

Dättwil, Dezember 2006

Embedded PC withstands 100G

The test underlines the ruggedness and quality of MPL embedded PC solutions which are designed from scratch for rugged applications without compromises.

The tested Industrial PC (PIP10, Pentium M 1.4GHz) designed by MPL AG, is a fanless, compact, robust, and high quality Embedded Computer with a guaranteed long-term availability. The PIP Family, including the PIP10, has been designed specifically for the use in environments with vibrations and shocks.



The key for a successful and reliable product that will withstand vibrations and shocks, is a down to the component level tuned concept and therefore can be used reliable in railways, ships, and automotive applications. It includes the design and construction of the PCB, the housing, and the planing of the final assembly and mounting possibilities for the accessories (PMC & PC/104 Module, GPS...).

Most in the market available solutions use the reference design of Intel that has been done for commercial PCs. Needless to say that this is definitively not the right solution as it obviously does not offer the robustness required over time as the design target was different one. The special and compact design of the PIP offers clear advantages compared to other IPCs. A PIP comes with an on-board power supply (8 - 28VDC) as well as a full set of interfaces already on-board so no special internal cabling is required.

In shock & vibration environments, the housing plays a major role. It must be adjusted to the form factor of the PCB and must offer a good stability. A standard sheet metal housing, as available on the market, is not sufficient to those requirements and therefore not adequate.

Also of highly important in a vibration & shock tolerant system is to select the best connectors available on the market to prevent failures. Key is the contact pressure of the connector and the gold plating of the contacts. The market is offering very inexpensive not to say cheap connectors which reduce the cost but also the reliability of the so called Industrial PCs.

Only a design without compromises as described above, allow an Embedded Computer System to withstand shock and vibrations (as found for example in industry, nautical, and transportation application) reliable over years. The PIP Concept of MPL AG has proven its reliability in the past by countless applications all over the world.

MPL AG
Elektronik-Unternehmen
Täferstrasse 20
Postfach
CH-5405 Dättwil
Tel. +41 56 483 34 34
Fax +41 56 493 30 20
E-Mail info@mpl.ch

Press Release

Shock and vibration proof systems require a balanced design from PCB, to housing, assembly of the system, and possible mounting of additional accessories. The 22 years experience of MPL in this demanding market segment have been influencing the PIP concept and the PIP family (5x86 to Pentium M) strongly.

A real robust Embedded Computer should never depend on a complex Heat Pipe Systems, as those will not withstand such conditions (shock & vibrations) over a long period of time. Much better is an excellent effective passive cooling as used in the PIP concept. But this is only possible with the right PCB design and construction as described previously. In comparison to most in the market available products, the PIP10 and the PIP concept differentiate in various areas and make it to the best and reliable solution for tough environments.

MPL AG also has experience in development of High-Speed cameras, which have been use in combination with the PIP in crash test for the car industry.



For more information about the shock & vibration proof PIP family and concept, please check our website www.mpl.ch or contact us by email info@mpl.ch