BELDEN
SENDING ALL THE RIGHT SIGNALS

Be Certain with Belden

Effective Solutions
for Traffic Systems

BELDEN
SENDING ALL THE RIGHT SIGNALS

Rolling Stock

A OCTOPUS Family

- Ruggedized switch family for extreme conditions
- Open system with standardized M12 technology
- IP67 protection class and EN 50155 approval
- Extended management by SNMP
- Redundancy via HIPER-Ring/MRP and Rapid Spanning Tree
- Available with PoE

B M12 Connectivity Solutions

- EN 50155:2007: Railway applications Class TX (-40°C +85°C) IEC 61373:1999 (shock and vibrations tests)
- DIN 5510-2: Preventive fire protection in railway vehicles
- DIN CLC/TS 50467: Rolling stock – Electrical connectors, requirements and test methods
- CLC/TS 45545-2:2009: Fire protection on railway vehicles
- Ethernet/ Fast Ethernet connectors (male and female)
- Field attachable connectors (spring-type terminals)
- M12, D-coded
- IP67 protection class

Rail Cable CAT5e

- EN 50155:2007: Railway applications
- CEN/TS 45545-2:2009: Fire protection on railway vehicles
- DIN 5510-2 protection level 1 to 4: Fire protection Railway vehicles
- High-Flexibility
- Bending/setting radius 10*D/5*D

C BAT Family for Field Use

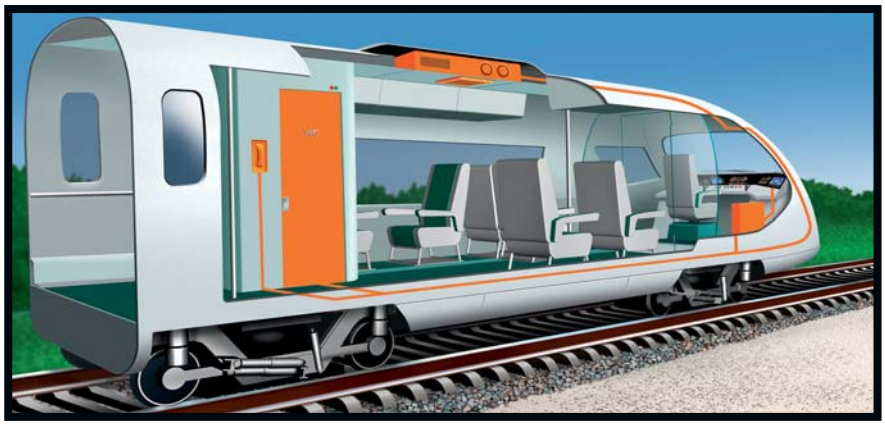
- Wireless access points and clients
- Bridge functionality
- Redundant WLAN links for reliable data transfer
- IP67 protection class
- EN 50155

BAT Family for DIN Rail

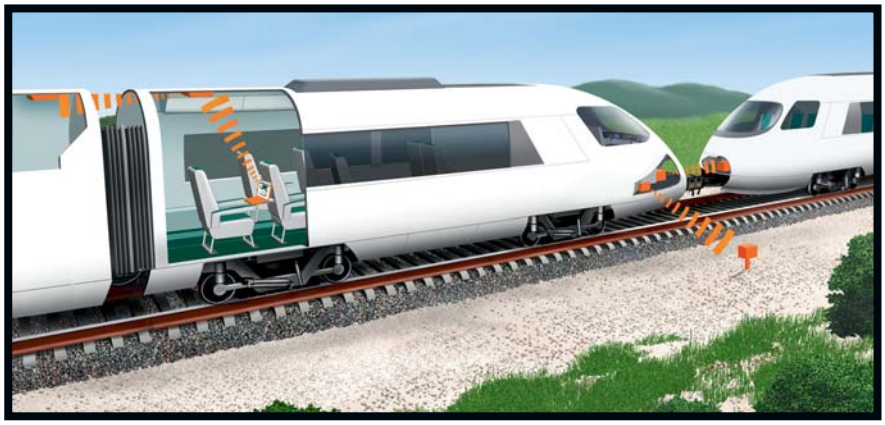
- Wireless access points and clients
- Bridge functionality
- Redundant WLAN links for reliable data transfer
- For DIN Rail mounting

