



UniCAN 3



Product description

UniCAN 3 is a microcontroller-based stand-alone data logger with up to 12 CAN bus interfaces for the acquisition of measurement data and ECU information.

With the optional features of UniCAN 3, you are well prepared for future measurement tasks: CSM implements the support of many CAN protocols (CCP, XCP,...) and software extensions (CANsend, CAN stimulation,...), upon request.

An internal GPS module recording position, speed and time as well as a modem for mobile communication and a WLAN module for wireless data transmission allow a wide range of applications.

Shipping content

- ▶ Data logger UniCAN 3
- ▶ CSMunicnf configuration software (Windows 7, 8, 8.1 and 10), documentation

Key features


CAN



- ▶ Up to 12 CAN bus interfaces, CAN FD capable
- ▶ 4 digital I/O interfaces
- ▶ Exchangeable CF card up to 64 GB
- ▶ GPS receiver with detached antenna
- ▶ LTE modem (+ UMTS / EDGE / GPRS) and WLAN module with detached antenna and Ethernet for
 - ▶ data transmission parallel to recording
 - ▶ remote maintenance (configuration & firmware updates)
- ▶ Very low power consumption (operation & stand-by)

Accessories

- ▶ See data sheet "UniCAN Accessories"

Technical data

Type designation	UniCAN 3
	
CAN interfaces	4 × / 8 × / 12 × CAN 2.0B High-Speed CAN (ISO11898-2:2016), max. 2 Mbit/s CAN FD capable, can be enabled via option
Digital inputs/outputs	4 × (each channel individually configurable as input or output)
USB	1 × USB 2.0 OTG
LAN	1 × Fast Ethernet 10/100 MBit/s Auto MDI-X
Storage capacity	1 × CF card slot (up to 64 GB)
Available options	
Hardware	
CAN FD	CAN FD support according to ISO11898-1:2015
GPS	internal GNSS module, 72 channel GPS positioning engine (+ GLONASS / BeiDou / Galileo), 10 Hz position update rate
Mobile communication ¹⁾²⁾	internal LTE modem (+ UMTS / EDGE / GPRS),
WLAN ²⁾	internal WLAN module (IEEE 802.11 a/b/g/n/ac)
Data upload	transfer of raw data to server, further processing with CSMdataconv software ▶ see section „additional products“
Protocols on CAN	CCP, XCP, CCP Block Read, OBD2/EOBD, J1939
Software extensions	CANsend, CAN Stimulation, Wake-on-CAN, Seed & Key (customer-specific adaptation)
Power supply	
Minimum	8 V DC (-10 %)
Maximum	32 V DC (+10 %)
Power consumption	typ. 3 W (in normal operation), max. 6.7 W (at full load)
Standby current	PowerControl OFF
w/o Wake-on-CAN	< 350 µA at 12 V
1 × Wake-on-CAN	< 450 µA at 12 V
12 × Wake-on-CAN	< 800 µA at 12 V

Type designation	UniCAN 3
Indicators	
Front side	two-digit numerical status display for device status and error codes
Front & back side	2 multi-color LEDs each for status / network indication / card access
Housing	aluminum, black coated
Weight	approx. 600 g
Dimensions (w × h × d)	approx. 109 × 45 × 158 mm
Connectors	
CAN	1 × / 2 × / 3 × D-SUB HD plug, 15-pole (each for 4 × D-SUB connector, 9-pin, via adapter cable)
Digital I/O	LEMO 0B, 7-pole, code A
Power supply, Ethernet	LEMO 0B, 7-pole, code B
USB	Micro-AB USB connector
GPS	FAKRA connector, code C, blue
Mobile communication	FAKRA connector, code D, bordeaux
WLAN	RP-SMA connector
Operating and storage conditions	
Operating temperature range ¹⁾	-40 °C to +80 °C
Relative humidity	max. 95 % (non-condensing)
Storage temperature	-40 °C to +85 °C
Certification	 PTCRB (in progress)
Conformity	 (in progress)

¹ The operating temperature of UniCAN 3 versions with integrated modem should not drop below -30 °C. The modem may otherwise not start up reliably.

² Approval for the U.S. market (FCC, PTCRB) in progress

additional products

CSMdataconv

The software **CSMdataconv** is installed on a Windows® server. The **UniCAN 3** data logger then delivers the recorded measurement data, e.g. via mobile data transmission (mobile communications or WLAN) to an FTP or SFTP server which the software can access. **CSMdataconv** then converts the data into the desired format, e.g. MDF or CSV, and makes it available for analysis and post-processing.





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