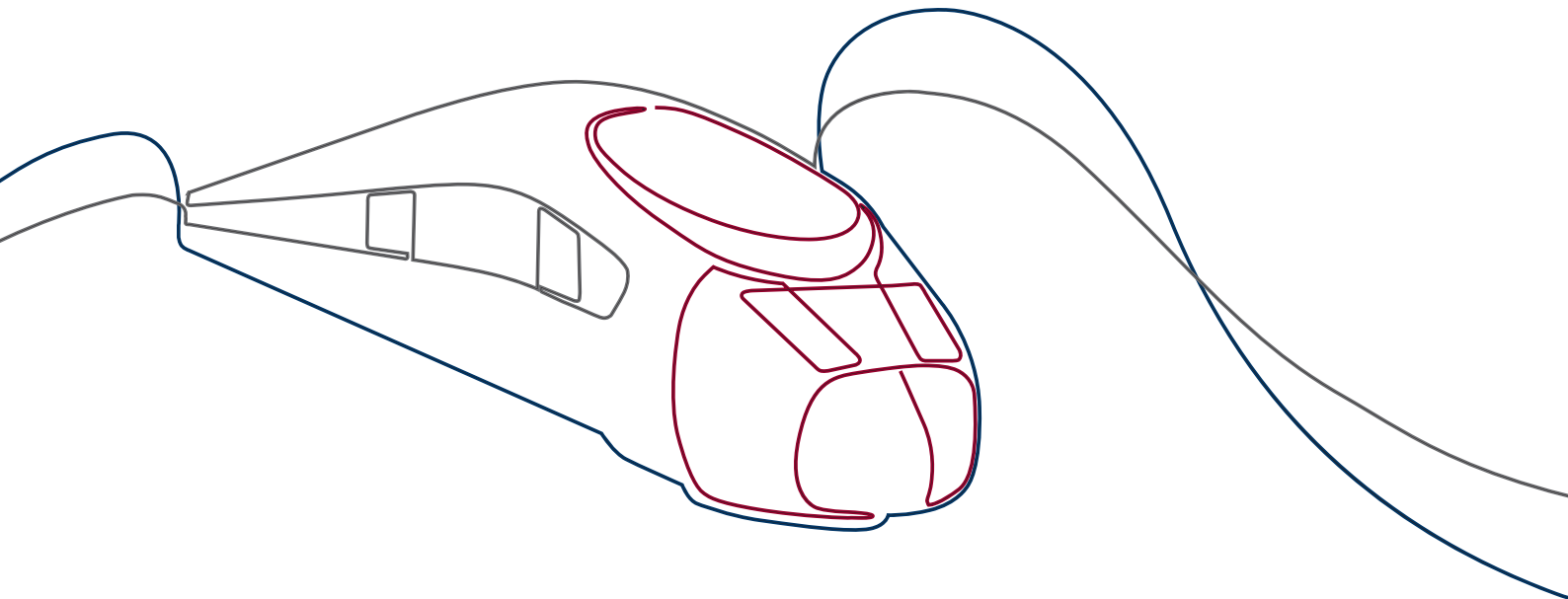


## ETHERNET UPGRADE SOLUTIONS



Commitment to quality: We supply this product in accordance with our tested and certified quality standard



**DIN EN ISO 9001:2015**  
Certified  
Quality Management System



**DIN EN 15085-2 CL1**  
International welding  
certification for railway  
vehicles



**IRIS Certification® based on  
ISO/TS 22163:2017**  
Quality management standard  
for the railway industry

## ETHERNET-UPGRADE-SOLUTION FOR REFURBISHMENT

The *ETHERNET-UPGRADE-SOLUTION* is a solution for simple Ethernet upgrades in existing systems with a **swivelled** coupler. The existing electrical coupler is retained and does not have to be opened (opening is often associated with new tests of the coupler and new approvals). The solution enables both redundancy operation and the use of two transmission channels.

The additional components are attached to the left and right of the existing electrical coupler. Only one new (and longer) lid is required.

Simple installation can be performed by the operator themselves or can be commissioned by our service team.



