

Main Features

- ▶ Up to MVB Class 4 support
- ▶ Support for several physical layers: EMD and ESD+
- ▶ Standardized cPCI host interface for fast system integration
- ▶ Designed for harsh rolling stock environments, EN 50155 compliant
- ▶ -40 to +85°C operating temperature

Overview

The D215 is a multi-purpose MVB interface with embedded processing power. The intelligent component encapsulates all MVB-relevant functions on a standardized 3U module.

duagon's own MVB controller is implemented on FPGA and supports up to 4096 process data ports. The train communication network interface complies with the TCN standard IEC 61375 up to class 4. The full set of MVB features are available:

- Process Data
- Message Data (optional)
- Bus Administrator (optional)
- Physical media: ESD+, EMD

The D215 is available with two different TCN software stacks:

- **MDFULL:** Passive MVB interface with a duagon MVB controller.

- **SERVER/ SERVER2:** Active MVB interface including the Message Data Real Time Protocol stack (MD RTP).

Each configuration is available with or without an integrated MVB Bus Administrator.

The interface card is accompanied by a host driver packet, providing a unified application programming interface (API) to access the various protocols and functions. The host driver is based on a client-server model, where the host system acts as client and the D215 as server.

The D215 is designed for harsh rolling stock environment and is fully compliant with EN 50155 and EN 50121 standards e.g. by:

- -40°C to 85°C operating temperature range
- coating against humidity
- enhanced EMI and vibration robustness

Technical Specification

PHYSICAL DATA

MVB connectors	2 x SUB-D Connectors
Host connector	CompactPCI Slot, universally keyed (+3.3V and +5V VCC(IO) tolerant)
Maintenance port connector	2 x Header, 10-pin and 20-pin
Power supply voltage range	5 V DC nom.
Power consumption	<3 W
Overall dimensions	160 × 100 × 20.32 mm

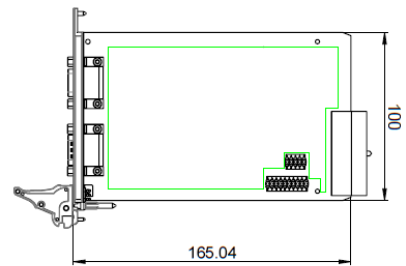
Weight	150 g
Operating temperature	-40 to +85°C, according to EN 50155; Class TX
Storage temperature	-40 °C to +85 °C
Relative humidity	yearly average ≤75%, 95% for 30 consecutive days max. (EN 50155)
Useful life	20 years, according to EN 50155 Class L4

COMPLIANCE

EN 50155:2007	Railway Applications (Electronic equipment used on rolling stock)
EN 50121-3-2:2016	Electromagnetic compatibility rolling stock apparatus
EN 61373:2010	Shock & Vibration
EN 45545-2	Fire protection, HL3
cPCI	PCI Express Base Specification 2.1, 2009, PICMG 2.0 R3.0
IEC 61375-3-1:2012	Multifunction Vehicle Bus (MVB)
IEC 61375-3-2:2012	
RoHS	Restriction of the Use of Certain Hazardous Substances
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals

Dimensions

Dimensions only for reference



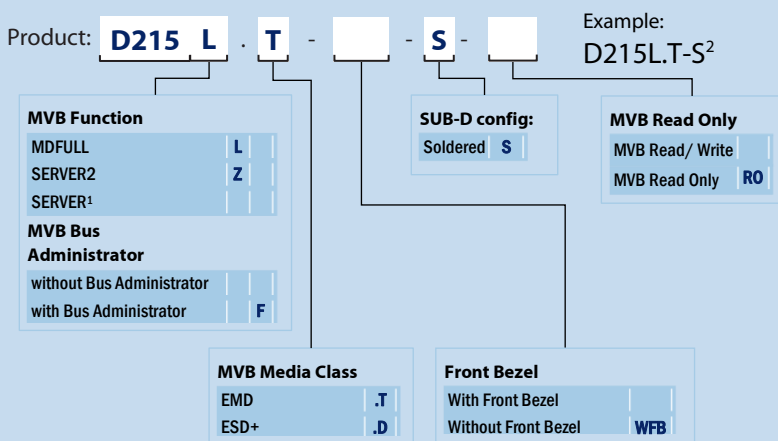
Top view



Side view

Front view

Ordering Information



¹ legacy option, preferred option "SERVER2"

² default ordering options

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