

CATALOG

Our products



PAGE 04

WIRELESS CAN-INTERFACE

RM's line of wireless CAN interfaces enables CAN messages to be transmitted around the world.

PAGE 22

WIRED CAN-INTERFACE

RM Michaelides offers a wide range of wired CAN interfaces (USB, Ethernet, GPS, etc.) which facilitate fast data transfer.

PAGE 40

CANLOGGER

The compact, robust CAN-logger® can be used anywhere where GPS data also needs to be displayed alongside CAN messages.



PAGE 48

CAN-DISPLAYS

Providing an efficient CAN data display and a limitless range of configuration options are what flexible RM displays do best.

PAGE 64

CAN-SENSOREN

Now it is easy to measure accelerations and tendencies. Our compact sensor modules can be connected to an existing network using an integrated CAN interface.

PAGE 72

RM-TOOLS

Based on our products, we developed matching software solutions for configuration and visualization of various data.

WIRELESS CAN-INTERFACE

Over 10.000 agricultural vehicles worldwide implement CANlink® mobile CAN data transmission. Thanks to cellular modem devices, our own server and double encrypted messaging CAN data is safely transmitted to customer servers. Based on the transmitted data comprehensive telematics systems for the agriculture sector are created. This provides continuous CAN data access and personalized settings configuration. Data may be viewed at a delayed time when Log-File-Reader (session history) is implemented.





1. WIRELESS CAN-INTERFACE

2.

3.

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5.

WIRELESS CAN INTERFACES

global access
to CAN networks

CANlink® mobile

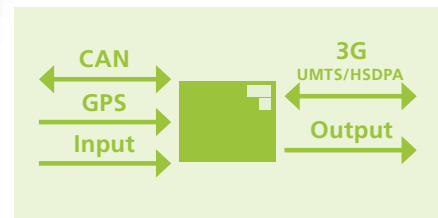


robust casing
for secure installation

optional
memory expansion

CAN DATA EXCHANGE VIA EDGE/UMTS/HSDPA WITH I/O FUNCTIONALITY

- + Easy-to-install housing
- + Integrated I/Os and also available with GPS
- + Web-based fleet management and remote diagnosis with PROEMION



ACCESS TO CAN DATA

Besides transferring data via GSM/GPRS/EDGE, CANlink® uses UMTS, UMTS and HSDPA standards to reduce dead time and reach a faster rate of data transfer. As a result, you are able to display, monitor, log and analyze data from mobile and stationary CAN bus systems in an even shorter amount of time from any location. CANlink® UMTS 5302 have local I/Os.

GPS GLOBAL TRACKING

CANlink® UMTS 5302 has an integrated GPS module for tracking mobile objects. Options, such as an extended storage drive, an RS-232 interface or an integrated battery for CANlink® UMTS 5302 are also available upon request.

RMSYS TOOLCHAIN MAKES CONFIGURATION EASY

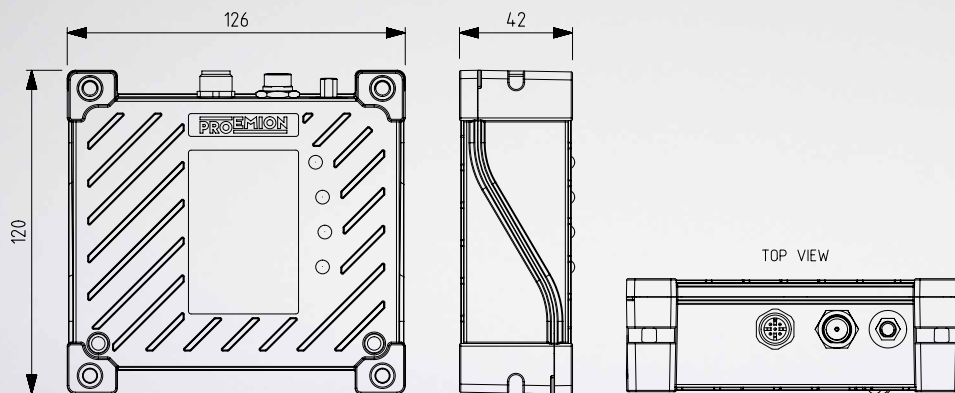
The extremely easy-to-use nature of RMsys Configurator software allows the user to configure CANlink® UMTS 5302 easily for different applications. Using this tool also makes it possible to carry out firmware updates and to configure devices remotely.

REMOTE DIAGNOSIS AND MANAGEMENT FOR FLEET AND MACHINE PARKS

By combining sophisticated solutions from PROEMION, CANlink® UMTS facilitates numerous telematic applications: Using PROEMION Real Time, machines or vehicles whose CAN data is monitored can be accessed almost in real time from any given location. The PROEMION web portal solution provides extensive options for machines and fleet management via the Internet, such as report compilation, route and workflow optimization or anti-theft measures using geofencing.

CANlink® mobile

5201 | 5301



| Mechanical Data | 5201 | 5301 |
|--------------------------------------------------------------|----------------------------------------|-------------------|
| Dimensions width / height / depth [mm] | 126 / 120.5 / 42 | |
| Degree of protection | IP 65 | |
| Temperature range | -30 °C ... +75 °C / -22 °F ... +167 °F | |
| Weight | 650 g | |
| Electrical Data | | |
| DC power supply | 6 V – 32 V | |
| Power input @ 24 V (operating \varnothing / sleep mode) | < 150 mA / < 1 mA | |
| Memory: Program / Configuration + Logging | 1 MB / 32 MB | |
| Real-time clock with backup capacitor | ✓ | |
| Status LEDs (2-colors) | 3 | 4 |
| Interfaces / Protocols | | |
| CAN (ISO 11898-2 high speed, 2.0 A/B) | 1 | |
| GPS / Glonass (tracking capability / accuracy / update rate) | - | 72 / 2,5 m / 1 Hz |
| GSM, GPRS, EDGE class 12 (MHz) | 850 / 900 / 1800 / 1900 | |
| UMTS, HSPA 6-Band (MHz) | 800 / 850 / 900 / 1700 / 1900 / 2100 | |
| Logging memory interface | ✓ (up to 32 GB) | |
| Acceleration sensor | 3 axes, \pm 16 g, 10 Bit | |
| Inputs / Outputs | 1x D-IN (CL15) / - | |
| CANopen®, Layer 2, J1939 | ✓ | |
| Customized CAN protocols | on request | |
| Software | | |
| RMtools Dashboard | ✓ | |
| RMtools Converter | ✓ | |
| RMtools CD | 157 002 059 | |
| Accessories / Product number | | |
| CANlink® mobile | 253 004 048 | 253 004 049 |
| CAN cable M12 5-pin / 9-pin D-Sub + power | 136 000 028 | |
| CAN cable M12 5-pin / 9-pin D-Sub | 136 000 009 | |
| CAN cable M12 5-pin / open | 136 000 005 | |
| GSM / GPS / 3G / Glonass antenna | 157 000 089 | |
| Micro SD memory card 2GB (industrial grade) | 157 001 011 | |
| Isolation board | 140 400 025 | |
| DIN rail mounting kit | 141 000 010 | |
| Starter-Kit | | |
| CANlink® mobile Starter-Kit | TBD | 253 000 123 |
| Certifications | | |
| CE, FCC, E1 | ✓ | |

