Pioneering new technologies

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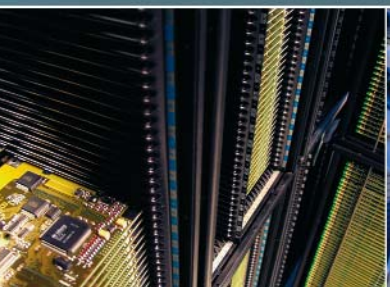
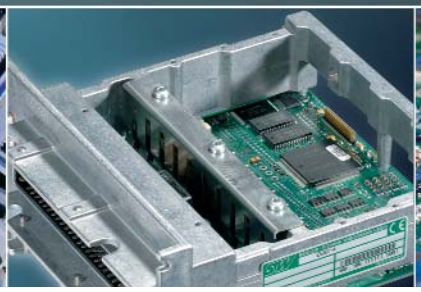
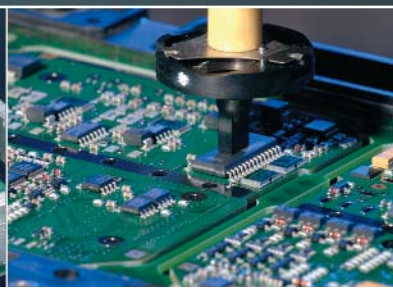
Sensor-Technik Wiedemann GmbH
Mobile Controllers and Measurement Technologies

ESX®-micro







Freely programmable controllers for
vehicles and machines with CAN-Bus

ESX®-micro - Technical Data

Processor system	
Processor	16 bit controller, 40 MHz and a system supervisor with watchdog
SRAM	512 kByte
Flash	256 kByte, optional 1 MByte
FRAM / EEPROM	8 kByte

Interfaces	
CAN	1st CAN, optional 2nd CAN, 2.0 B (11 bit and 29 bit identifier), full CAN, low- / high-speed up to 1 Mbit/s
RS232	optional 1 RS232, programmable baud rate
Babyboard	for expansions

In-/Outputs (max. 10)	
Analog inputs	**max. 4 analog inputs**, 4 ... 20 mA or 0 ... 10 V, 10 bit, switchable via software, short circuit protected **max. 4 additional voltage inputs**, 0 ... 10 V, 10 bit, short circuit protected **max. 2 additional voltage inputs 0 ... 32 V**, module coding (SEL 1/2), short circuit protected
RPM inputs	**max. 2 RPM inputs**, cut-off-frequency 6.5 kHz, short circuit protected
Digital inputs	**max. 8 digital inputs**, active high / low switchable, thresholds configurable via software, short circuit protected **max. 2 digital inputs**, active high / low configurable per hardware, short circuit protected
Digital / PWM outputs with current measurement	**max. 4 x 2 A**, high side switch, 0 ... 100 %, optional 2 x 4 A PWM-frequency from 10 Hz ... 1 kHz, diagnosable, short circuit protected
Digital / PWM outputs	**max. 2 x 2 A**, high side switch, 0 ... 100 % diagnosable, short circuit protected
max. PVG outputs	**max. 6 x PVG** used for Danfoss valves (20 % U_B ... 80 % U_B)
Analog outputs	**max. 2 voltage outputs**, 0 ... 10 V, each 140 mA **max. 2 current outputs**, 4 ... 20 mA, max. load 300 Ohm, diagnosable, short circuit protected
Motor bridge	optional motor bridge, nominal current 3.5 A with low side current measurement, high side and low side switch also usable separately, diagnosable, short circuit protected

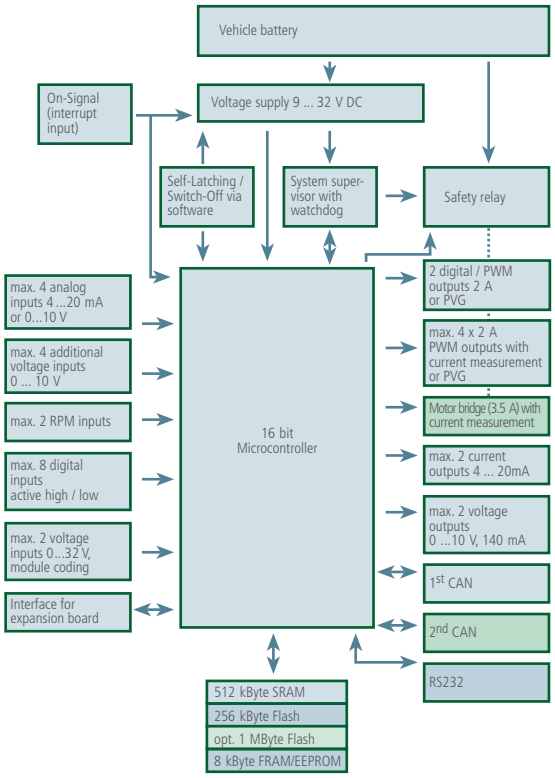
System data	
Voltage supply	9 ... 32 V DC
Current requirements	operational about 110 mA without external load, stand-by < 1 mA, max. total current 16 A

Mechanical data	
Connector	16 pin automotive type (Tyco / AMP)
Chassis	IP65, optional IP67, die-cast aluminium, GORE-TEX® breathing filter for pressure equalization
Weight	approx. 0.5 kg (1.1 lbs)
Dimension	approx. 97 mm x 125 mm x 45 mm (3.81" x 4.92" x 1.77")

EMC, Environmental requirements	
Requirements	According to automotive, agricultural and contruction industry standards; CE-conformity
Operating temperature	-40° C ... + 85° C (-40° F ... +185° F) chassis temperature

Pin	In-/Outputs			
4	TXD	CAN2H	DRZ1	SEL1
5	PWM1 / PVG1	UIN5		
6	PWM2 / PVG2	UIN6		
7	PWM3 / PVG3	UIN7	CAN2H	
8	PWM4 / PVG4	UIN8	CAN2L	
12	RXD	CAN2L	DRZ2	SEL2
13	AIN4	DO2 / PVG5	IOUT2	
14	AIN3	DO1 / PVG6	IOUT1	
15	AIN2	MB2	UOUT2	
16	AIN1	MB1	UOUT1	

Block diagram



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