

ISOBUS

IoT gateway for agriculture vehicles

Claas, a manufacturer of agriculture machinery, has selected the IoT (Internet of Things) gateways from Liebherr. The gateways provide a CAN-based interface as specified in the ISO 11783 series.



Claas and Liebherr co-operate regarding IoT applications (Source: Liebherr)

The IoT gateway by Liebherr links Claas' digital services with the CAN-based in-vehicle networks using Isobus protocols. This higher-layer approach is based on SAE J1939. The Isobus interface has passed the AEF conformance test. AEF is the nonprofit association promoting and pre-developing the Isobus protocols. The digital services include data management and precision farming.

Every day, tens of thousands of Liebherr IoT gateways ensure the efficient connection of machines worldwide. The products find their use primarily in mobile machinery – often operated under challenging environmental conditions in a range of industries.

The manufacturer of agriculture machinery uses the programmable gateways in its combine harvesters, forage harvesters, and tractors. The product runs a Linux operating system. "As one of the world's largest agricultural machinery manufacturers, Claas also plays a leading role in the digital sector. In order to fully exploit the potential of our productivity – enhancing digital services, today and in the future, we need powerful hardware. Liebherr has proven to be the optimal partner for this. The group's many years of know-how in the field of telematics and the electronics expertise at the Lindau site ensure that our machines are future-proof and intelligently connected," said Frank Drexler from Claas.

When the first rays of the sun pierce through the morning mist and the farmer opens the barn door to release their tractor, the work has already been planned. The farmer has already collected extensive yield and potential data on the fields to be cultivated, which can be called up on the machine itself at any time. This data collection enables the targeted management of agricultural land by means of adapted fertilization and regulation of the sowing rates.

While tilling the fields, the machine continuously collects new data and saves it in the cloud, so that the farmer can access it for future optimization. If the tractor reports a fault during a work operation, the machine manufacturer's service department can start remote diagnosis in real-time and, thus, maximize the machine's availability.

The gateways can communicate directly with common clouds, such as Azure or Cumulocity. Likewise, the gateways can connect to customer-specific cloud solutions.

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