

iCOM – Digitalization of rail business



iCOM

iCOM IS A FLEXIBLE, OPEN AND SCALABLE SOLUTION to transfer the philosophy of mobile digitalization into rail business by maximal flexibility and control.

- Compatible with various train architectures
- Connectivity with all relevant KB products
- Open architecture to support third-party products
- Create synergies by using additional functionalities of product groups
- Hardware and Operating System independence

REFERENCE PROJECTS WORLD-WIDE

A circular graphic containing a light gray world map. Numerous small blue dots are scattered across the map, representing the locations of reference projects. The dots are concentrated in North America, Europe, and Australia, with a few in South America and Asia.

SAVING POTENTIALS

- Increased vehicle availability and reduction in operating costs
- Less wear and tear
- Improved energy efficiency
- Reduction of CO₂ Emission

iCOM MONITOR

Monitors and analyzes the vehicle system and the infrastructure and provides information relating to the system status and prognosis of services requirements. From reactive and corrective maintenance to condition based maintenance.

ADVANTAGES

- Online monitoring of vehicle and component conditions
- Preventive maintenance to increase vehicle availability and optimizing maintenance and utilization costs
- Own development of dynamic reports, analysis and applications

iCOM – A UNIQUE INSIGHT INTO YOUR FLEET

The screenshot displays the iCOM fleet management software interface. The top navigation bar includes the iCOM logo, a 'Management' tab, and a 'Dashboard - Dashboard' label. The main interface is divided into several sections:

- Control Unit 1:** A list of vehicle components and their last update dates. The list includes: Door 1 (2015-12-08), Magnetic Track Brake 1, Sensing 1, Sals 1, Door 1 Bag Drive (2015-12-04), Intron Brake 1, JHMC 1, Wheel 1, Wiper 1, Electro Hydraulic Unit 1, Air Bussing 1, Brake Control 1, Pneumatic Brake System 1, Battery 1, OCV (2015-01-08), Door 1 Door Drive (2015-01-02), High Speed Circuit Breaker 1, Air Charge 1, Air Leaky 1, and Hydraulic Brake 1.
- Control Diagram:** A central area with a grid of icons representing various vehicle systems and components.
- Events of Subsystem JHMC_1:** A table listing diagnostic events. The table has columns for 'Time', 'Code', 'Description', and 'Action'. The events listed are:

Time	Code	Description	Action
2015-12-07 07:52:07	140	Air heater is in risk of failure. Its replacement must be scheduled.	X
2015-12-07 07:52:07	140	Engine fan motor is in risk of failure. Its replacement must be scheduled.	X
2015-12-07 07:52:07	140	Compressor fan motor is in risk of failure. Its replacement must be scheduled.	X
2015-12-07 07:52:07	140	Compressor motor is in risk of failure. Its replacement must be scheduled.	X
2015-12-07 07:52:07	140	Air filter is in risk of failure. Its replacement must be scheduled.	X
2015-12-07 07:52:07	140	Air heater shows degradation. Its service should be scheduled.	X
2015-12-07 07:52:07	140	Engine fan motor shows degradation. Its service should be scheduled.	X
2015-12-07 07:52:07	140	Compressor fan motor shows degradation. Its service should be scheduled.	X
2015-12-07 07:52:07	140	Compressor motor shows degradation. Its service should be scheduled.	X
2015-12-07 07:52:07	140	Air filter is dirty. It should be replaced.	X

The bottom of the interface shows the status '100% OK' and the iCOM logo.

iCOM ASSIST

Advanced driver advisory for energy efficient and economic driving with improved punctuality and energy savings up to 15% for passenger and freight operations.

ADVANTAGES

- Less costs for energy and operation
- Sustainable improvement for the operation
- Dynamic run optimization
- Reduction of wear and tear
- Simply implementation and semi-automatic integration of topography- and time table data

iCOM METER

Energy management covering data collection and visualization of consumption and regeneration energy. Measurement of energy consumption is the base for energy efficient operation. According to EN 50463.

ADVANTAGES

- Live overview of the energy consumption parameters of the rail vehicle
- Comprehensive data analysis to convert and improve the train operation
- Study of the performance of the vehicle on a specific railway track
- Optimization of maintenance and service works



Knorr-Bremse Systeme für Schienenfahrzeuge GmbH

Ansprechpartner: Kathrin Moder/Dirk Seckler

Moosacher Straße 80

80809 Munich

Germany

Tel: +49 89 3547-0

Fax: +49 89 3547-2767

WWW.KNORR-BREMSE.COM



Knorr-Bremse Group