### The ETHERNET-UPGRADE-SOLUTION includes:

- era-transceiver®
- Housing is adapted according to the installation space
- Control arm is adapted to the new length
- A new adapted lid is fitted to protect the era-transceiver®
  - We offer a **self-opening version** for coupler without their own drive
- Optional: Installation by our service team

### Requirements for ETHERNET-UPGRADE-SOLUTION:

- Sufficient installation space, which has to be calculated individually for each coupler, but at least an additional 50 mm on all sides
- For couplers from companies other than era-contact, the third-party product must be made available or accessible for measuring so that the customer-specific adaptations can be made.

### The advantages for you:

- An upgrade solution for the transmission of large quantities of data in existing system
- Fast and particularly modern upgrade of older models of railway vehicles
- Customer-specific adaptations are possible, even for third-party products
- Independent installation is possible

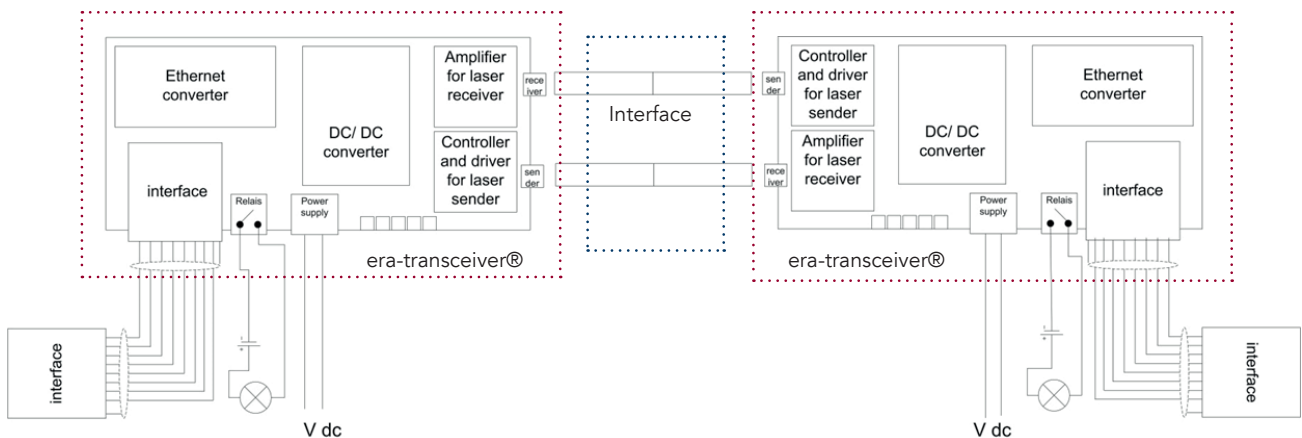


Technical data subject to change.

## era-transceiver® – DATA PULSES WITH NO WEAR

The *era-transceiver®* is a unique contactless system for high-speed data transmission with full galvanic isolation, which means that no mechanical wear is caused on the contact itself. As a result, you benefit from a longer service life and cost savings throughout the entire product life cycle.

The *era-transceiver®* provides an ideal data transmission solution for both the initial equipping of a new vehicle and for the upgrading (Plug & Play ETHERNET, ETHERNET-UPGRADE-SOLUTION) of existing fleets and older models of railway vehicles.



### Transmission principle of the *era-transceiver®*

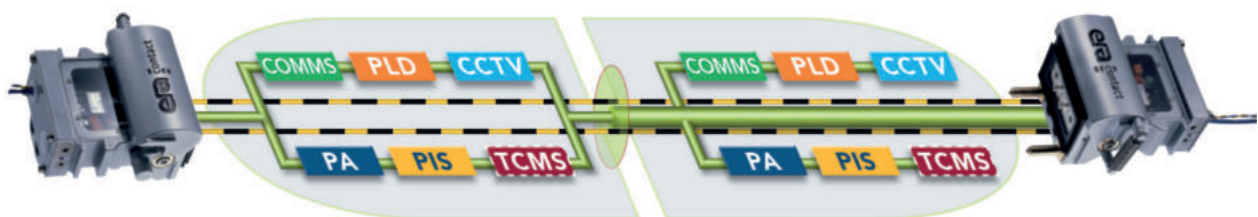
The incoming electrical Ethernet signal is converted into an optical signal. The optical signal is received on the opposite side and is converted back into an electrical signal. This involves correcting the level and timing (data clock recovery). Galvanic isolation is achieved using the interface.

