FlexCard USB-M

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BENEFITS

- 1x FlexRay A+B, 2x CAN HS, 1x CAN LS
- Synchronous timestamp generation for all of the bus interfaces
- FlexRay bus system is self-sync capable (second FR-Controller only for synchronization integrated).
- USB powered (no need of an external power supply)
- Numerous triggering capabilities
- Driver available for: Windows
- Monitoring software included

FLEXCARD USB-M – OVERVIEW

The FlexCard USB-M, robust and powerful, is a multifunctional USB interface device for analyzing and monitoring of CAN and FlexRay bus systems. One FlexRay Communications Controller is available in the FlexCard USB-M, including channel A and B. Additionally, access to two CAN high-speed and to one CAN low-speed bus systems are provided.

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FlexCard USB-M

FLEXRAY

- Bosch E-Ray IP Core FlexRay controller
- V2.1 A FlexRay protocol specification
- Asynchronous monitoring mode allows listening without FlexRay synchronicity
- Combined asynchronous and synchronous monitoring mode (the procedure of a bus start-up can be monitored and registered exactly)
- Configurable TX-acknowledges
- Network synchronicity will be reported immediately (with timestamp)
- Chronological correlation of bus messages with one timestamp base
- Firmware update directly at the user PC possible
- Extensive filter configuration available
- Significant bus error messages
- Triggering on the precise slot, cycle, channel and on various error states
- Start-up Communications Controller

CAN

- Bosch D-CAN IP Core CAN controller
- V2.0 A/B CAN protocol specification
- Silent mode useable for listening without bus interference
- Transmit FIFO with up to 512 messages
- Configurable TX-acknowledges
- Significant bus error messages

TRIGGER

- Trigger 1x in, 1x out

PC INTERFACES

- USB 2.0 PC interface

DRIVER

- Uniform FlexCard API
  (Same API for FlexCard USB-M and FlexCard PMC-II)
- Driver Windows 32-bit (Windows XP, Vista, 7, 10)
- Driver Windows 64-bit (Windows 7, 10)

SOFTWARE SUPPORT

- STAR COOPERATION
  · Caromee
  · FlexAlyzerV2
  · Testtools SDK
- RA Consulting
  · DiagRA D
- dSPACE
  · Control Desk Bus Navigator Module

SCOPE OF DELIVERY

- FlexCard USB-M
- USB cable
- Documentation
- FlexCard API
- Monitoring Software FlexAlyzerV2
- Demos
- Tools

HARDWARE

Electrical Characteristics
The typical power consumption of the FlexCard USB-M is 1.75 W.

Supply voltage	5 VDC
Supply current (typical)	350 mA
Supply current (Standby)	20 mA

Physical Characteristics

FPGA on the FlexCard USB-M	Altera Cyclone III
Bus interfaces	1 FlexRay interface (Channel A+B), 2 CAN interfaces (high-speed) 1 CAN interface (low-speed)
Bus drivers	2x TJA1080 FlexRay transceiver 2x TJA1041 CAN high-speed transceiver 1x TJA1054 CAN low-speed transceiver
LEDs	Two LEDs per bus interface + 1 power LED
Synchronization interfaces	2 TTL trigger lines (1 IN, 1 OUT)
Dimensions L x W x H without cables app.	105 mm x 102 mm x 37 mm

Environmental Conditions

Temperature	Operating: -20°C to +70°C Storage: -40°C to +85°C
Relative Humidity	Operating/Storage: 0 % to 100 % rH, condensing

ORDER INFORMATION FLEXCARD USB–M

Product	Description	Order number
FlexCard USB-M	The FlexCard USB-M is a buspowered USB bus interface.	3-V0580A01
FlexCard USB-M CAN	The FlexCard USB-M CAN is a buspowered USB bus interface only for CAN-HS/-LS.	3-V0580B01
Upgrade FlexCard USB-M CAN to USB-M	Upgrades USB-M CAN to USB-M. Enables the FlexRay functionality.	3-V0580C01

ORDER INFORMATION ACCESSORY PARTS

Product	Description	Order number
Standard D-Sub 2x Y-bus cable (1 m)	9 pole D-Sub female to 2 x 9 pole D-Sub female, unshielded	3-00342C01
USB cable (1 m)	USB A to USB B cable	10016476
Trigger cable (1 m)	Trigger cable for FlexCard USB-M	3-00342D01