

iEPF-10000S Series

Expandable Edge AIoT Platform

Preliminary



KEY FEATURES

- ASRock Industrial ATX Industrial Motherboard IMB-1714 or IMB-X1714 inside
- Intel® 14th/13th Core™ Processor, up to 125W
- 4 x 288-pin Long-DIMM DDR5, up to 192GB (48GB per DIMM)
- PNY GEFORCE RTX® 4090 24GB option. NVIDIA Ada Lovelace Streaming Multiprocessors, 4th Generation Tensor Cores, and 3rd Generation RT Cores
- ASRock Intel Arc A770 Challenger SE 16GB OC option. Intel® Xe HPG Microarchitecture and Intel® Xe Super Sampling (XeSS) support
- ATX Power Supply 850W or 1000W option, Complies with ATX12V V3.0

SPECIFICATIONS

Mechanical

Dimensions (D x W x H)	597mm (D) x 206mm (W) x 455.1mm (H)
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Processor System

CPU	Intel® 14th/13th Core™ Processor, up to 125W (Default Intel® Core™ i9-13900 Processor)
Chipset	Intel® Q670 (IMB-1714) or Intel® W680 (IMB-X1714) Default is IMB-1714
Socket	LGA1700
BIOS	AMI SPI 256 Mbit

Memory

Technology	Dual Channel DDR5 4400/5600 MHz ² <small>*Actual memory frequency depends on the CPU types and DRAM modules, for more information refer to https://www.asrockind.com/en-gb/index.php?route=newsblog/faq&faq_id=90 technical FAQ <small>**For DDR5 5600 support refer to memory support list ECC feature only supported by IMB-X1714</small></small>
Capacity	192GB (48GB per DIMM)
Socket	4 x 288-pin Long-DIMM

CPU Graphics

Controller	Intel® UHD Graphics
HDMI	HDMI 2.0b Max resolution up to 4096x2160@60Hz
DisplayPort	DisplayPort 1.4a, DP++ Max resolution up to 4096x2160@60Hz
VGA	Max resolution up to 1920 x 1200@60Hz
MultiDisplay	Triple Display

Audio

Interface	Realtek ALC897, High Definition Audio. Line-in, Line-out, Mic-in (Rear Side)
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MB Expansion Slot

PCIe	2 x PCIe Gen5 Slots (PCIe1/PCIe4; single at x16 (PCIe1); dual at x8 (PCIe1) / x8 (PCIe4)) 2 x PCIe x4 (Gen4), 3 x PCIe x1 (Gen3)
M.2	1 x M.2 (Key E, 2230) with PCIe x1, USB 2.0 and CNVi for Wireless 1 x M.2 (Key B, 3042/3052) with PCIe x1, USB3.2 Gen1, USB 2.0 and SIM for 4G/5G
SIM Socket	1 x SIM socket connected to M.2 Key B

Ethernet

Controller/ Speed	LAN1: Intel® I226V with 10/100/1000/2500 Mbps, supports PoE (IEEE 802.3at). LAN2: Intel® I226LM with 10/100/1000/2500 Mbps, supports vPro LAN3: Intel® I226V with 10/100/1000/2500 Mbps
Connector	3 x RJ-45

MB Rear I/O

HDMI	1 x HDMI 2.0b
DisplayPort	1 x DP 1.4a++
VGA	1
Ethernet	3 x 2.5 Gigabit LAN
USB	5 x USB 3.2 Gen2 1 x USB 3.2 Gen2x2 (Type-C, 5V/3A)
Audio	3 (Mic-in, Line-in, Line-out)
COM	COM1, COM2 (RS-232/422/485)

MB Internal Connector

USB	2 x USB 3.2 Gen1 (Chassis front side), 2 x USB 2.0 Type-A internal vertical connector, 2 x USB 2.0 (1 x 2.54 pitch header)
COM	COM3, COM4, COM5, COM6 (RS-232)
Parallel	1
GPIO	8 x GPI, 8 x GPO (shared with LPT header)
PS2	1 x PS2 header
Thunderbolt header	1

Storage

M.2	1 x M.2 2280 (Key M) PCIe Gen4 x4 SSD (Default 2TB) 1 x M.2 2280 (Key M) PCIe Gen3 x4 SSD (IMB-X1714 only)
SATAIII	2.5"/3.5" HDD bays x 5
RAID	Intel® VMD RAID 0/1/5/10 <small>**supported by identical interface (PCIe or SATA) PCIe interface: M.2 Key B + M.2 Key M x1 or x2 (IMB-X1714 only) SATA interface: SATA port</small>

Security

TPM	TPM 2.0 onboard IC
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Power Requirements

Power Supply Unit	Rated Output Power 850W(Default), Input Voltage 100-240V, Input Current 11-5.5A, Input Frequency 50-60Hz Rated Output Power 1000W, Input Voltage 100-240V, Input Current 12-6A, Input Frequency 50-60Hz
Power On	AT/ATX Support -AT: Directly PWR on as power input ready -ATX: Press button to PWR on after power input ready

Discrete Graphic Card Option

PNY GEFORCE RTX® 4090 24GB	NVIDIA® CUDA Cores 16384 Clock Speed 2235 MHz Boost Speed 2520 MHz Memory Speed 21 Gbps Memory Size 24GB GDDR6X Memory Interface 384-bit Memory Bandwidth 1008 Gbps Outputs DisplayPort 1.4 (x3), HDMI 2.1 Multi-Screen 4 Resolution 7680 x 4320 @120Hz (Digital) Bus Type PCI-Express 4.0 x16
ASRock Intel Arc A770 Challenger SE 16GB OC (A770 CL SE 16GO) (One pcs or two pcs option)	Engine Clock 2150 MHz Memory 16GB GDDR6 Memory Clock 16 Gbps Memory Interface 256-bit Outputs 3x DisplayPort 2.0 up to UHBR 10 ⁺ , 1 x HDMI™ 2.0b <small>*Designed for DP 2.0, certification pending VESA CTS Release</small> Multi-Screen 4 Resolution 7680 x 4320 (Digital) Bus Type PCI-Express 4.0 x16

Assured Systems

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