

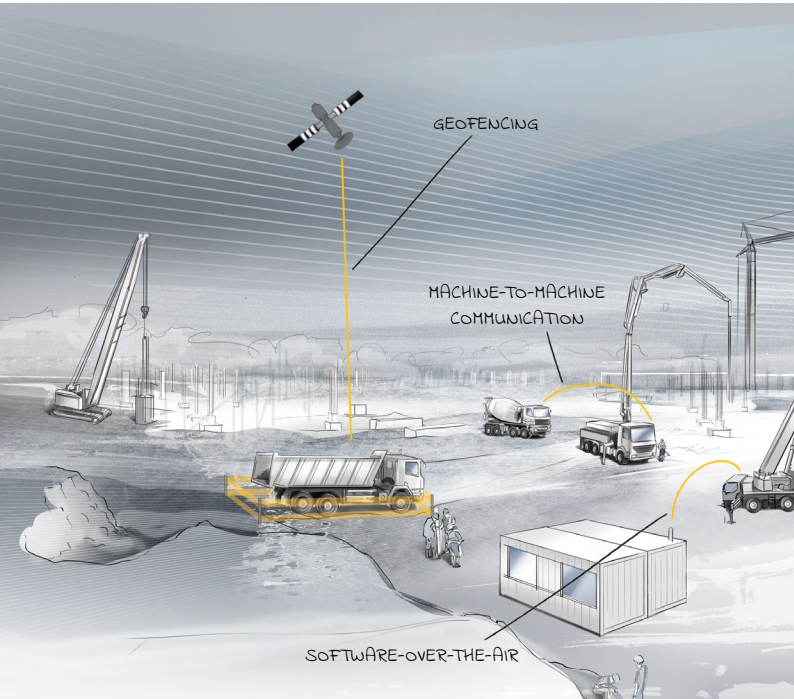
More efficiency through interconnection

# Telematics units by Liebherr



# LIEBHERR

# Discover the opportunities



## Wide range of application

The increasing interconnection of mobile machinery and their integration into the Internet of Things opens up numerous new opportunities. Use the potential for higher productivity, lower costs and more safety – with Liebherr telematics units.

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### Protection against manipulation

Protect your machines from unauthorized access: With us, you have the complete security life cycle in view – secure at every level, from development to the end of the product's life:

- Public-Key-Infrastructure
  - Secure communication
  - Secure boot and update mechanism
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### **Stable communication**

Our portfolio supports all available mobile communication standards enabling stable and area-wide data exchange. The integrated modem manager handles the control and monitoring of the modem. It provides a simple connection for data transfer for the application – ensuring high connectivity.

### **Future-proof interconnection**

Life Cycle Management: Active technology scouting ensures the cyclical further development of our telematics units without technology discontinuity. This ensures the long-term availability of our products.

### **Always with our finger on the pulse**

In terms of technology upgrades, the form-fit-function programme enables trouble-free hardware replacement. This ensures your communication infrastructure is always up to date – and in terms of security too.

## Prepare

Collect, process and transfer all relevant machine data on your telematics unit for optimization.

## Visualize

Display and access key data for your machine – thanks to the cloud wherever you want.



PREPARED FOR CLOUD CONNECTION:  
ACCESS YOUR DATA FROM  
ALL OVER THE WORLD

SOURCE CODE, BUILD SYSTEM,  
DEMO APPLICATION: PREPARED FOR  
QUICK AND FLEXIBLE MACHINE INTEGRATION



SECURE FROM BOOT TO CLOUD:  
TOTAL FOCUS ON YOUR APPLICATION

## Analyze

Implement cost-saving and safety-enhancing applications such as condition monitoring or geofencing.

## Be proactive or respond quickly

Be in control: predictive maintenance or updates via software-over-the-air enable valuable efficiency gains.



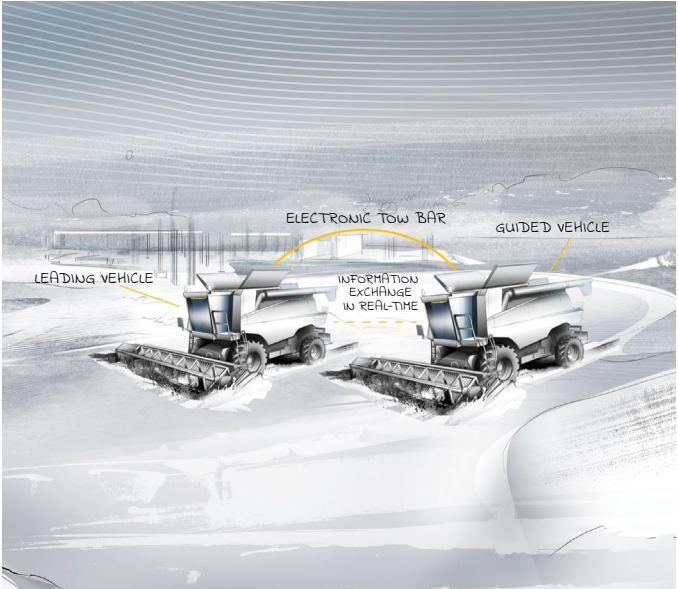
ANTENNA DIVERSITY AND FALLBACK:  
RELIABLE AND ROBUSTLY CONNECTED

## Satellite navigation

With all the leading navigation systems on board, you'll never lose sight of your machine.

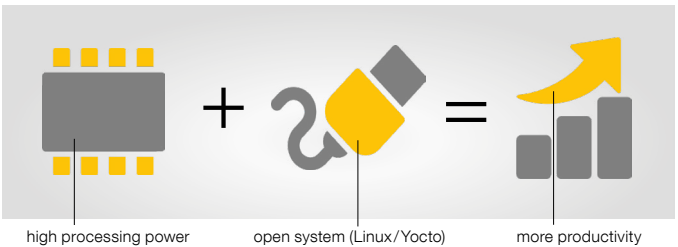
## Processing power

Our powerful telematics units offer increased flexibility in system architecture.



## Ready for the future

Our powerful telematics units enable the implementation of an “electronic tow bar” for virtual coupling of two machines. One machine guides and the other one follows – unmanned and fully automatically thanks to real-time enabled WLAN.



## Free space for your ideas

Our telematics units offer the prerequisites for the implementation of OEM-specific, process-oriented applications – meaning you can increase the productivity of your machine.

## Optimum availability

Our telematics units automatically connect you to all available mobile communication standards worldwide.

## Better reception

Higher connection quality and more data transfer: With antenna diversity, you can use two antennas simultaneously.



MCG – Mobile Communication Gateway



MTG – Mobile Telematics Gateway

## Technical data

	MCG	MTG
Processor	Single-core Freescale i.MX 6	
Software build system	Linux/Yocto 2.0 Jethro	
Mobile communications	2G/3G/4G	
Satellite navigation	GPS/GLONASS/Galileo/Beidou/QZSS	
Rated voltage	12V/24V	
Hardware security	ECDSA-256/SHA-256/AES-256	
Interfaces	3 x CAN/1 x ETH	2 x CAN/1 x ETH
Wireless interfaces	WLAN (antenna diversity) Bluetooth	WLAN
Inputs/outputs	1 x analogue/1 x digital	4 x universal
Battery		Li-ion 2,900 mAh
Operating temperature	-30 °C to +70 °C	-20 °C to +60 °C
IP rating	IP5K2	IP5K4



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### **Benefit from our experience**

For more than 10 years, our telematics solutions have been ensuring fast and secure communication in demanding industries, such as construction machines and agriculture.

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