Unique 19" Xeon Server for use in EN50155 Railway Applications

The new fanless Xeon server from MPL enables the use of a powerful server in a very demanding environment, such as in the railway sector. The server is installed in a **19" chassis** and can be configured to customer specifications, **offering significantly more processing power, more storage capacity, more flexibility** and more **extreme temperature** range than previously available.

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In normal operation, servers operate in air-conditioned rooms with forced ventilation. The operating temperature range is approx. 25 - 30°C. Not so the new MXCS server from MPL, it is designed to achieve standard computing performance without ventilation. As ambient temperature rises, servers tend to fail! The MPL server however, will continue to work as usual. The additional extended temperature range up to +60°C, is achieved through MPL's unique conductive cooling concept. The heat generated by the system is passively passed by the server to the heat sink of the housing. The air is not forced through the housing as usual.

On request, an integrated airflow can be added. The fans are located internally of the enclosure and are mounted within the special designed concept. During operation, contamination of the server by the forced air is prevented (two-chamber principle), as the air movement takes place outside the electronics. The temperature load of the components is reduced and increases the longevity and reliability of the MXCS. With a temperature range of -20°C to +60°C, the MXCS server can be used in areas that were previously not possible. Lockable plugs such as M12 incorporate guaranteed vibration-resistant connections.

The MXCS has been designed with the same design philosophy as for the last 32 years, to develop robust fanless MPL products. The concept "Rugged by Design" was implemented and leads to a solution with highlights like:
• Intel Xeon CPU, up to 16 cores
• Conductive cooling concept
• Use of components for elevated temperatures
• Use of components from embedded program with long-term availability
• Designed for the highest demands

The MXCS has a modular design and is therefore extremely flexible. It can be installed in different housing types, depending on customer requirements. The MXCS like all other MPL products, is optimized for size, weight, power and cooling (SWaP-C) and requires less than 60W (8 core) at full operation.
Key points:
• Up to 128 GB 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 server is 100% developed 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 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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