WIRELESS CAN INTERFACES

Mini-USB for fast and secure data exchange

robust casing for secure installation

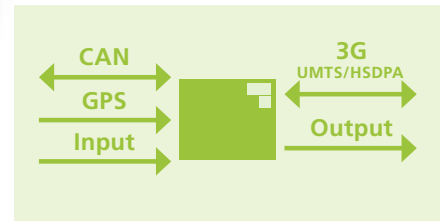
optional memory expansion

CANlink® mobile



CAN DATA EXCHANGE VIA EDGE/UMTS/HSDPA WITH I/O FUNCTIONALITY

- + Easy-to-install housing
- + Integrated I/Os and also available with GPS
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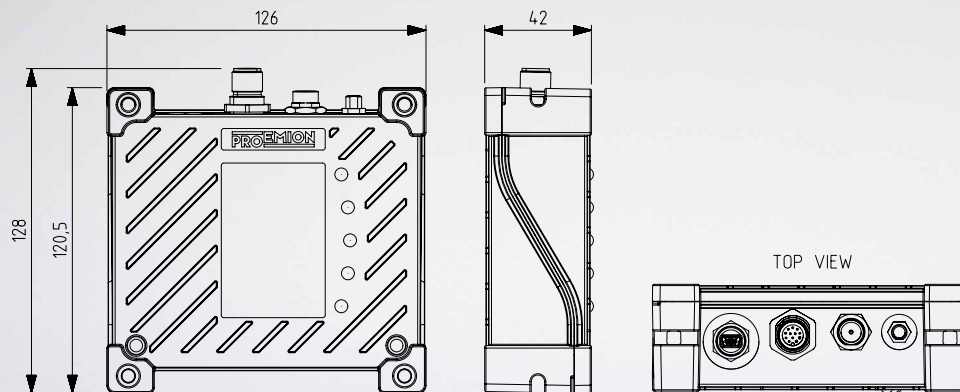
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CANlink® mobile

5303 | 5320



| Mechanical Data | 5303 | 5320 |
|--------------------------------------------------------------|-------------------------------------------|---------------------------------------|
| Dimensions width / height / depth [mm] | 126 / 128 / 42 | |
| Degree of protection | IP 65 | |
| Temperature range | -30 °C ... +75 °C / -22 °F ... +167 °F | -20 °C ... +60 °C / -4 °F ... +140 °F |
| Weight | 650 g | |
| Electrical Data | | |
| DC power supply | 6 V – 32 V | |
| Power input @ 24 V (operating \varnothing / sleep mode) | < 150 mA / < 1 mA | |
| Battery (capacity) | - | ✓ (4000 mAh) |
| Memory: Program / Configuration + Logging | 1 MB / 32 MB | |
| Real-time clock with backup capacitor | ✓ | |
| Status LEDs (2-colors) | 5 | |
| Interfaces / Protocols | | |
| CAN (ISO 11898-2 high speed, 2.0 A/B) | 2 | |
| GPS / Glonass (tracking capability / accuracy / update rate) | 72 ch / 2,5m / 1 Hz | |
| GSM, GPRS, EDGE class 12 (MHz) | 850 / 900 / 1800 / 1900 | |
| UMTS, HSPA 6-Band (MHz) | 800 / 850 / 900 / 1700 / 1900 / 2100 | |
| Micro SD card interface | ✓ (up to 32 GB) | |
| USB, RS-232 | 2.0 Fullspeed mini USB / max 230 kbit/s | |
| Acceleration sensor | 3 axes, \pm 16 g, 10 Bit | |
| Inputs / Outputs | 1x D-IN (CL15), 2x A-IN (0 VDC... 10 VDC) | |
| CANopen®, Layer 2, J1939 | ✓ | |
| Customized CAN protocols | on request | |
| Software | | |
| RMtools Dashboard | ✓ | |
| RMtools Converter | ✓ | |
| RMtools CD | 157 002 059 | |
| Accessories / Product number | | |
| CANlink® mobile | 253 004 050 | 253 004 046 |
| CAN cable M12 12-pin / 3x 9-pin D-Sub + power / open | 136 000 172 | |
| CAN cable M12 12-pin / open 2m | 136 000 171 | |
| GSM / GPS / 3G / Glonass antenna | 157 000 089 | |
| Micro SD memory card 2GB (industrial grade) | 157 001 011 | |
| Isolation board | 140 400 025 | |
| DIN rail mounting kit | 141 000 010 | |
| Starter-Kit | | |
| CANlink® mobile Starter-Kit | 253000124 | TBD |
| Certifications | | |
| CE, FCC, E1 | ✓ | |



Model: 6303
SN: 1042014
Rev: 6.0.4
QR CODE
6578

mo

CANZ



CANlink®
mobile

CAN1

CONTROL



WIRELESS CAN INTERFACES

data exchange via serial port profile

easy configuration

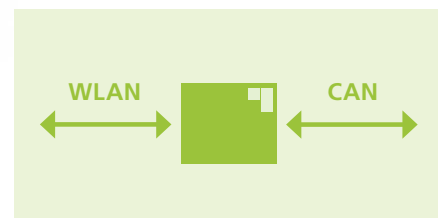
CANlink® WLAN Series 2000

high data throughput



WIRELESS TRANSFER OF CAN DATA BETWEEN CAN AND / OR WLAN / LAN NETWORKS

- + Wireless data transfer via WLAN now with 400m coverage
- + High data transfer rate
- + Two different operating modes



CANLINK® WLAN CONNECTS CAN NETWORKS AND USES AN IPHONE AS A CONTROL POINT

Whether as a diagnosis tool, remote control or data link – CANlink® WLAN is a multi-functional interface for various different requirements. 400m coverage, a high data transfer rate and robust housing allow the new model from RM Michaelides to be connected to networks that are difficult to couple, thus saving costs. With CAN bus, it is as if the user were directly connected to a mobile or stationary object. CANlink® WLAN facilitates a high data transfer rate in order to display telemetry data in real time. The data can be displayed on a computer or iPhone.

WIRELESS TRANSFER

Depending on what is required, the module can be used between different CAN networks or between CAN and WLAN networks. Thanks to its integrated inputs and outputs, CANlink® WLAN is the only CAN WLAN Gateway solution on the market. Data is transferred in accordance with the IEEE 802.11 a/b/g/n standard. The range of the previous model has been quadrupled and can now be used in applications where up to 400m are required.

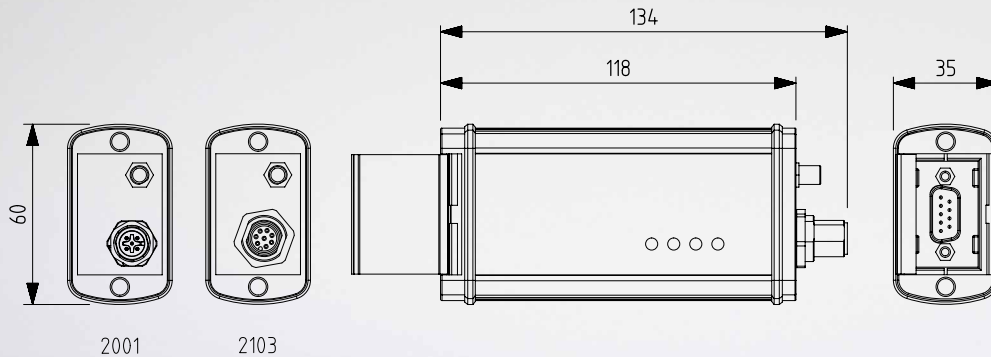
ADJUSTABLE DATA PROTOCOLS

Either TCP or UDP data protocols are available. By using an appropriate router, CAN data can be transferred via the Internet or made available over the network. CANlink® WLAN has two different operating modes: infrastructure mode and ad hoc mode. When in infrastructure mode, data is transferred via a WLAN access point which is often part of the company's internal IT infrastructure. In contrast, the ad hoc mode establishes a direct connection to a computer or laptop using an integrated WLAN interface or a second CANlink® WLAN device. This way, CANlink® WLAN can be used as a CAN diagnosis interface.

