



# HUB

The Hub of Knorr-Bremse is an IoT gateway device to collect data in rail vehicles and transfer it to Knorr-Bremse's Cloud Services. It enables rail asset monitoring by providing constant updates of location, utilization and sensor readings in a variety of data driven use cases. Besides integrated sensors, the Hub comes with BLE connectivity to Knorr-Bremse's Node to link further Knorr-Bremse devices, as well as 3rd party sensors.



## Key features and benefits

- **Continuous Data Transfer:** Offers data transfer from train systems to Knorr-Bremse Cloud Services, enabling continuous monitoring and rapid response to incidents.
- **Zero maintenance:** No regular servicing required as external power supply ensures continuous operations.
- **Compatibility:** Works perfectly with BLE IoT devices, such as the Node, to receive data wirelessly.
- **Robust design:** Engineered for durability under harsh railway conditions, including vibration resistance and temperature tolerance.



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## Applications

- High-speed trains
- Locomotives
- Metros
- Passenger Coaches
- Regional & commuter trains
- Freight cars (Power supply required)

## System integration

Provides possibility to be easily integrated in all common installation situation with little effort

- Under the floor installation
- Roof mounted installation
- Inside installation in car body (**GNSS signal needs satellite connectivity!**)

## Standards

Environment	RoHS EN50155 IEC 61373 Category 1, Class B IEC 60529 (IP66/IP67)	WEEE EN50125-1 (Vibrations and shocks for rail) IEC 60068 Series
Product safety	IEC 62368-1	
Radio equipment and EMC	Directive 2014/53/EU EN 301 908-1 EN 300 328 EN 303 413	EN 301 489 EN 301 511 EN 300 330 EN 62311

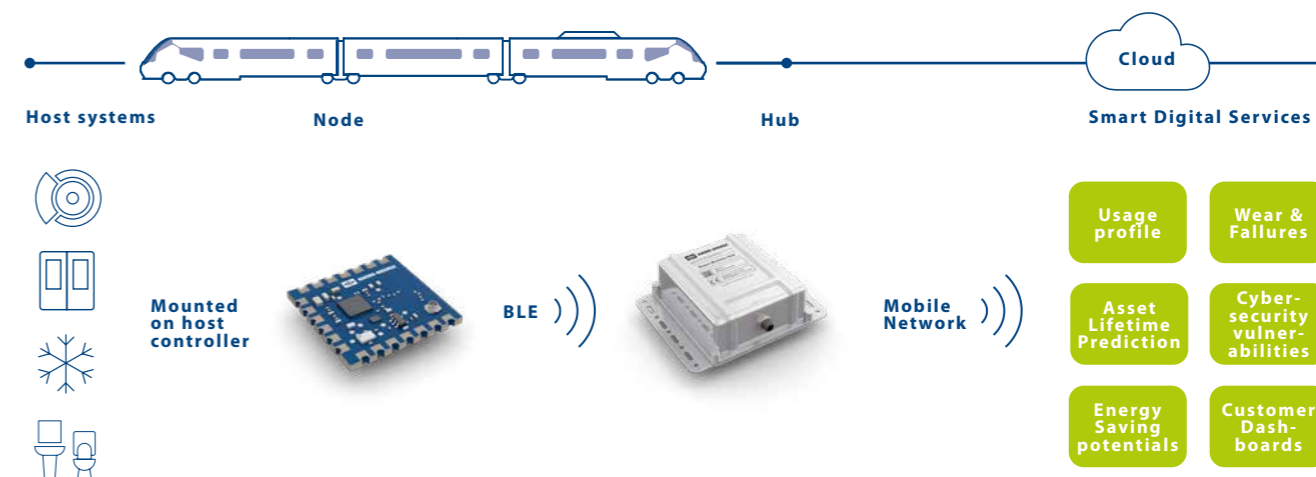
## Technical specification

<b>Part number</b>	KP4699325
<b>Physical dimensions</b>	
Size	146.2 mm x 132.2 mm x 52.2 mm
Weight	585g without power supply cable
Mounting hole spacing	160 mm
<b>Environmental</b>	
Operating temperature	-20 °C ... +70 °C; Electronics operational up to +85°C
Non-operating temperature	-40°C ... +80°C
Altitude	2000 m / 6562 feet
Ingress protection	IP66/IP67
<b>Energy</b>	24 VDC ... 110VDC
<b>Shock detection</b>	± 16 g
<b>GNSS</b>	
Supported networks	GPS/QZSS, GLONASS, Galileo, BeiDou
Antenna	Internal
<b>Cellular</b>	
Supported frequency bands	4G (NB-IoT, Cat-M1), 2G fallback Quadband
Antenna	Internal
<b>BLE</b>	5.1
<b>NFC</b>	ISO 15693, 13.56 MHz. Passive, connected to microcontroller
<b>ITSS Interface 2</b>	Ready
<b>Lifetime</b>	6 to 10 years
<b>Maintenance</b>	The device is maintenance free. It is not designed to be opened by the user and shall not be opened by the user



## 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, maximized asset lifespans – and 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!



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 **NEW YORK AIR BRAKE**

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 **IFE**

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 **MERAK**

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 **MICROELETTRICA**

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 **SELECTRON**

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 **EVAC**

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 **ZELSKO**

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 **RAILSERVICES**

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