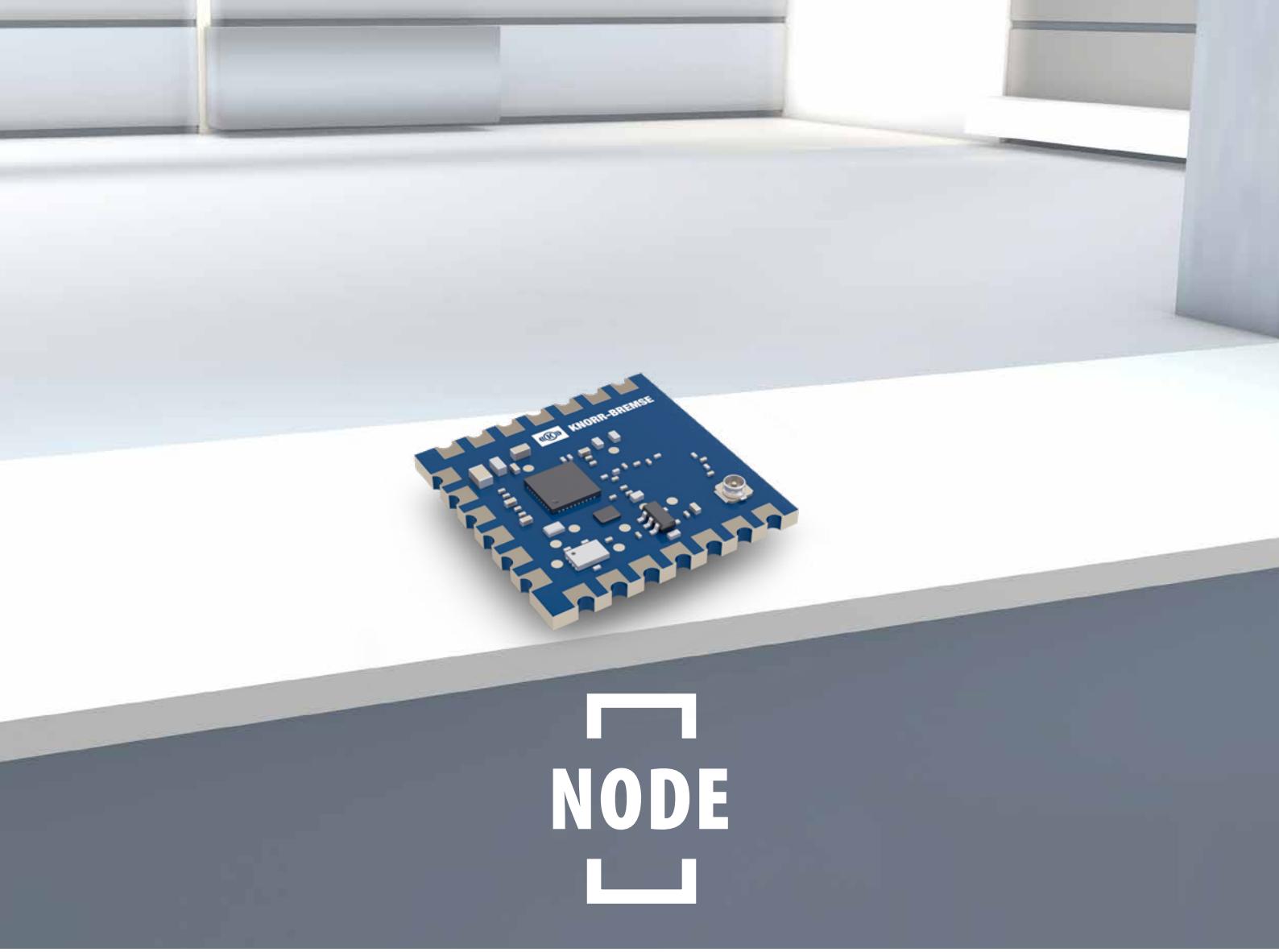


NODE

The Node of Knorr-Bremse provides "IoT connectivity" for host systems such as entrance, HVAC and sanitary systems, and brake domain controllers by linking subsystems to the Hub – an advanced IoT gateway. By serving as a communication bridge, the Node seamlessly integrates with the Hub, enabling a direct and efficient flow of sensor data via BLE from various train subsystems to our Knorr-Bremse Cloud Services.