A Multimedia

B Train Control and Monitoring System

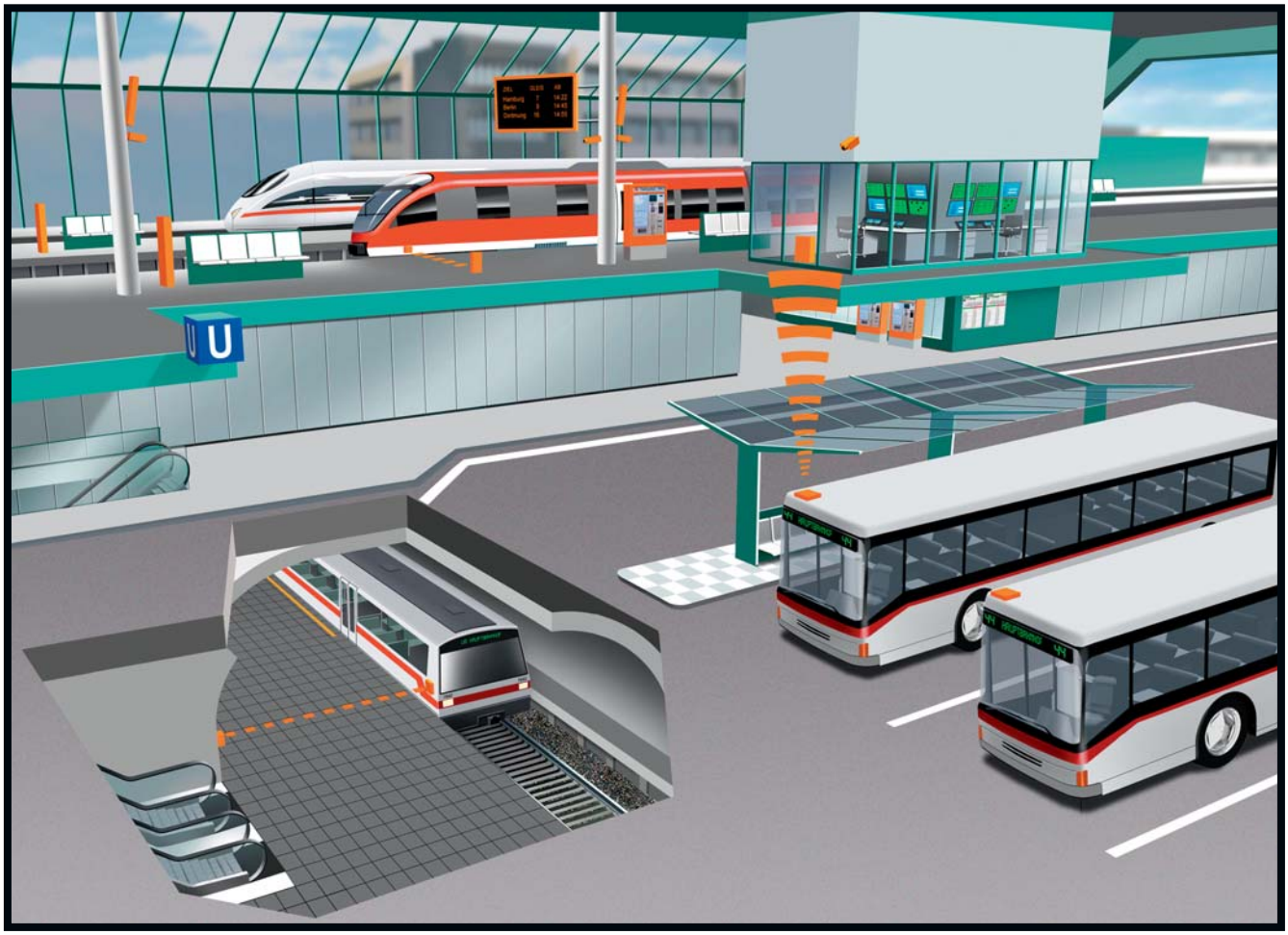


C Wireless



Stations and Control Centers

D Control Rooms



E Train/Subway Station

D

EAGLE Family

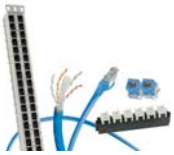
- High-speed VPN, firewall and routing solution
- Transparent and routing mode
- Various media connection options
- 9.6 V up to 60 VDC redundant inputs

MACH4000

- Gigabit backbone routing switches
- Up to 48 Gigabit Ethernet ports and three 10 Gigabit Ethernet ports
- Highly redundant

IBDN Cables

- Full range of copper cables
- Full range of fiber cables



E

SPIDER Family

- Entry-level switches in many varieties
- Fast Ethernet or full gigabit
- Fiber to copper conversion
- 2 to 8 (+2) ports plus optional optical fiber ports
- Unmanaged

