BOX PC

Railway computer for predictive maintenance

Syslogic specializes in industrial computers for railway use. Their railway computers are used for predictive maintenance of railway vehicles. The latest device comes with CAN and also supports computer vision applications.

(Source: Syslogic)

Nowadays, predictive maintenance is an important success factor for railway operators. It uses diagnostic data so that maintenance cycles can be planned at an early stage. Downtimes and maintenance costs are reduced. Accordingly, all major railway vehicle manufacturers offer their own predictive maintenance systems. As a specialist for embedded systems that are suitable for railways, Syslogic's railway computers provide the ideal hardware basis for predictive maintenance.

Railway computers by the company provide the hardware foundation for efficient use of railway vehicles. Syslogic supplies various large railway vehicle manufacturers with railway computers. Among others, Stadler Rail uses Syslogic equipment for its RDS (rail data services) remote analysis system. This system records all diagnostic and operating data of the railway vehicles and stores them in a fleet database. Maintenance intervals can thus be planned precisely. Unplanned downtimes and maintenance times are avoided.

The latest railway computer is based on a Jetson-TX2 module by Nvidia. It provides conditions for GPU-accelerated processing of process data and paves the way for integration of deep learning functions. This opens up possibilities for predictive maintenance as well as cognitive image recognition (computer vision). This in turn makes semi-automated and highly automated driving possible. This is equally intriguing for railway operators and railway vehicle manufacturers, as it not only improves cost-effectiveness, but also safety on railways. Besides others, the product features a CAN interface.

All railway computers from the company are designed to meet the high demands of railway operations. They are passively cooled and feature a housing with screw-on M12 connectors. This makes them resistant to shock and vibration. They are also suitable for the wider temperature range from -40 °C to +70 °C. These railway computers also meet railway standards EN 50155, Class OT 4, and EN 45545 (fire protection).

The devices are delivered with a preinstalled operating system. A complete developer environment (Jetpack) including Cuda libraries and Deep Learning Framework is also installed on the AI Railway Computer. Florian Egger, Sales Manager of Syslogic, said: "Railway manufacturers worldwide really value our experience in railway electronics." With the new AI Railway Computer, Syslogic will further expand its market position, added Egger.

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