

Avalue Launches EMX-PTLP Thin Mini-ITX Motherboard, Designed for Advanced AI and Industrial Automation

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Technology Inc. (TPEX: 3479.TWO), a provider specializing in industrial computer solutions, provides innovative, value-based motherboards that empower industries to enhance operational efficiency. In today's competitive landscape, choosing the right industrial motherboard can significantly boost productivity, streamline operations, and enable faster, more efficient outcomes across various industries. Avalue continues to lead the way in providing cutting-edge motherboard solutions by introducing Intel Panther Lake H Core™ Ultra (Series 3) H Series Processors motherboard.



Avalue's [EMX-PTLP](#) supports up to 64GB of DDR5 7200MHz SoDIMM/CSoDIMM max. memory, delivering a significant leap in data processing speeds. Optimized for the burgeoning AI market, the board delivers up to 180 TOPS of AI performance. With the integration of PCIe 5.0, users benefit from doubled bandwidth and ultra-low latency, providing the essential foundation for AI acceleration and high-performance computing (HPC) in embedded applications.

EMX-PTLP is designed for maximum flexibility, the EMX-PTLP offers a rich array of expansion options:

- **Expansion Slots:** A dedicated PCIe Gen5 slot allows for high-speed system scaling.
- **Wireless & Connectivity:** Complete Key-B/E/M interfaces support M.2 modules, complemented by a SIM card slot or SIM FPC interface for seamless remote device management.
- **Data Security:** For storage-intensive tasks, the board supports RAID 0/1 configurations via dual M.2 SSDs, ensuring high-speed data access and enterprise-grade redundancy even when using

low-power processors.

The EMX-PTLP is a powerful for visual applications, supporting up to four simultaneous displays via HDMI, DisplayPort, and USB4 Type-C. It offers resolutions up to 8K and maintains legacy compatibility through eDP and LVDS interfaces, making it adaptable to nearly any industrial display scenario.

To ensure seamless integration into factory ecosystems, the board features:

- Networking: Dual Intel® LAN (2.5G + 1G) for reliable AOI, DCS, and SCARA robot synchronization.
- I/O Richness: Two USB4 (Type-C) ports, four USB 3.2 ports, and five RS-232 serial ports (including two RS-422/485).
- Industrial Control: 16-bit GPIO and TPM 2.0 for enterprise security.
- Efficiency: A wide 12–24V DC input and an onboard 6W audio amplifier reduce the need for external power converters and peripheral hardware, lowering overall system costs.

EMX-PTLP stands out in the compact PC market as a stable, high-compatibility solution. It is purpose-built to withstand complex operating conditions and harsh environments, offering an ideal balance of reliability, long-term availability, and cost-performance for the next generation of industrial automation, with mass production planned for Q3 2026 to support next-generation AI and industrial automation deployments.

Thin Mini ITX EMX-PTLP main features:

Onboard Intel® Core™ Ultra 5 322, 325, Intel® Core™ Ultra 7 355, 356H, 358H series BGA Processors

2 x DDR5 SoDIMM/CSoDIMM (up to 7200MHz / 64GB, non ECC only)

1 x HDMI, 3 x DP (2 from USB Type C), 1 x LVDS or eDP (4 independent displays max.)

1 x Intel® I226LM 2.5G, 1 x Intel® I210AT Gigabit Ethernet.

Realtek ALC888S, TI TPA3113D2PWP Stereo Class-D 6W x 2 Audio Amplifier

1 x M.2 Type B 2242/3042/3052, 1 x M.2 Key E 2230, 2 x M.2 Key M 2280

1 x PCIe x8 slot
2 x USB4 TYPE-C, 4 x USB3.2, 3 x USB 2.0 by pin header

For more information, visit Avalue Website, or contact us using our online [contact form](#).

About Avalue Technology

Avalue Technology was founded in 2000 and is a provider specializing in industrial computer solutions. Avalue Technology has a proven track record of success in the industrial control industry, and we leverage that experience to provide reliable and trustworthy customized products and services. Our primary products are embedded and industrial computer solutions, with a focus on smart healthcare, smart manufacturing, smart transportation, smart retail, and Internet of Things (IoT) applications. Avalue is committed to the sustainable growth of our company. We are guided by the business philosophy of "stability, innovation, diligence, and enthusiasm, and enjoyment of work and life." We are dedicated to leveraging the power of intelligence and sustainability to disrupt the future of digital blueprints and to drive positive, long-term change in the smart industry.

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