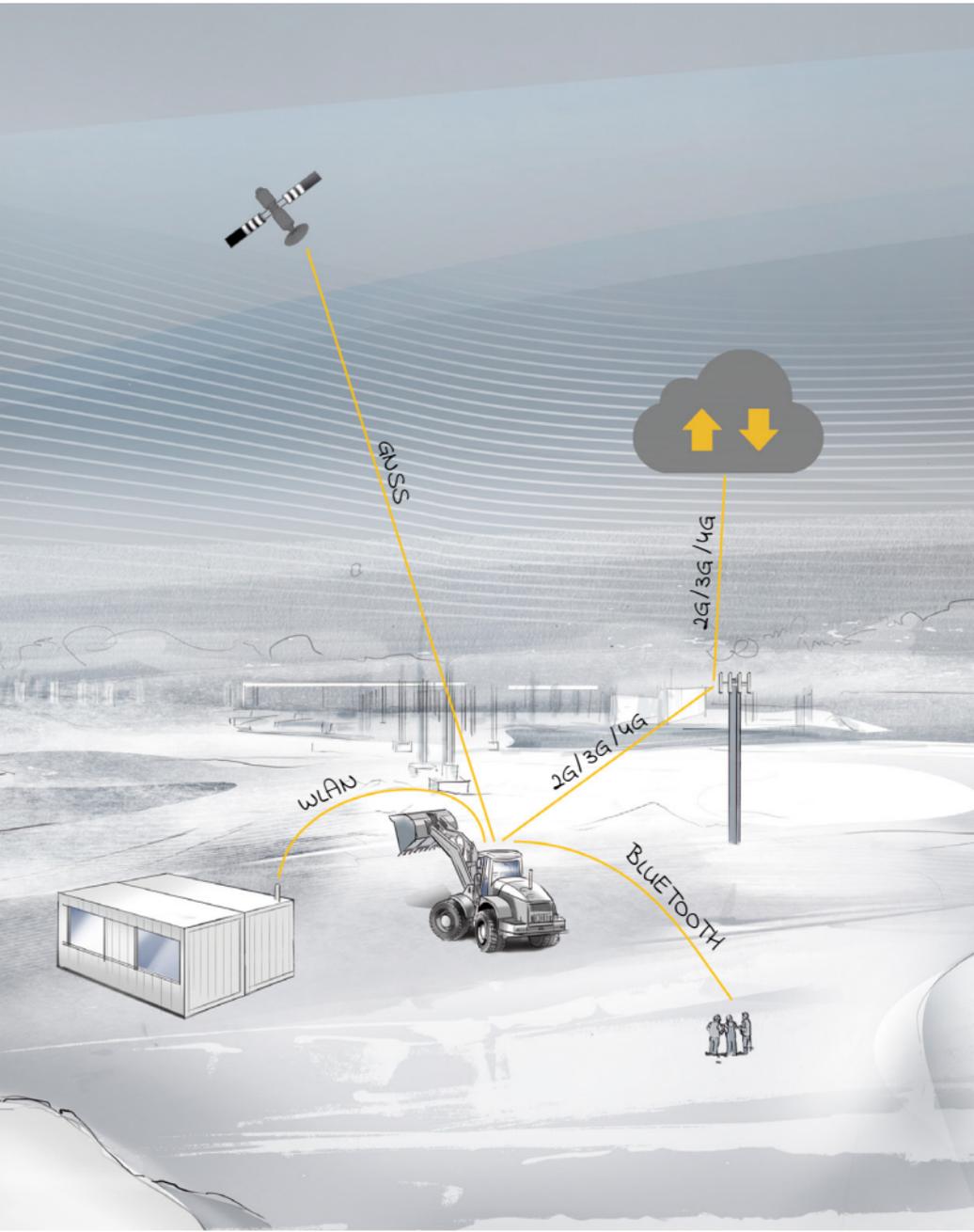


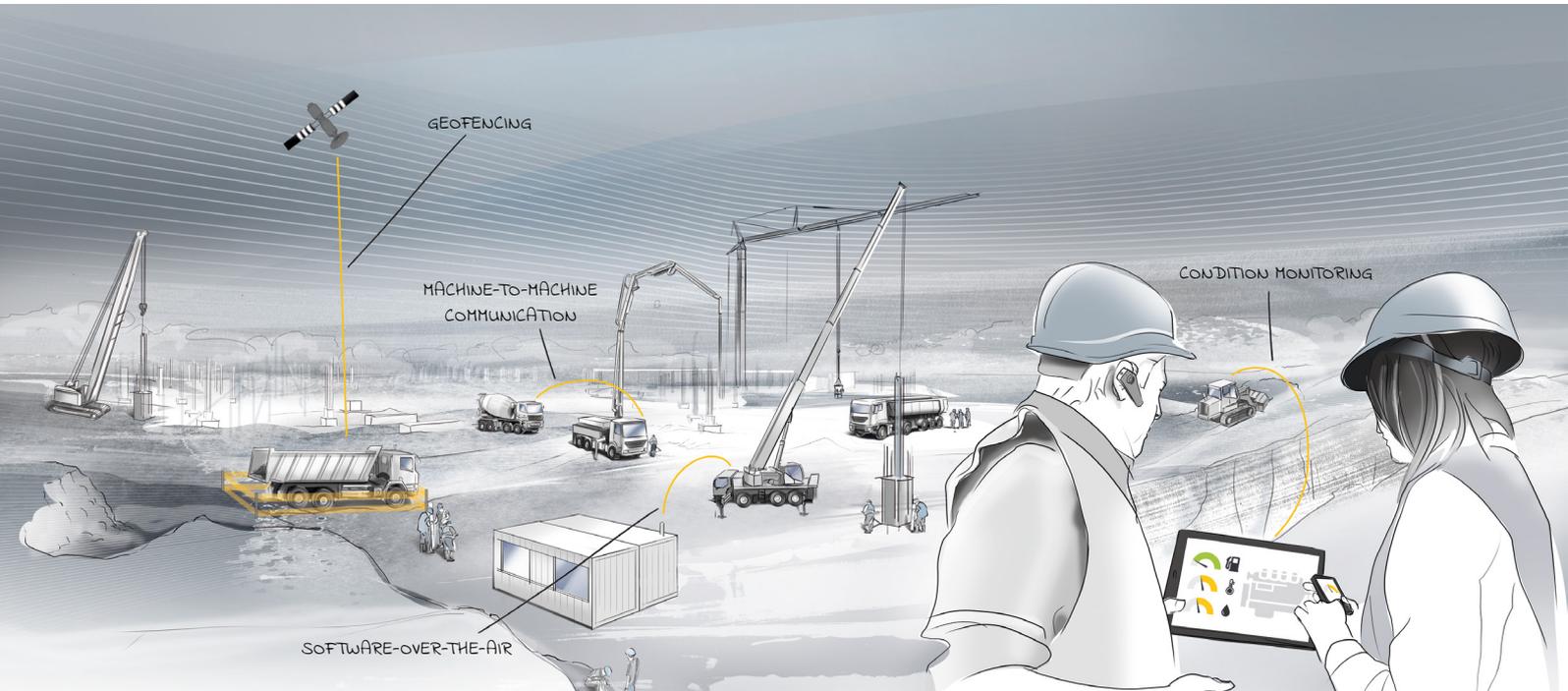
Telematics units for more connectivity

# IoT Gateways 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 IoT gateways.

#### 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

### 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 IoT gateways 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 IoT gateway for optimization.

## Visualize

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

## 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.



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



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

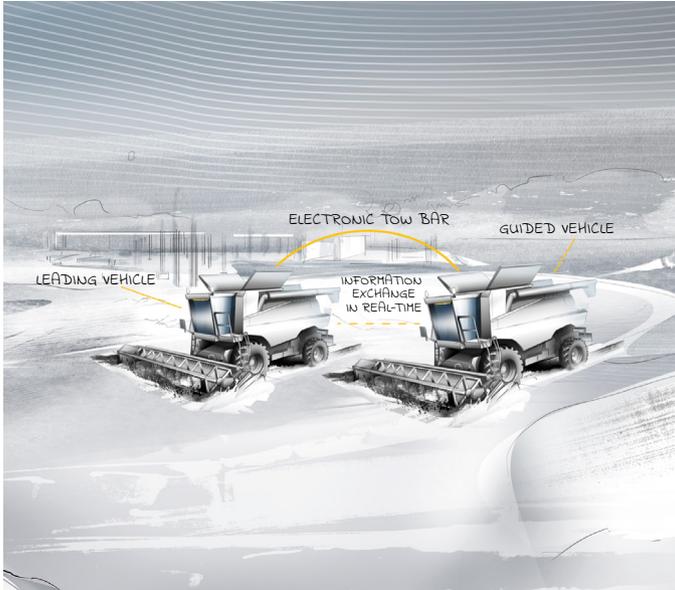
Our IoT gateways offer increased flexibility in system architecture.

### Optimum availability

Our IoT gateways automatically connect you to all available mobile communication standards worldwide.

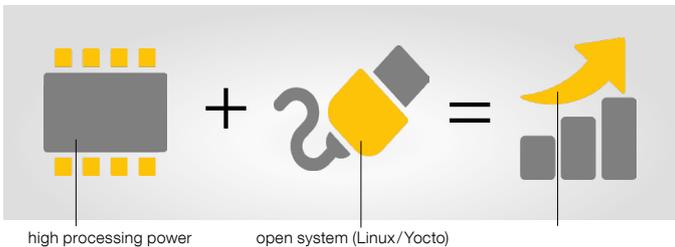
### Better reception

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



### Ready for the future

Our powerful IoT gateways 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. more productivity



### Free space for your ideas

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



MCG – Mobile Communication Gateway

### Technical data

	MCG
Processor	Single-core Freescale i.MX 6
Software build system	Linux/Yocto
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
Wireless interfaces	WLAN (antenna diversity), Bluetooth
Inputs	1 x analogue
Outputs	1 x digital
Operating temperature	-30 °C to +70 °C
IP rating	IP5K2



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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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### **Liebherr-Components AG**

Post box 222, CH-5415 Nussbaumen/AG

☎ +41 56 296 43 00, ✉ components@liebherr.com

[www.liebherr.com/telematics](http://www.liebherr.com/telematics)