FlexDevice-S

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BENEFITS

- ARM Cortex A9 dual core (800 MHz)
  with 1 GByte DDR3 RAM
- Up to 10 bus channels
- 8 hardwired bus channels
  · 2*CAN-HS channels
  · 2*CAN-FD channels*
  · 1*FlexRay A channel (Self-Sync)*
  · 1*FlexRay B channel (Self-Sync)*
  · 1*100BASE-T1 channel*
  · 1*LIN channel
- 1 flexible FlexTiny3 Slot for additional bus transceivers
  (2*CAN- or 2*FlexRay- or 2*100BASE-T1- channels)
- Integrated WiFi module
- D-sub connectors for automotive bus systems
- Wakeup/Sleep mode support
- Startup <200ms possible
- Micro SD card slot
- IP20
- Temperature range –40°C to +85°C

* The base unit provides the bus systems CAN-HS and LIN. To use the bus systems FlexRay, CAN-FD or 100BASE-T1, additional licenses are required

FLEXDEVICE-S - THE MULTIFUNCTIONAL BUS CONTROL UNIT

FlexDevice-S is the starter of the FlexDevice product familiy which is used and recognized by many car manufacturers and component suppliers in their automotive electronics development. The FlexDevice family provides manifold solutions for

- gateways between different automotive bus systems
- bus interfaces
- remaining bus simulation
- signal manipulation
- data logging
- rapid prototyping

The multifunctional bus control unit FlexDevice-S supports the current and upcoming bus systems and has one variable interface, so it covers most of the application fields where bus interfaces are required. This device is appreciated by embedded software developers since it facilitates the implementation and testing of even very tricky gateway applications and prototyping functionalities.

Together with the comprehensive FlexConfig software family, the developers are enabled to set up and control their bus systems and ECU environment in a smart manner.

FlexDevice-S

TECHNICAL FEATURES

- Altera Cyclone V SOC (integrated ARM Cortex A9 dual core CPU)
- 1 GByte DDR3 RAM
- 3 D-sub bus connectors with fixed and pluggable transceivers
  - · Up to 4 bus interfaces on each connector
- Supported automotive bus systems
  - · Up to 4 FlexRay controllers (Bosch E-Ray cores)*
  - · Up to 2 FlexRay channels (2*channel A and 2*channel B) available on the connectors
  - · A connector with 2 FlexRay cores provides self-synchronization
  - · Up to 4 CAN-FD controllers*
  - · Up to 6 CAN-HS controllers*
  - · Up to 3 100MBit/s Ethernet controllers*
- Wakeup/sleep-support (wakeup possible via FlexRay or CAN)
- 1 GBit/s RJ45 Ethernet configuration interface
- Integrated 1 GBit/s Ethernet switch
- Micro SD card slot
- 4 digital inputs/outputs, or analog inputs (ADIO) via D-sub

*several bus combinations are possible, please contact us regarding your desired bus configuration.

SOFTWARE SUPPORT

The device is supported by FlexConfig RBS starting with version 4.4.

HARDWARE

Electrical Characteristics

Supply voltage	8-42 VDC
Supply current (Sleep Mode)	<10 mA (@ 12 V)
Supply current (Operation Mode)	<500 mA (@ 12 V)

Table 1: Electrical characteristics of the FlexDevice-S

Environmental Conditions

Temperature	Operating / Storage: -40 to +85°C
IP-Code	IP20
Relative Humidity	Operating / Storage: 0% to 90% rH, condensing

Table 2: Environmental conditions for the FlexDevice-S

SCOPE OF DELIVERY

- FlexDevice-S
- Documentation

ORDER INFORMATION FLEXDEVICE-S

Product	Description	Ordering number
FlexDevice-S	The FlexDevice-S is a multi-functional autonomous bus system platform	3-V0860A01
CAN-FD runtime	Runtime license for enabling the CAN-FD bus system on the FlexDevice-S. Required once per FlexDevice-S	3-00701K01
FlexRay runtime	Runtime license for enabling the FlexRay bus system on the FlexDevice-S. Required once per FlexDevice-S	3-00701L01
Ethernet runtime	Runtime license for enabling the Ethernet bus system on the FlexDevice-S. Required once per FlexDevice-S.Note: This license is not necessary for the ethernet configuration interface.	3-00701M01

ORDER INFORMATION FLEXDEVICE-S

Product	Description	Ordering number
FlexTiny3 FlexRay	Pluggable transceiver module with two FlexRay transceivers	3-00880A01
FlexTiny3 CAN-FD/HS	Pluggable transceiver module with two CAN-FD/HS transceivers	3-00880E01
FlexTiny3 Ethernet	Pluggable transceiver module with an Ethernet switch	3-00882B01
FlexTiny3 BroadR-Reach	Pluggable transceiver module with two BroadR-Reach transceivers	3-00882C01
Power supply 110/220 V	Power supply (12 VDC, 1.5 A)	3-00400B03
FlexConfig RBS runtime	Runtime license for RBS execution Required once per FlexDevice-S	3-00700J01
FlexConfig Gateway runtime	Runtime license for gateway execution Required once per FlexDevice-S (requires "FlexConfig RBS runtime")	3-00701E01
FlexConfig Control runtime	Runtime license for signal manipulation Required once per FlexDevice-S (requires "FlexConfig RBS runtime")	3-00701G01
FlexConfig Analyzer runtime	Runtime license for FlexConfig Analyzer execution Required once per FlexDevice-S	3-00701J01