock Industrial

IMB-A8000

Mini-ITX Motherboard



KEY FEATURES

- AMD Ryzen™ Embedded 8000 Series processors
- 2 x 262-pin ECC/non-ECC SO-DIMM DDR5 5600 MHz, up to 96GB (48GB per DIMM)
- 1 x PCIe x8 (Gen4), 1 x USB 3.2 Gen2, 3 x USB 3.2 Gen1, 4 x USB 2.0, 1 x M.2 Key B, 1 x M.2 Key M, 1 x M.2 Key E, 5 x COM, 2 x SATA3
- 1 x Realtek Gigabit LAN, 1 x Realtek 2.5 Gigabit LAN
- Supports Quad display, 4 x DP 1.4a
- 12~28V DC-In (Lockable DC Jack)

SPECIFICATIONS

Form Factor

Dimensions	Mini-ITX (6.7-in x 6.7-in x 1.6-in, 17.0 cm x 17.0 cm x 4.1 cm)

Processor System

CPU	AMD Ryzen™ Embedded 8000 SoC processors -IMB-A8000P (PRO 8845HS, 8/16, 3.8GHz, 35-54W) -IMB-A8000S (PRO 8645HS, 6/12, 4.3GHz, 35-54W) -IMB-A8000M (PRO 8840U, 8/16, 3.3GHz, 15-30W) -IMB-A8000V (PRO 8640U, 6/12, 3.5GHz, 15-30W)
BIOS	AMI SPI 256 Mbit

Memory

Technology	Dual Channel ECC/non-ECC DDR5 5600 MHz
Capacity	96 GB (48 GB per DIMM)
Socket	2 x 262-pin SO-DIMM

Graphics

Controller	AMD RDNA™ 3
DisplayPort	DisplayPort 1.4a, DP++ Max resolution up to 4096x2160@60Hz
MultiDisplay	Quad Display

Expansion Slot

PCIe	1 x PCIe x8 (Gen4)
M.2	1 x M.2 (Key E, 2230) with PCIe Gen3 x1, USB 2.0 for Wireless 1 x M.2 (Key B, 3042/3052) with PCIe Gen3 x1, USB 3.0, USB 2.0 and SIM Socket for 4G/5G
SIM Socket	1 x Socket connected to M.2 Key B

Audio

Interface	Realtek ALC897, High Definition Audio. Line-in, Line-out

Ethernet

Controller/ Speed	LAN1: Realtek® RTL8125BG with 10/100/1000/2500 Mbps LAN2: Realtek® RTL8111H with 10/100/1000 Mbps
Connector	2 x RJ-45

Rear I/O

DisplayPort	4 x DP 1.4a
Ethernet	1 x 1 Gigabit LAN 1 x 2.5 Gigabit LAN
USB	1 x USB 3.2 Gen2 3 x USB 3.2 Gen1
Audio	2 (Line-in, Line-out)
COM	COM1, COM2 (RS-232/422/485)

Internal Connector

USB	4 x USB 2.0 (2 x 2.54 pitch header, 1 x USB 2.0 Type-A vertical con)
COM	COM3, COM4, COM5 (RS-232)
SATA PWR Output	1
GPU Card PWR Input	1

Storage

M.2	1 x M.2 (Key M, 2242/2280) with PCIe Gen4 x4 for SSD
SATA	2 x SATA3 (6Gb/s)

Security

TPM	AMD FW TPM

Watchdog Timer

Output	From Super I/O to drag RESETCON#
Interval	256 Segments, 0, 1, 2, ...255sec

Power Requirements

Input PWR	12~28V DC-In with 4-pin wafer PWR cable or DC Jack (Screw type)
Power On	AT/ATX Supported - AT : Directly PWR on as power input ready - ATX : Press button to PWR on after power input ready

Environment

Operating Temp	-20°C ~ 70°C
Storage Temp	-40°C ~ 85°C
Operating Humidity	5% ~ 90%
Storage Humidity	5% ~ 90%

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