SEE THE BENEFITS

The benefits of wireless connections are primarily that CAN networks which are difficult to couple, such as machines with a mobile unit that are connected via a cable carrier or sliding contact, can be connected to each other. As a result, wear on the cable is avoided, a stable connection is guaranteed and savings are made.

CANlink® WLAN Series 2000



| Mechanical Data | 2001 | 2103 |
|---------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| Dimensions width / height / depth [mm] | 135 / 60 / 35 | |
| Degree of protection | IP 65 | |
| Temperature range | -40 °C ... +75 °C / -40 °F ... +167 °F | |
| Weight | 190 g | |
| Electrical Data | | |
| DC power supply | 8 V – 33 V | |
| Power input @ 24 V | 100 mA | |
| Memory: Program / Configuration / Data | 128 kB / 8 kB / 256 kB | |
| Status LEDs | 4 | |
| Interfaces / Protocols | | |
| CAN | 1 (ISO 11898-2 high speed, 2.0 A/B) | |
| WLAN | IEEE 802.11 a/b/g/n TCP / UDP Dual band 2.4 / 5GHz Security: WPA2, WPA, WEP Range: up to 400m (open ground) Connector: RPSMA-f | |
| CANopen®, Layer 2 | ✓ | |
| Customized CAN protocols | on request | |
| Inputs / Outputs | - | 2x 0...10V (10 Bit) / 1 Relais |
| Software | | |
| RM CAN Device Monitor | ✓ | |
| RM CAN Device Monitor Pro CANopen® | opt. (157 002 025) | |
| RMsys Dashboard | ✓ | |
| Accessories / Product number | | |
| CANlink® WLAN | 253 001 029 | 253 001 044 |
| CAN cable M12 5-pol. / 9-pol. D-Sub + Power | 136 000 028 | - |
| CAN cable M12 8-pol. / 9-pol. D-Sub + Power + offen 5 m | - | 136 000 154 |
| WLAN antenna dualband (2,4 / 5 GHz) | 157 000 085 | |
| DIN rail mounting clamp | 142 200 053 | |
| Mounting Sheet ABP600/119,5 - set | 140 200 063 | |
| Starterkit | | |
| CANlink® WLAN Starter Kit | 253 000 059 | - |
| CANlink® WLAN Bridge Starter Kit | 253 000 060 | - |
| Certifications | | |
| CANlink® WLAN | CE, FCC, E1 | |

WIRELESS CAN INTERFACES



extended range
of up to 1320 ft

small compact casing

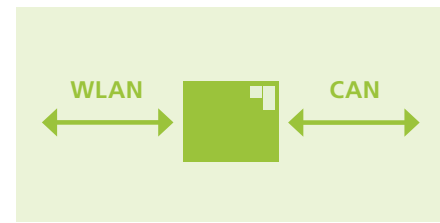
suited to
OEM applications

CANlink® WLAN Series 3000



WIRELESS TRANSFER OF CAN DATA BETWEEN CAN AND / OR WLAN / LAN NETWORKS

- + Wireless data transfer via WLAN now with 400m coverage
- + High data transfer rate
- + ease of assembly
- + Two different operating modes



CANLINK® WLAN CONNECTS CAN NETWORKS AND USES AN IPHONE AS A CONTROL POINT

Whether as a diagnosis tool, remote control or data link – CANlink® WLAN is a multi-functional interface for various different requirements. 400m coverage, a high data transfer rate and robust housing allow the new model from RM Michaelides to be connected to networks that are difficult to couple, thus saving costs. With CAN bus, it is as if the user were directly connected to a mobile or stationary object. CANlink® WLAN facilitates a high data transfer rate in order to display telemetry data in real time. The data can be displayed on a computer or iPhone.

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Depending on what is required, the module can be used between different CAN networks or between CAN and WLAN networks. Thanks to its integrated inputs and outputs, CANlink® WLAN is the only CAN WLAN Gateway solution on the market. Data is transferred in accordance with the IEEE 802.11 a/b/g/n standard. The range of the previous model has been quadrupled and can now be used in applications where up to 400m are required.

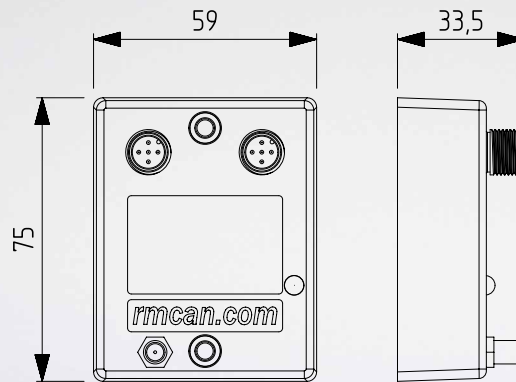
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Either TCP or UDP data protocols are available. By using an appropriate router, CAN data can be transferred via the Internet or made available over the network. CANlink® WLAN has two different operating modes: infrastructure mode and ad hoc mode. When in infrastructure mode, data is transferred via a WLAN access point which is often part of the company's internal IT infrastructure. In contrast, the ad hoc mode establishes a direct connection to a computer or laptop using an integrated WLAN interface or a second CANlink® WLAN device. This way, CANlink® WLAN can be used as a CAN diagnosis interface.

SEE THE BENEFITS

The benefits of wireless connections are primarily that CAN networks which are difficult to couple, such as machines with a mobile unit that are connected via a cable carrier or sliding contact, can be connected to each other. As a result, wear on the cable is avoided, a stable connection is guaranteed and savings are made.

CANlink® WLAN Series 3000



| Mechanical Data | 3101 | 3102 |
|-------------------------------------------|---------------------------------------------------------------------------------------------|----------------------------|
| Dimensions width / height / depth [mm] | 59 / 75 / 33.5 | |
| Degree of protection | IP 65 | |
| Temperature range | -30 °C - +75 °C / -22 °F - +167 °F | |
| Weight | ca. 100 g | |
| Electrical Data | | |
| DC power supply | 9 V - 33 V | |
| Power input @ 24 V (sleep mode) | < 80 mA (< 1mA) | |
| Memory: Program / Configuration / Data | 768 kB / 16 kB / 96 kB | |
| Status LEDs (2-colors) | 1 (red / green) | |
| Interfaces / Protocols | | |
| CAN | 1 (ISO 11898-2 high speed, 2.0 A/B) | |
| WLAN | IEEE 802.11 a/b/g/n Dual band: 2.4 / 5 GHz Security: WPA2-PSK, WPA-PSK, WEP64, WEP128 | |
| Range | on request | up to 400m (open ground) |
| Antenna internal / external (connector) | internal | external (RP-SMA – female) |
| RS-232 | ✓ (for configuration, further functionality on request) | |
| CANopen®, Layer 2 | ✓ | |
| Customized CAN protocols | on request | |
| Software | | |
| RMtools Dashboard | ✓ | |
| RMtools CD | 157 002 059 | |
| Accessories / Product number | | |
| CANlink® WLAN | 253 001 054 | 253 001 055 |
| CAN cable M12 5-pin / 9-pin D-Sub + power | 136 000 028 | |
| WLAN antenna dual-band (2.4 / 5 GHz) | 157 000 085 | |
| Starterkit | | |
| CANlink® WLAN Starter Kit | on request | |
| Certifications | | |
| CE, FCC, E1 | ✓ (planned) | |