OpenRail Family

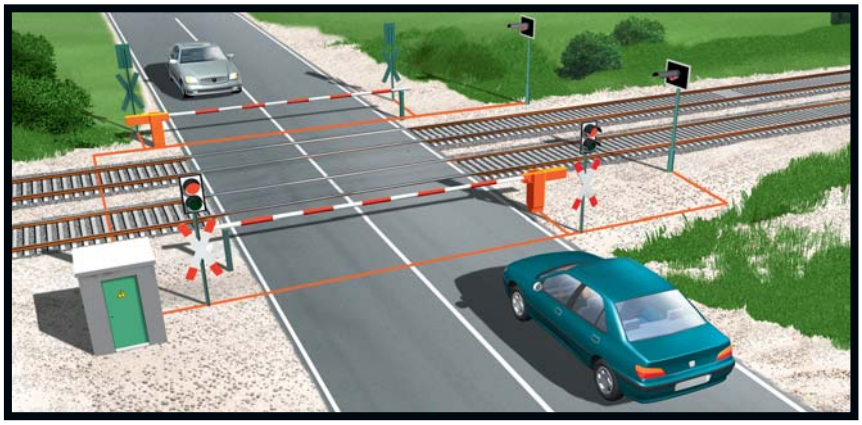
- Redundant power supply
- Available in customized versions
- Available with conformal coating
- Available with PoE

Industrial HiVision

- Topology Discovery
- SNMP Trap support
- Auto Discovery
- Configuration and extended diagnosis are provided via interfaces, incl. HiVision 6.4, Web browser and TELNET

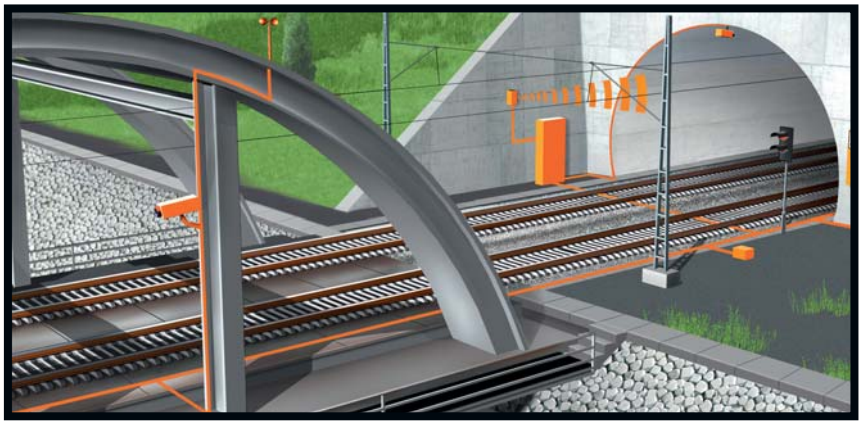
Track Side

F Signalling



G Railway Control Center

H Tunnels and Bridges



F MICE Family

- Modular switch system
- Gigabit router option
- Extensive range of hot-swappable media modules

OpenRail Family

- Redundant power supply
- Available in customized versions
- Available with conformal coating
- Available with PoE

G BAT Family

- Wireless access points and clients
- Bridge functionality
- Redundant WLAN links for reliable data transfer
- Optional IP67 for field use or DIN Rail

MACH1000

- Rack-mount ruggedized switch
- Maximum uptime in extreme environmental conditions
- Extended temperature range: -40°C up to +85°C
- EN 50155

H Connectivity Solutions

- Actuator/sensor connecting and interconnecting cables
- Field attachable connectors
- M8, M12, M23, 7/8"
- Valve connectors A, B and C design
- IP65 – IP69K protection class

RSR

- Compact ruggedized DIN Rail Switches
- Extremely high EMI resistance
- Withstands tremendous shocks and vibration

Fieldbus Repeaters

- For the most common Fieldbus protocols
- Predictive maintenance
- Protocol specific Fieldbus repeaters available

IBDN Cables

- Full range of copper cables
- Full range of fiber cables

Reliable and Safe Solutions for Transport

Guaranteed Traffic and Passenger Safety Around the Clock

Belden offers integrated communication solutions for the transportation market. With top-quality products from the Belden®, Hirschmann™ and Lumberg Automation™ brands, we are able to deliver the most complete solutions for monitoring passengers, traffic, and networks, both on-board and at terminals, enhancing comfort, safety and security. Our portfolio contains of a comprehensive range of cables, connectors, ruggedized Ethernet switches plus routers and firewalls – all harmonized to work seamlessly together and carrying the necessary international and local approvals. As a member of UNIFE, Belden's products are certified to the highest standards, whilst our organisation meets the IRIS requirements.

Be Certain with Belden

Solutions for the transport market need to quarantee safety, security and comfort. The applications are expected to last a long time under extremely challenging conditions. Be it for high-speed trains, metros, subways or other rail vehicles – in tunnels, on bridges, in train stations, airports, on the open track, or in harbor facilities, Belden has the right solution for any application. If you are looking for a complete solution that delivers uncompromising safety and security, whilst offering highest availability, talk to Belden to be certain that you meet your requirements.

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www.beldensolutions.com

GLOBAL LOCATIONS

To learn more about Belden visit us at
www.beldensolutions.com

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