Optical signals are free from EMC influence and potential shifts and are resistant to relative movements. The transmission unit operates in full-duplex mode, i.e. data is sent and received simultaneously.

## era-transceiver® – PRODUCT RANGE

era-contact manufactures the 100 Mbit/s and 1000 Mbit/s versions in series production – versions up to 10 Gbit/s are available upon customer request.

Data rate	100 MBit/s	1000 MBit/s
Data interface	RJ45 (24V DL) M12 D-coded (24... 48 V DC)	M12, X-coded SC multimode
Cable requirement	min. CAT 5	min. CAT 7
Power supply	24 V DC	24 ... 48 V DC, 110 DC
General power consumption	< 5 W	< 5 W
Operating temperature range	RJ45: -25 ... +85 °C M12: -40... +35 °C	-40 ... +85 °C
Bit error rate	< 10 <sup>-12</sup>	< 10 <sup>-12</sup>



PA	Public Address
PIS	Passenger Information System
CCTV	Closed Circuit Television
COMM	Communications Systems
PLD	Passenger Load Determination
TCMS	Train Control Management System



## OUR BENEFITS FOR YOU:

- Punctuality
- Consistently high quality all over the world
- Comprehensive service wherever you are in the world
- Years of expertise for your product
- International presence
- On-site engineering service – from prototyping to after-sales
- Original manufacturer
- A team just for you



www.aichele-group.com  
www.bremi.de  
www.era-contact.com  
www.streicherplast.de

aichele GROUP  
GmbH + Co. KG  
Gewerbstraße 44  
75015 Bretten  
Deutschland / Germany  
Phone +49 (0)70 32 - 9 55 30 0  
info@aichele-group.com

BREMI Fahrzeug-Elektrik  
GmbH + Co. KG  
Grüner Weg 1  
19303 Dömitz  
Deutschland / Germany  
Phone +49 (0)38 758 - 304 0  
info@bremi.de

BREMI Fahrzeug-Elektrik  
GmbH + Co. KG  
Vertriebs- und Logistikzentrum  
Einsteinstraße 1  
71083 Herrenberg  
Deutschland / Germany  
Phone +49 (0)70 32 - 955 30 0  
info@bremi.de

streicherplast GmbH + Co. KG  
Friedhofstraße 4  
78588 Denkingen  
Deutschland / Germany  
Phone +49 (0)74 24 98 17-0  
info@streicherplast.de

era-contact GmbH Germany  
Gewerbstraße 44  
75015 Bretten-Gölshausen  
Deutschland / Germany  
Phone +49 (0)72 52 - 971 0  
info.germany@era-contact.de

era-contact Tunisia S.A.R.L.  
Hriza  
7026 El Azib, Bizerte  
Tunesien / Tunisia  
Phone +216 72 - 45 10 10  
info.tunisia@era-contact.de

era-contact (Suzhou) Co., Ltd.  
Building P,  
No. 9 Chang Yang Street,  
Suzhou Industrial Park  
Jiangsu, 215024,  
P.R. China  
Phone +86 5 12 - 6299 1800  
info.china@era-ct.com

era-contact Turkey  
Demiryolu Sistemleri San.  
ve Tic. Ltd. Sti.  
Cerkesli OSB Mahallesi,  
Imes-9 Caddesi, No:31,  
41455 Dilovasi, Kocaeli  
Türkei / Turkey  
Phone +90 532 504 38 09  
info.turkey@era-contact.com.tr

era-contact USA, LLC  
1475 Smith Grove Road  
Liberty, SC 29657  
USA  
Phone +1 (864) 777-6060  
info.usa@era-contact.com