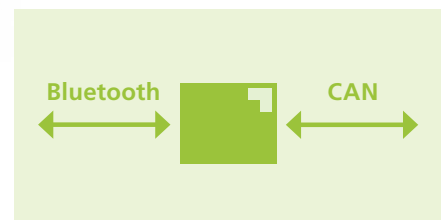


WIRELESS CAN INTERFACES



EXCHANGE DATA SIMPLY BETWEEN DIFFERENT CAN NETWORKS VIA BLUETOOTH

- + Wireless transfer via Bluetooth
- + Data transfer via serial port profile
- + Optional second CAN interface
- + Optional local I/Os



WELL SUITED FOR MOBILE AND STATIONARY APPLICATIONS

CANlink® Bluetooth facilitates wireless data transferral between two different CAN networks or between a CAN network and a computer, laptop or PDA via a Bluetooth connection. Various different devices with a Bluetooth interface can exchange data if they support the serial port profile (SPP) – a virtual, serial COM port required for the interface. Connected devices may either be mobile (e.g. vehicles or machines) or stationary (e.g. building or facility). CANlink® Bluetooth supports the transparent CANview® mode where the device can be operated as a CAN/RS-232 Converter (CANview®). By operating in CANopen® slave mode, CANopen® participants are able to communicate via Bluetooth devices. CANlink® Bluetooth comes with an optional second CAN interface or with local I/Os and can be quite easily exchanged for CANview® or a CANview® USB.

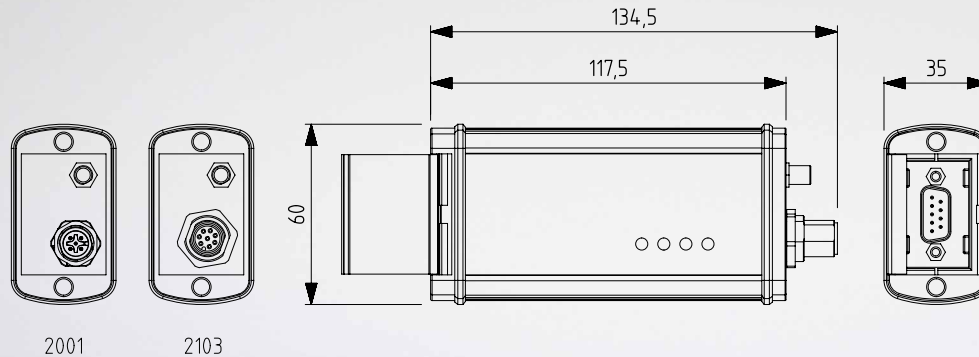
CUSTOMIZED MODELS

CANlink® Bluetooth is contained within robust housing and has an EMC-secure design that allows it to be used in tough conditions. The CAN side has the option of being delivered galvanically isolated from the Bluetooth side. Hardware can also be customized upon request.

POSSIBLE CONFIGURATION VIA BLUETOOTH

CANlink® Bluetooth firmware can be adjusted to suit the customer's requirements. A flash tool for updating the firmware is also included in the delivery. Configuration is carried out via CAN, RS-232 or via Bluetooth using the CANlink® Bluetooth Configurator. The RM CAN Device Monitor software for PC is used to communicate with the CAN bus.

CANlink® Bluetooth Series 2000



| Mechanical Data | 2001 | 2103 |
|---------------------------------------------------------|-------------------------------------------------------------------------------|---------------|
| Dimensions width / height / depth [mm] | 127 / 60 / 35 | 135 / 60 / 35 |
| Degree of protection | IP 65 | |
| Temperature range | -40 °C ... +75 °C / -40 °F ... +167 °F | |
| Weight | 200 g | |
| Electrical Data | | |
| DC power supply | 10 V – 33 V | |
| Power input @ 24 V (typical) | 80 mA | |
| Memory: Program / Configuration / Data | 128 kB / 8 kB / 256 kB | |
| Status LEDs | 4 | |
| Interfaces / Protocols | | |
| CAN | 1 (ISO 11898-2 high speed) | |
| Bluetooth | 2.0, Power Class 1 range: up to 100m (open ground), Serial Port Profile | |
| CANopen®, Layer 2 | ✓ | |
| Customized CAN protocols | on request | |
| Outputs | - | 1 Relais |
| Software | | |
| RM CAN Device Monitor | ✓ | |
| RM CAN Device Monitor Pro CANopen® | opt. (157 002 025) | |
| RMsys Dashboard | ✓ | |
| Accessories / Product number | | |
| CANlink® Bluetooth | 253 001 030 | 253 001 036 |
| CAN cable M12 5-pol. / 9-pol. D-Sub + Power | 136 000 028 | - |
| CAN cable M12 8-pol. / 9-pol. D-Sub + Power + offen 5 m | - | 136 000 154 |
| Bluetooth- / WLAN antenna angled style 90° | 157 000 014 | |
| DIN rail mounting clamp | 142 200 053 | |
| Mounting Sheet ABP600/119,5 - set | 140 200 063 | |
| Starter-Kit | | |
| CANlink® Bluetooth Starter Kit | 253 000 055 | - |
| CANlink® Bluetooth Bridge Starter Kit | 253 000 056 | - |
| Certifications | | |
| CE, FCC, E1 | ✓ | |

WIRELESS CAN INTERFACES

Layer 2-, CANopen®
and custom firmware

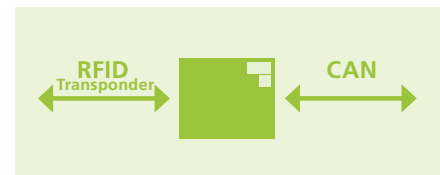


reading and writing
transponder data

integration of RFID
in CAN networks

CANlink® RFID

- + RFID is integrated into the CAN network
- + Various different transponder type read-outs
- + CANopen®, Layer 2- and customized firmware



EASY TO INTEGRATE

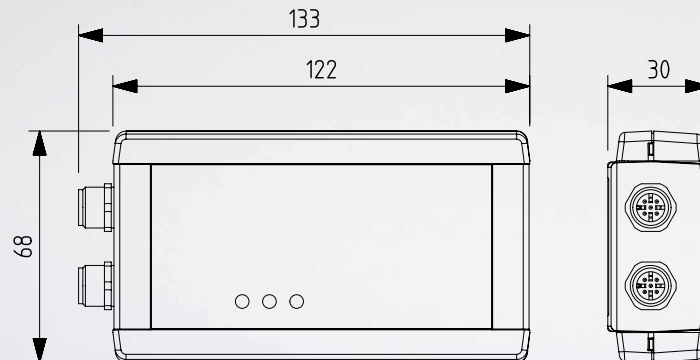
CANlink® RFID allows RFID technology to be integrated into a CAN network. The device can read out and describe transponders in accordance with ISO 15693 and ISO 14443 (e.g. NXP® MIFARE® Standard3 and MIFARE® Ultralight3). In this context, the range of an ISO 14443 transponder is 50 mm and the range of an ISO 15693 transponder is 90 mm. These ranges make CANlink® RFID ideal for controlling access to stationary and mobile applications, for identifying Smart Labels and for use in ticketing. CANlink® RFID is particularly suitable for identifying which modules on machines and in equipment need to be replaced. An integrated anti-collision function is particularly advantageous in this respect since several transponders can be within the reading range at the same time.

