

EN 50155 and IEC 60945 verified Embedded Computers with 9th Generation Intel CPUs

The PIP4x Product Family is fully EN 50155 Class Tx and IEC 60945 verified from an external Test Lab. The product is a rugged, highly flexible, and fanless embedded computer solution, using the 9th Generation Intel CPUs.

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The PIP4x Family products have specifically been developed for the use in rugged applications such as Railway, Maritime, or Defense. MPL uses the latest low power consumption and long-term available CPUs out of the Intel embedded road-map.

The PIP4x Family is completely designed from scratch by MPL engineers to insure highest reliability. The design is based on MPL's 36 years of experience in the field of low power engineering. The PIP form factor has been introduced more than 25 years ago and has since same size and conception. The real advantage for the customers is the fact, that the products are designed for long-term availability. To ensure this, MPL designs and manufactures the products 100% in Switzerland. All components are stocked at MPL AG Switzerland to guarantee that the products can be supported and repaired, even years after EOL for a product.



The members of the PIP4x Family start with Intel Xeon and offer i7, i3 and Celeron CPUs.

The PIP4x comes with highlights like:

- Up to **64GB** registered **DDR4** memory, some models with ECCDDR4
- 1x **m.2 Key-A** (USB2.0, PCIe 2x1, up to 3042 module size, WIFI, ...)
- 1x **m.2 Key-B** (USB3.0, up to 3042 module size, LTE, ...)
- 1x **m.2 Key-M** (SATA or PCIe 4x1, up to 2280 module size)
- 2x mPCIe/mSATA socket with SATA 3.0 & USB 2.0
- 2x SATA 3.0 / 1x NVMe or SATA SSD
- Up to 7 LAN ports
- 4x RS232 or RS422/485 (optional)
- Expansion capabilities for GPGPU on MXM, PCIe (eg. RAID, AI, high end graphics or XMC modules)

The PIP4x Family is available in the MPL standard housing with DIN-Rail or flange mounting. Further, enclosures with IP67 or as 19" rack version are available too. The open frame version (CPU board on cooling plate) is best suited for installation in existing cabinets and tight areas. For applications in a vibration environment, the solution can be supplied with M12. Customized versions are MPL's strength!

MPL's Railway Solutions are EN50155 certified and undergo environmental testing to ensure reliable performance under a variety of conditions. The PIP4x product family has been tested from -40°C to +85°C, called Tx in the EN 50155 Standard. It also includes the Railways Standard EMC and mechanical tests.

All MPL products are designed for long-term availability and the PIP4x Family will be available for at least 10 years. MPL's own component stock guarantees repairs for up to 20 years. Extended temperature ranges can be fulfilled and are tested in MPL's own climatic chambers according customer's request.

The PIP4x Family is 100% engineered & manufactured by MPL AG in Switzerland. Next to fulfilling EN50155 and IEC 60945 standards, the PIP4x meets or exceeds the most common standards. Particular references are: EN 55022, EN 55024, EN 61000, MIL-STD-461E, EN 60068, MIL-STD-810G, EN 60601, EN 60950, CE, IACS and E10.

For more specific information, please visit www.mpl.ch/t24g0.html or contact MPL AG directly.

About the Company

MPL AG is located in Switzerland and was founded in 1985. Since the beginning, MPL stands for robust designs, long-term availability, low power consumption, and fanless concepts. The products are designed from scratch to succeed in extended temperature and meeting the high demands of rugged environments.

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