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## The other Pentium-M Solution

Specifically designed for rugged environments and long term availability!

MPL AG designed a further product within their widely known PIP product family. The PIP products are different to the commonly known IPC which most are based on the "Intel Reference design". The differences include the PCB design & construction, the EMI/RFI protection that are on board and within the housing, the selection of components within the Embedded programs to reach a long term availability as well as features that are unique in this industry.

The new product, called PIP10, is available as from now on. It is based on the Pentium-M chip of the Embedded program of Intel that guarantees a long term availability. The CPU that is being used in the PIP 10 is the powerful Pentium M 738 (1.4GHz with 2MB internal L2 cache). This is currently the most powerful low voltage CPU out of the Embedded program.



A further special feature for a standard IPC is the fact that the PIP10 is available with 512MB memory soldered on board. Ideal in areas where vibration, temperature and high reliability are an issue. Additionally a socket is available where standard DDR RAM Modules up to 1GB can be installed.

The board incorporates 3 x FireWire Interfaces with 800Mbit/s (IEEE1394b), 3 x USB 2.0, GigaBit Ethernet, 4 x serial ports (you may choose from RS232, RS485, half & full duplex, fully isolated..), a 2D and 3D graphic engine with a DVI-I connector (dual panel support is possible) and for mass storage devices already new SATA interfaces as well as IDE ports. If desired an Audio module, CAN interface, Digital I/O or even a UPS can be equipped.

The PIP10 is extremely flexible. Basically any configuration you need can be achieved. Several housings are available and the PIP10 can be easily expanded over its internal expansion buses (PC/104, PC/104-Plus, PCI). The housings are specifically designed to offer the most compact solution. The standard housing comes

without any openings as the PIP10 requires even under full CPU, memory and HDD/Flash load no fan or heat-pipe cooling. The secret is the specific design technique we provide to the industry since 20 years.

The PCB of the PIP10 can also be installed in the "All-around-IP65" Panel solution from MPL. The Panel-PIP's are available with 6,5 " up to 19" LCD's with or without touch screen in aluminum or stainless steel housings. Some of the Panel solutions are also available in extended temperature.

The Thermal Design Power (TDP) of the PIP10 solution is done in such a way that it can be operated with max. CPU power at the rated temperature (0°C – 60°C ambient temperature without CPU derating). Also extended temperature PIP10 solutions are available from MPL.

The PIP10 can be powered with a single power supply between 8 - 28VDC (optionally up to 48VDC for mobile applications), there is no need for a costly multi voltage power supply.

The PIP10 is the right choice basically anywhere where a reliable and/or rugged computer is needed. The PIP10 can be supplied according to the customer requirements and needs. Also depopulated versions are available. Talk to us or a MPL distributor near you. The PIP10 currently is supplied to customers.

For more information about the fanless Pentium-M and the PIP Concept please contact us via Fax or email or consult our Home Page ([www.mpl.ch](http://www.mpl.ch)).