CUSTOMIZED HARDWARE

CANlink® RFID housing is made from ABS. The device's status is shown using three LED lights. Special developments for hardware are available upon request. CANlink® RFID can also be delivered as an OEM version, for example, without housing.

VARIOUS CAN PROTOCOLS CAN BE USED

CANlink® RFID firmware is available in a standard Layer 2- and CANopen® version, but can also be adjusted to suit the customer's requirements. There is also the option of implementing a CANopen® Device Profile for RFID devices. The RM CAN Device Monitor is used to display and send CAN messages as well as implement CANopen® functions.



| | |
|-------------------------------------------|------------------------------------------------------------|
| Mechanical Data | 2001 |
| Dimensions width / height / depth [mm] | 134 / 69 / 30 |
| Degree of protection | IP 40 |
| Temperature range | -20 °C ... +70 °C / -4 °F ... +158 °F |
| Weight | 140 g |
| Electrical Data | |
| DC power supply | 9 V – 36 V |
| Power input @ 24 V | 65 mA |
| Memory: Program / Configuration / Data | 32 kB / 2 kB / 1 kB |
| Status LEDs | 3 |
| Interfaces / Protocols | |
| CAN | 1 (ISO 11898-2 high speed, 2.0 A/B), no galvanic isolation |
| RFID | 13,56 MHz |
| CANopen®, Layer 2 | ✓ |
| Customized CAN protocols | on request |
| Transponders | ISO 15693, ISO 14443 |
| Digital Inputs / Outputs | - |
| Software | |
| RM System Tools CD | 157 002 059 |
| RM CAN Device Monitor Pro CANopen® | 157 002 025 |
| Accessories / Product number | |
| CANlink® RFID 2001 | 253 006 001 |
| CAN cable M12 5-pin / open 2 m | 136 000 005 |
| CAN cable M12 5-pin / 9-pin D-Sub | 136 000 009 |
| CAN cable M12 5-pin / 9-pin D-Sub + power | 136 000 028 |
| RFID transponder card ISO 14443 | 157 001 006 |
| RFID transponder card ISO 15693 | 157 001 005 |
| Wall suspension element RFID | 142 200 050 |
| Starter-Kit | |
| CANlink® RFID Starter-Kit | 253 000 025 |
| Certifications | |
| CE | ✓ |

WIRED CAN INTERFACES

Today, forklift and warehouse equipment manufacturers already benefit during new device development phase from uniform diagnostic interfaces for service technicians. Via wired CAN interfaces the service PC is connected via USB or RS-232 with the vehicles. In this way CAN data may be analyzed at any time. The main advantage for machine and vehicle developers is the prospect of being able to read out various diagnostic protocols of different series and generations of vehicles.





1.

2. WIRED CAN INTERFACES

3.

4.

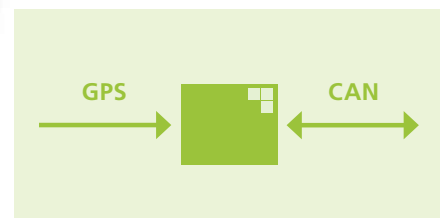
5.

WIRED CAN INTERFACES



RECEIVE AND TRANSMIT GPS DATA

- + Reasonably priced gateway component
- + Simple to configure
- + No additional firmware programming necessary



POSITIONING

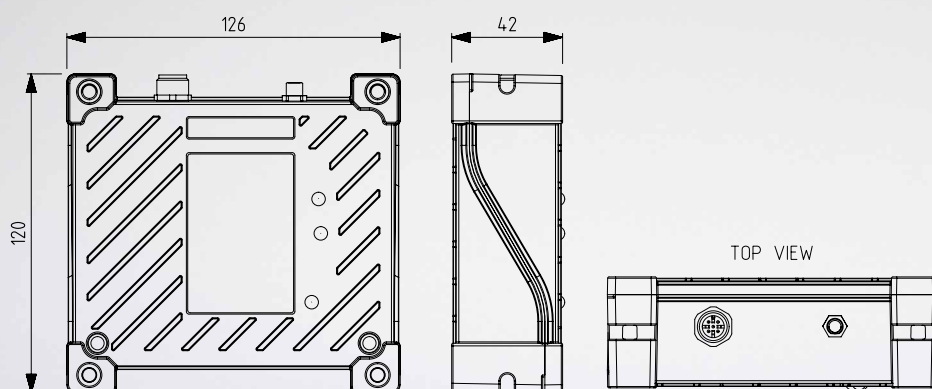
CANview® GPS 5107 transfers current GPS data and displays it locally on the CAN bus.

GATEWAY IN USE

The new CANview® GPS model is able to collect all parameters simultaneously and supply them individually, depending on what is required. This is especially useful when conducting tests on new airplane models (pre-series) or when employing agricultural aircraft to calculate the exact amount of atomizer required based on ground speed. The module has been developed in such a way that it meets industrial standards and thus can be used in almost all environments.

SIMPLE SOFTWARE

CANview® GPS can be configured very easily using the computer software delivered with the device. Additional firmware programming is therefore not required. Alongside standard configuration parameters, a configuration file is also provided which transmits GPS data in a J1939 format. Depending on how else the device will be used, transmission can be configured in relation to the parameters required. Moreover, the hardware and software can both be customized to suit the customer's requirements.



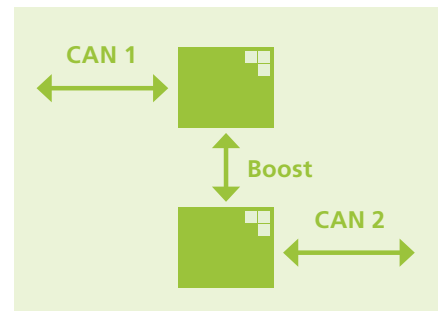
| | |
|-------------------------------------------|----------------------------------------|
| Mechanical Data | 5107 |
| Dimensions width / height / depth [mm] | 126 / 121 / 42 |
| Degree of protection | IP 65 |
| Temperature range | -30 °C ... +75 °C / -22 °F ... +167 °F |
| Weight | 510 g |
| Electrical Data | |
| DC power supply | 6 V – 32 V |
| Power input @ 24 V | 60 mA |
| Memory: Program / Configuraton / Data | 384 kB / 4 MB / 512 kB |
| Real-time clock with backup capacitor | Backup-time 24 hours (typical @ 25 °C) |
| Status LEDs (2-colors) | 3 |
| Interfaces / Protocols | |
| CAN | 1 (ISO 11898-2 high speed, 2.0 A/B) |
| GPS (tracking capability) | 22 channels |
| GPS (accuracy) | 3 m |
| GPS (update rate) | 10 Hz |
| CANopen®, Layer 2, J1939 | ✓ |
| Customized CAN protocols | on request |
| Software | |
| RM System Tools CD | 157 002 059 |
| Accessories / Product number | |
| CANview® GPS 5107 | 253 004 043 |
| CAN cable M12 5-pin / open 2 m | 136 000 005 |
| CAN cable M12 5-pin / 9-pin D-Sub | 136 000 009 |
| CAN cable M12 5-pin / 9-pin D-Sub + power | 136 000 028 |
| GPS-antenna roof | 157 000 020 |
| DIN rail mounting kit | 141 000 010 |
| Starterkit | |
| CANview® GPS 5107 Starter Kit | 253 000 107 |
| Certifications | |
| CANview® GPS 5107 | CE, FCC |

WIRED CAN INTERFACES



RELIABLE CAN DATA TRANSFER, EVEN IN DIFFICULT OPERATING CONDITIONS

- + CAN data transfer with higher voltage level
- + Protection against overvoltage impulses
- + Range of up to 1000 ft