Key features and benefits

- **Based on standards:** The common UART protocol enables easy-to-implement integration and communication with domain controllers.
- **Continuous data transfer:** Offers data transfer from domain controllers to Knorr-Bremse Cloud Services via Hub, enabling continuous monitoring and rapid response to incidents.
- **Works perfectly with Hub:** Link to Knorr-Bremse Cloud Services using the Hub V1 IoT gateway.

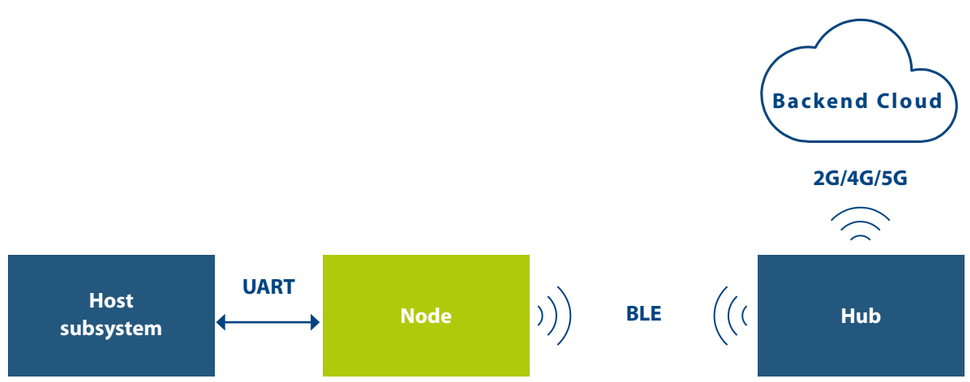
KNORR-BREMSE

Applications

- High-speed trains
- Locomotives
- Metros
- Passenger coaches
- Regional & commuter trains
- Freight cars

System integration

- The Node is a PCBA (Printed Circuit Board Assembly) to be soldered into host system electronics.
- The communication with the host system is based on UART (Universal Asynchronous Receiver Transmitter).
- The Node links up with the Hub via a BLE connection.
- The Node is equipped with a male U.FL connector for the BLE antenna (project scope).



Technical specification

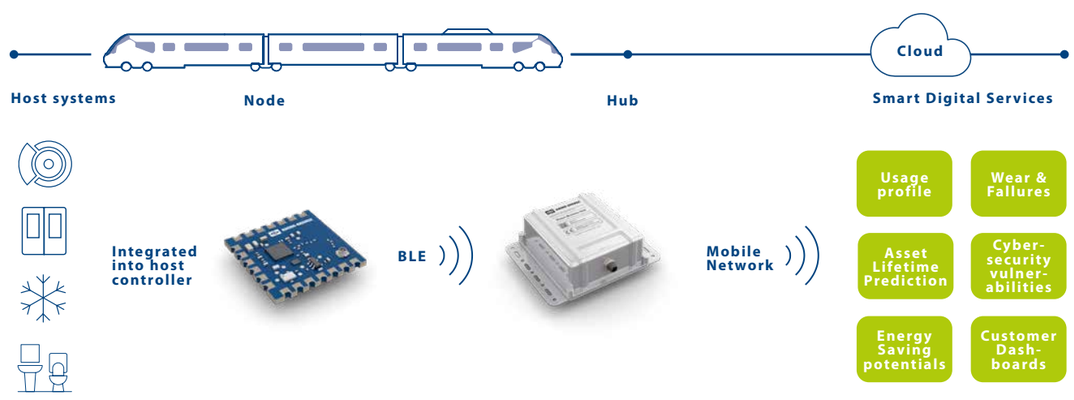
Part number	KP4699335
Physical dimensions Size Weight Mounting hole spacing	 25mm x 25mm x 1,6mm 2g Solder board, no mounting
Environmental Operating temperature	 -25°C to 85°C
Energy Power provided by the host Voltage range	 2,5V – 3,8V
Communication	BLE 5.2

Standards

Environment	EN50155:2021
Radio equipment and EMC	EN50121-3-2:2016

Knorr-Bremse – your partner for smart rail transportation

Smart train systems are key to address challenges in passenger and freight transportation. Our technology enhances remote monitoring and predictions, enabling smooth operation, efficient maintenance, high availability and maximized lifespans – all with a focus on your ecologic footprint. We employ sensor-equipped components that transfer data to the Knorr-Bremse Cloud, directly via TCMS or our IoT connectivity hardware: Node and Hub. With us you get everything from one source to turn your data into action!



P-1336-EN 08.2024

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