

General Features

The D114RS board is a cost optimized interface card between railway vehicle equipment and a serial RS485 interface.

The "UART Emulation" interface allows serial communication without the need for a real-time operating system.

The D114RS is designed for harsh traction environment:

-40 °C to 85°C ambient temperature range.

Tested against:

EN 50155

EN 50121

EN 61373

IEC 61375 (2007)

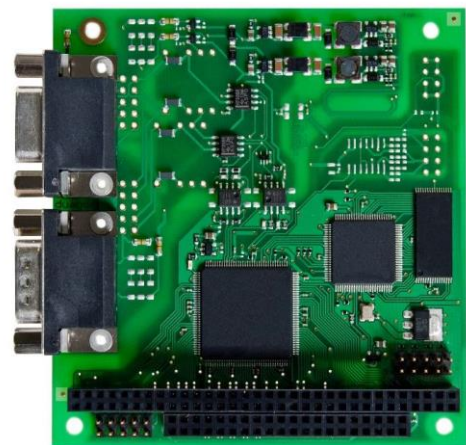
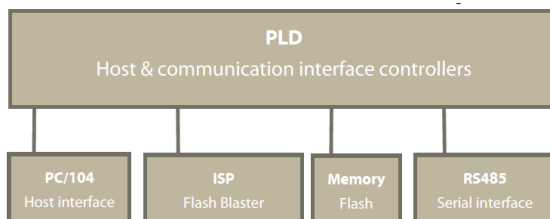
Key Benefits

- The "UART Emulation" interface is allows serial communication with the need for a real time operating system.
- Cost optimized interface card
- Reducing CPU power on the Host System
- Fully compliant to EN50128, EN50129, EN 50155, EN 50121, IEC 61373 and IEC 61375

Application Examples

- Generic RS485 interface for various serial protocols (e.g. HDLC)

D114RS Hardware Architecture



Life Cycle Cost

Total cost of ownership was an important aspect when creating the installation, maintenance and service concept.

To avoid service expenses, the interface card has strictly been designed without the usage of electrolytic capacitors.

Technical Data

Controller – Host and communication interface controller in FPGA
– 1Mb Flash Memory

Host-Interface – duagon UART emulation (2nd generation)
– Interface according to PC/104 specification

Supply Voltage – Single power supply
– 5V

Diagnostic/Service – Device status information/identification available through host interface

Power consumption – Max 2W

Operation conditions – Temperature: -40 to +85 °C (EN 50155 class TX)
– Relative humidity 75%, max 95% for 30 days per year (conformal coating) EN 60 068
– Shock and vibration: According to IEC 61373 category 1, class B
– EMI: According to EN 50121 and EN 50155

Dimensions/Weight – PC/104: 95 x 90 mm
– Mass: approx. 82g

Environment – Fully compliant to RoHS and REACH
– 100% 48h cyclic climatic testing

d-024937-038561

Order Code and HW Options

Product Type: **D114RS** - [] - [] - [] EXAMPLE: D114RS-T-H-N

Termination

1200hm
No internal termination

T
N

Communication protocol

HDLC

H

Grounding Pin

Pin 3 on X1 and X2 connected to GND
Standard pinout on X1 and X2

G
N

Related Documents

Data Sheet D114RS  D114RS_DS.pdf

Integration Guide  integ_pc104.pdf

Configuration Guide  config_ug.pdf

available at www.duagon.com

duagon AG
Riedstrasse 12
CH-8953 Dietikon
Phone +41 44 743 73 00
Fax +41 44 743 73 15

www.duagon.com

duagon®