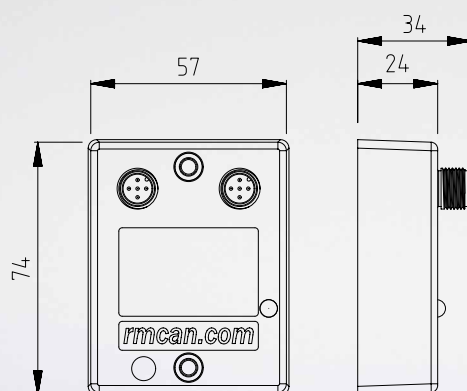


POORLY CONDUCTIVE CONTACTS ARE BYPASSED

Usually, CAN signals are transmitted at a very low voltage level. If poorly conductive contacts need to be bypassed during transmission, however, this voltage level is insufficient to do so. CANboosters are always operated as “bypasses” and facilitate bi-directional data transfer. In the process, CAN messages received by the CAN interface are transferred by a CANbooster – which has a considerably higher voltage level (8V/16V differential) than CAN in accordance with ISO11898-2 – to a second CANbooster. The latter then transmits the data to the CAN bus. Contaminated and so poorly conductive contacts thus present no further hindrance. The cable between the boost interfaces may be up to 300m long. The high dielectric strength of the CANboosters means that any connected CAN devices, apart from being protected from destruction, are protected against overvoltage.

RELIABLE DATA TRANSFER DESPITE DIFFICULT CONDITIONS

CANboosters have robust, splash-proof plastic housing that allows them to be used even in difficult environmental conditions. Harbor cranes are an ideal area where CANboosters can be applied. Here, sliding contacts are often used to transfer control signals from the cabin to the claw. These sliding contacts are often contaminated or corrode due to unfavorable weather conditions meaning that CAN data cannot be transferred reliably without using a CANbooster.



| | |
|-----------------------------------------------|-------------------------------------------|
| Mechanical Data | 5101 |
| Dimensions width / height / depth [mm] | 59 / 75 / 33 |
| Degree of protection | IP 67 |
| Temperature range | -30 °C ... +75 °C / -22 °F ... +167 °F |
| Weight | 120 g |
| Electrical Data | |
| DC power supply | 9 V – 36 V, galv. isolated |
| Power input @ 24V | < 100 mA |
| Memory: Program / Configuration / Data | 64 kB / 8 kB / 20 kB |
| Status LEDs | 1 |
| Cable length (Boost) | up to 300 m |
| Isolation voltage | 2 kV (GND-PWR GND-Boost) |
| Interfaces / Protocols | |
| CAN | 1 (ISO 11898-2, 2.0 A/B, galv. isolated) |
| Boost | 1 (signal level: 8 V / 16 V differential) |
| CANopen® (configuration), Layer 2 (operation) | ✓ |
| Software | |
| RM System Tools CD | 157 002 059 |
| Accessories / Product number | |
| CANbooster | 253 002 015 |
| CAN cable M12 5-pin / D-Sub + power | 136 000 028 |
| CAN cable M12 5-pin / D-Sub 120R 2m | 136 000 064 |
| CAN cable M12 5-pin / open 2m | 136 000 005 |
| Starter-Kit | |
| RM CANbooster Starter-Kit | 253 000 100 |
| Certifications | |
| CE, FCC | ✓ |



QR code
M
A
A

COM

CAN →

Device Status

ISO 11898

9.36V DC

02.11

0001395

253002015

CANbooster 5101

→ **BOOST**

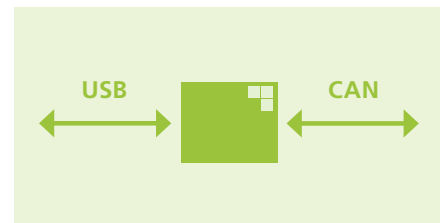


WIRED CAN INTERFACES



TRANSFER DATA FROM A CAN NETWORK TO A COMPUTER

- + Data transfer between CAN and USB
- + Connection via virtual, serial COM port
- + Additional Windows® communication DLLs available



FAST DATA TRANSFER

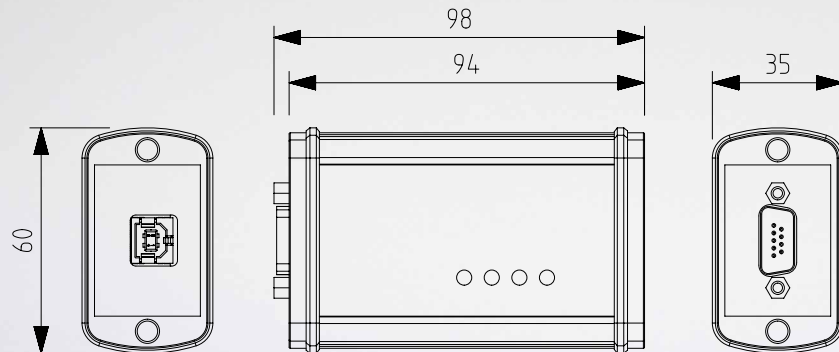
Using USB interfaces, CANview® USB facilitates fast data transfer with a computer. Connection to the device is established via a virtual, serial COM port. This acts as a conventional RS-232 interface, but supports the high speeds present in a USB interface. Consequently, CANview® USB can also be exchanged for a CAN/RS-232 Converter CANview® quite simply.

OEM VERSION AVAILABLE

CANview® USB is available as an OEM device or in robust aluminum housing so that it can be used in difficult conditions. The device is supplied with electricity via USB and therefore does not require a separate mains adapter. The CAN and Profibus DP sides on the device are galvanically isolated.

FOR HIGH-PERFORMANCE APPLICATIONS

CANview® USB has a high-performance 8-bit microcontroller which can be programmed from a computer using Windows® software. As a result, the device is able to support customized CAN protocols and carry out high-performance applications easily. CANview® USB is configured using the RM CAN Device Configurator. The RM CAN Device Monitor displays and sends CAN messages and implements CANopen® functions. Drivers are also available for Mac and Linux. Software and firmware can also be customized.



| | |
|----------------------------------------|--------------------------------------------|
| Mechanical Data | USB |
| Dimensions width / height / depth [mm] | 98 / 60 / 35 |
| Degree of protection | IP 40 |
| Temperature range | 0 °C ... +70 °C / -32 °F ... +158 °F |
| Weight | 150 g |
| Electrical Data | |
| DC power supply | USB powered |
| Power input (USB @ 5V DC) | < 100 mA |
| Memory: Program / Configuration / Data | 32 kB / 2 kB / 128 kB |
| Status LEDs | 4 |
| Interfaces / Protocols | |
| CAN | 1 (ISO 11898-2 high speed), galv. isolated |
| USB | 1 (USB 2.0 Full-Speed) |
| Layer 2 | ✓ |
| Customized CAN protocols | on request |
| Software | |
| RM System Tools CD | 157 002 059 |
| RM CAN Device Monitor Pro CANopen® | opt. 157 002 025 |
| Accessories / Product number | |
| CANview® | 253 001 014 |
| CAN cable D-Sub 9-pin female / female | 257 001 000 |
| Mounting clamp 600 / 800 90° | 142 200 052 |
| Mounting clamp 600 | 142 200 053 |
| Wall-mounting set | 142 200 010 |
| Starter-Kit | |
| CANview® Starter-Kit | 253 000 008 |
| Certifications | |
| CE, FCC, UL | ✓ |

