

PRELIMINARY

General Features

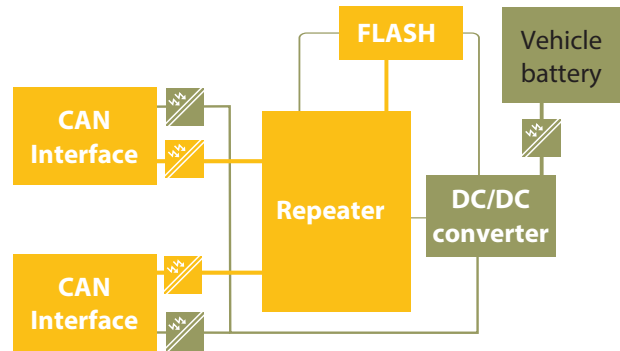
The D220C is a compact CAN repeater that connects two high speed CAN networks to a single logical CAN bus. With this repeater the amount of devices on the CAN bus and the range of the CAN bus can be increased. Furthermore both CAN ports on the D220C are fully galvanically isolated.

The repeater is equipped with an FPGA that integrates the glue logic for the functionality. It is fully transparent to any CAN protocol and can therefore be used in a wide range of applications.

One special feature of the D220C is that it can separate a defective segment from another segment in the network. This makes sure, that the remaining network can continue operating. As soon as the defect has been eliminated, the segment will again be attached to the network.

The D220C is powered directly from the train battery (24V to 110V). There is no need for an additional DC/DC converter.

The D220C is designed for harsh rolling stock environment and fully compliant to EN50155, IEC61375 and IEEE802.3.



Key Benefits

- Space-saving and robust
- Battery voltage input (up to 110V) eliminates the need for an external power supply
- Power interruption class S2: no service needed thanks to design without electrolytic capacitor
- Fully complies to IEC61375, EN50155 and EN50121

Application Examples

- Connects two galvanical separated CAN networks into one logical CAN network

Life Cycle Cost

Total cost of ownership was focused when creating the installation, maintenance and service concept. Further, to avoid service expenses, the gateway has strictly been designed

without the usage of electrolytic capacitors. As a result, the gateway does not need any periodic maintenance.

Technical Data

Platform	– FPGA Cyclone IV
Repeater	– Single bit delay < 100ns – Reconstruction of the Edges – Baudrate: up to 1Mbit/s
CAN Interfaces	– Fully transparent for CAN and CANopen – CAN 2.0A and 2.0B Interface – Galvanical separation 1kV
Diagnostic	– Diagnostic LEDS for CAN communication – Diagnostic LEDS for system Ok
Input Voltage / Power	– Powered directly from battery (24V -110V) Pmax = 4W – Interruption Class S2 ceramic capacitor on board, no need to replace capacitors due to ageing

Operating Conditions	– Ambient temperature: – 40°C to + 70°C (EN 50155) – Relative humidity: 75%, max 95% for 30 days per year (conformal coating) EN 60068 – Shock and vibration: According to EN 61373 category 1, class B – EMI: According to EN 50121 and EN 50155
Mounting	– DIN Rail – Anywhere (4 screw holes)
Physical Characteristics	– Housing: Metal, IP30 protection – Dimensions: 120 × 106 × 32 mm – Weight: 415 g
Environment	– Fully compliant to RoHS and REACH

d-014486-023972

Order Code and HW Options

EXAMPLE: D220C-HV

Product Type: **D220C** -

Power Supply

24 - 36 Vdc	LV
48 - 110Vdc	HV

Related Documents

Data Sheet D220C  d-014586-nnnnnn.pdf
available at www.duagon.com

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