New Unique Xeon Server Designed for use in Extreme Temperature Ranges

The new conductive cooled Xeon Server from MPL allows the use of a powerful server in a very demanding environment. The server is installed and available in a 19" chassis. The concept offers considerably more computing power, more memory capacity, more flexibility and a more extreme temperature range than was custom up to now.

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In normal use, servers operate in air-conditioned rooms with forced ventilation and the operating temperature range is around 30°C. Not so the new MXCS server from MPL, it is designed to reach its standard computing performance without ventilation. If the ambient temperatures rises, servers tend to fail! The MPL server continues to work. This additional extended temperature range, up to +60°C, is achieved with MPL's conductive cooling system. The air is not passed through the device as usual. The produced heat from the system is passed by the server passively to the heatsink of the housing. On request, an integrated airflow can be added. The fans are located internally of the enclosure and are mounted within the special designed concept. In operation, contamination of the server by the forced air is prevented, since the air movement takes place outside the electronics. The temperature stress of the components is reduced and increases the longevity, failure safety of the MXCS. With the temperature range of -20°C to +60°C, the MXCS server can be used in areas that have not been possible up to now.

The MXCS has been developed with the same design philosophy as in the past 32 years to develop robust fanless MPL products. The concept "Rugged by Design" has been applied and leads to a server solution with highlights such as:
• Intel Xeon CPU, up to 16 cores
• Conductive cooling concept
• Use of components for elevated temperature
• Use of components from embedded programs with long-term availability
• Designed to meet the most demanding requirements

The Xeon server solution is designed to allow the system to be passively conductive cooled. The concept of conductive cooling can be adapted to the respective application and the installation location. Therefore, it can be used universally, on request it can even be equipped with a fail-safe ventilation system.

The MXCS is modular and therefore extremely flexible. It can be installed in different housing types depending on customer requirements. The MXCS, like all other MPL products, is SWaP-C (Size, Weight, Power and Cooling) optimized and requires less than 60W in full operation. It comes with features like:
• Up to 128GB of registered ECC DDR4 memory
• 4 x mSATA or M.2 for mass storage
• 4 x mPCIe slots with retention capabilities
• 4 x PCIe x1 or 1 x PCIe x8 and 1 x PCIe x1
• Extensions for GPGPU on MXM, PCIe (eg RAID, high-end graphics or XMC modules)

The MXCS is the perfect solution for an unlimited range of application like C4ISR, EW, imaging processing, surveillance, virtual machines, data center processing or any application that requires the highest computing performance in a small space without the need of a fan and highest reliability. The rugged design allows to install the MXCS e.g. in vehicles, tanks, railways, etc.

The MXCS server is 100% designed and produced by MPL AG in Switzerland. The MXCS is designed to meet most standards like CE, UL, MIL-STD-810G, MIL-STD-461F, MIL-STD-704F, MIL-STD-1275D, CE, EN50155 or IEC 60945. For more specific information, please contact MPL AG.

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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