WIRED CAN INTERFACES

robust aluminium casing

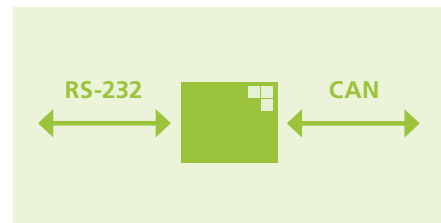


serial RS-232 interface

CANview® RS-232

DATA TRANSFER BETWEEN CAN AND DEVICES USING AN RS-232 INTERFACE

- + RS-232 are connected to CAN networks
- + Intelligent, universal and cost-effective
- + Special sensor mode and integrated A/D converter



PROVEN QUALITY

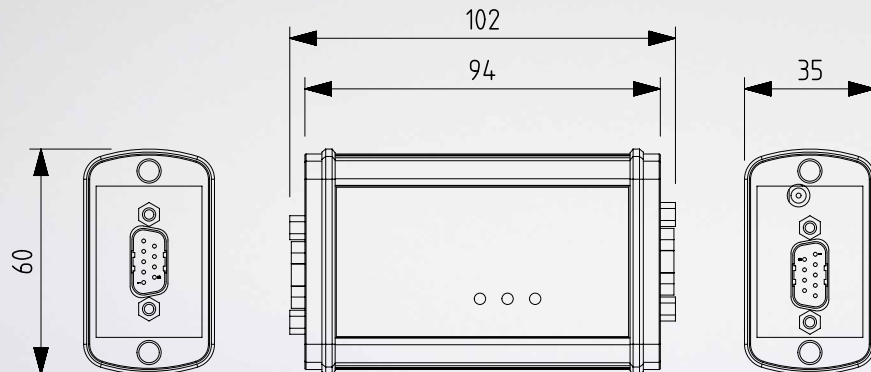
CANview® has been the industry's top solution for years when it has come to connecting devices with serial RS-232 interfaces to CAN networks. Transfer between CAN and RS-232 is bi-directional. Among other things, CANview® serves to connect computers or PDAs to stationary or mobile CAN networks. Once connected to a computer, CANview® can be used as a data logger or as a CAN monitor and so controls itself. In sensor mode, the device connects a sensor with an RS-232 interface to a CAN network. The integrated A/D converter is used to statically measure the voltage supply and CAN signals, as well as providing additional monitoring and diagnostics functions.

CUSTOMIZED HARDWARE

CANview® has robust aluminum housing so that it can be used in difficult conditions. The device is supplied with electricity either by a plug-in mains adapter or directly by the CAN plug. The CAN and RS-232 sides on the device are galvanically isolated. A 120 Ohm bus terminating resistor can also be connected to the CAN side. All of the hardware, the front film and plug in particular, can be customized.

ADJUSTABLE BAUD RATES

The standard firmware delivered with the device allows CAN baud rates to be recognized automatically. Baud rates can be adjusted by directly configuring the CAN bit timing register. Firmware and software can be adjusted to suit the customer's requirements. The CANview® device is configured by the RM CAN Device Configurator. The RM CAN Device Monitor displays and sends CAN messages and implements CANopen® functions. A flash tool is included in delivery for installing new firmware.



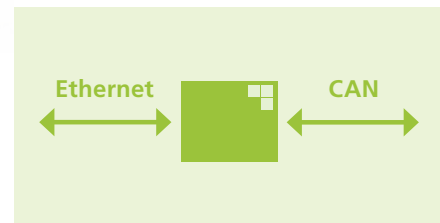
| | |
|----------------------------------------|--------------------------------------|
| Mechanical Data | RS-232 |
| Dimensions width / height / depth [mm] | 102 / 60 / 35 |
| Degree of protection | IP 40 |
| Temperature range | 0 °C ... +70 °C / -32 °F ... +158 °F |
| Weight | 150 g |
| Electrical Data | |
| DC power supply | 9 V – 36 V |
| Power input (USB @ 5V DC) | 70 mA |
| Memory: Program / Configuration / Data | 128 kB / 512 B / 32 kB |
| Status LEDs | 4 |
| Interfaces / Protocols | |
| CAN | 1 (ISO 11898-2 high speed) |
| RS-232 | 1, galv. isolated |
| Layer 2 | ✓ |
| Customized CAN protocols | on request |
| Software | |
| RM System Tools CD | 157 002 059 |
| RM CAN Device Monitor Pro CANopen® | opt. 157 002 025 |
| Accessories / Product number | |
| CANview® | 253 001 001 |
| CAN cable D-Sub 9-pin female / female | 257 001 000 |
| Mounting clamp 600 / 800 90° | 142 200 052 |
| Mounting clamp 600 | 142 200 053 |
| Wall-mounting set | 142 200 010 |
| Starter-Kit | |
| CANview® Starter-Kit | 253 000 001 |
| Certifications | |
| CE, FCC, UL | ✓ |

WIRED CAN INTERFACES



CONNECT CAN NETWORKS TO ETHERNET NETWORKS

- + Data transfer between CAN and Ethernet
- + CAN networks are connected via the Ethernet
- + Other optional CAN protocols can be implemented



MULTI-FUNCTIONAL GATEWAY

CANview® Ethernet has a 10/100M Base-T Ethernet interface for transferring data quickly. CAN data can be transferred via Ethernet at a baud rate of 1 Mbit/s and with a high bus load. It is also possible to connect 2 remote CAN networks via Ethernet. CANview® Ethernet is based on a standardized RM byte commando interface which facilitates exchange between other CAN components within the RM product family. Communication can be established via the Internet using the right gateways or routers. Flexibly adjustable filters limit the number of messages to be transmitted. The device can communicate using TCP or UDP in regards to the Ethernet. A multi-socket server allows for several TCP clients to communicate with the CANview® Ethernet at the same time. CANview® Ethernet is equipped with a DHCP and a DNS client. Upon request, the device can also be ordered with a CANopen® stack that has additional NMT master and SDO client functionality, a HTTP web server, FTP server and implementation in accordance with DSP 309.

ROBUST ALUMINUM HOUSING

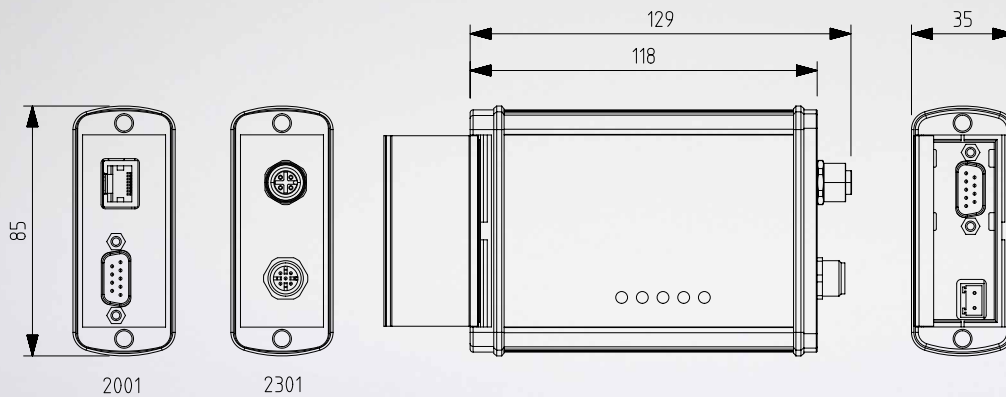
CANview® Ethernet is available as an OEM device or in robust aluminum housing so that it can be used in rough conditions.

SIMPLE TO PROGRAM MICROCONTROLLER

CANview® Ethernet has a high-performance 16-bit microcontroller with a flash memory, which can be programmed from a computer using Windows® software. In this way, other CAN protocols (e.g. J1939, Device Net or customized protocols) can also be implemented. Customized firmware adaptations are always possible. The configuration process is carried out entirely via the CANopen® or via an integrated Telnet server. CANview® Ethernet is delivered together with the RM CAN Device Monitor.

CANview® Ethernet

2001 | 2301



| Mechanical Data | 2001 | 2301 |
|----------------------------------------|---------------------------------------------------|----------------|
| Dimensions width / height / depth [mm] | 122 / 85 / 35 | 128 / 85 / 35 |
| Degree of protection | IP 20 | IP 65 |
| Temperature range | -40 °C ... +80 °C / -40 °F ... +176 °F | |
| Weight | 230 g | |
| Electrical Data | | |
| DC power supply | 10 V – 30 V | |
| Power input @ 24V | 100 mA | |
| Memory: Program / Configuration / Data | 128 kB / 8 kB / 256 kB | |
| Status LEDs | 4 | |
| Interfaces / Protocols | | |
| CAN | 1 (ISO 11898-2, high speed) not galv. isolated | galv. isolated |
| RS-232 | 1, for firmware updates | |
| Ethernet | 10 / 100 BaseTX | |
| CANopen®, Layer 2 | ✓ | |
| Customized CAN protocols | on request | |
| Ethernet Protocols | IP, TCP, UDP, Telnet | |
| Number of TCP / UDP sockets | 4 | |
| Software | | |
| RM System Tools CD | 157 002 059 | |
| RM CAN Device Monitor Pro CANopen® | opt. (157 002 025) | |
| Accessories / Product number | | |
| CANview® Ethernet | 253 001 031 | 253 001 047 |
| CAN cable D-Sub / D-Sub + power | 136 000 055 | |
| CAN cable M12 5-pin / D-Sub + power | 136 000 028 | |
| Patch cable RJ45 2m | 136 000 078 | - |
| Cable M12 4-pin D male / RJ45 2m | - | 136 000 134 |
| Mounting clamp 800 | 142 200 054 | |
| Wall-mounting set | 142 200 010 | |
| Starterkit | | |
| RM CANview® Ethernet Starter Kit | 253 000 035 | - |
| Certifications | | |
| CE, UL | ✓ | |

WIRED CAN INTERFACES

communication between
CAN and Profibus DP



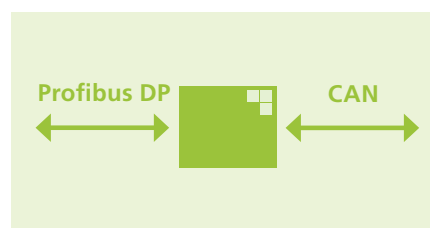
modular
Profibus DP-V0-Slave

Siemens SIMATIC®
S7-compatible

CANview® Profibus DP

EXCHANGE CAN DATA WITH A PROFIBUS DP NETWORK

- + Communication between CAN and Profibus DP
- + Compatible with Siemens SIMATIC® S7
- + Modular Profibus DP V0 slave



DEVICES FROM BOTH NETWORKS ARE EASY TO COMBINE

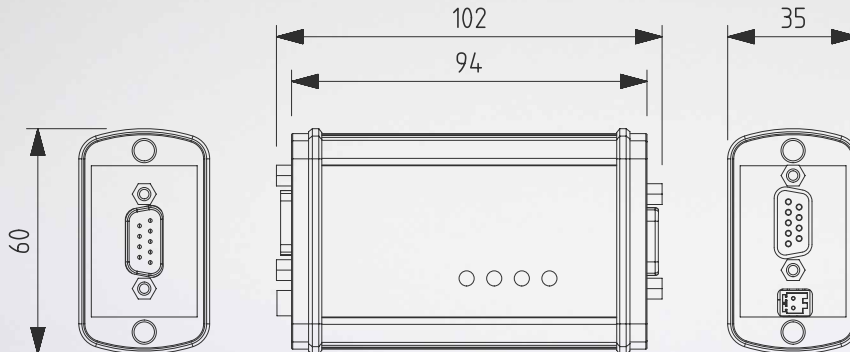
CANview® Profibus DP enables data to be exchanged easily between CAN networks and a Profibus DP network. As a result, devices used in both of these bus systems can be combined with one another quite simply. There are also excellent fields of application for PLC-controlled machines and systems. CAN sensors or actuators, for example, can be connected to a PLC with a Profibus DP interface. CANview® Profibus DP acts as a modular Profibus DP V0 slave and supports all standard baud rates on the Profibus' side and, besides standard baud rates, all customized ones on the CAN side too. In addition to CAN communication at Layer 2, other CAN protocols (e.g. CANopen®, J1939, CAN Kingdom, DeviceNet, customized protocols) can also be implemented upon request.

EMC-PROOF

Its EMC-proof design allows CANview® Profibus DP to be used in difficult conditions. The CAN and Profibus DP sides on the device are galvanically isolated. CANview® Profibus DP is delivered in robust aluminum housing.

ADAPTABLE FIRMWARE

The firmware can be customized and updated using a flash tool which is delivered along with the device. CANview® Profibus DP is configured via CAN using the CANview® Profibus Configurator and a CANview® USB, or via Profibus DP using PLC programming software, such as STEP 7®. Moreover, GSD files provide storage programmable controllers so that they can be integrated into existing systems.



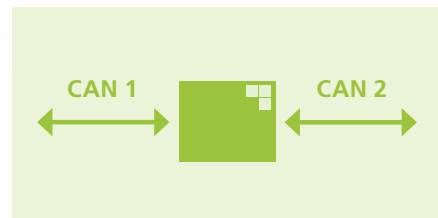
| Mechanical Data | Profibus DP |
|----------------------------------------|---------------------------------------|
| Dimensions width / height / depth [mm] | 102 / 60 / 35 |
| Degree of protection | IP 40 |
| Temperature range | -20 °C ... +70 °C / -4 °F ... +158 °F |
| Weight | 150 g |
| Electrical Data | |
| DC power supply | 9 V – 36 V |
| Power input @ 24 V | < 180 mA |
| Memory: Program / Configuration / Data | 32 kB / 2 kB / 1 kB |
| Status LEDs | 4 |
| Interfaces / Protocols | |
| CAN | 1 (ISO 11898-2 high speed) |
| Profibus DP | 1 (slave) DP-V0 |
| Layer 2 | ✓ |
| Customized CAN protocols | on request |
| Software | |
| RM System Tools CD | 157 002 059 |
| Accessories / Product number | |
| CANview® Profibus DP | 253 001 010 |
| CAN cable D-Sub 9-pin female / female | 257 001 000 |
| Power supply EU Combicon 2,5 | 257 002 006 |
| Power supply UK Combicon 2,5 | 257 004 003 |
| Power supply USA Combicon 2,5 | 257 004 002 |
| Mounting clamp 600 / 800 90° | 142 200 052 |
| Mounting clamp 600 | 142 200 053 |
| Wall-mounting set | 142 200 010 |
| Starter-Kit | |
| CANview® Profibus DP Starter-Kit | 253 000 013 |
| Certifications | |
| CE | ✓ |

WIRED CAN INTERFACES



THE MOST FLEXIBLE WAY TO CONNECT CAN TO CAN

- + Intelligent, cost-effective CAN Gateway
- + Excellent mapping feature
- + Simple and free configuration using an RM PC tool



ROBUST, TRIED AND TESTED HARDWARE

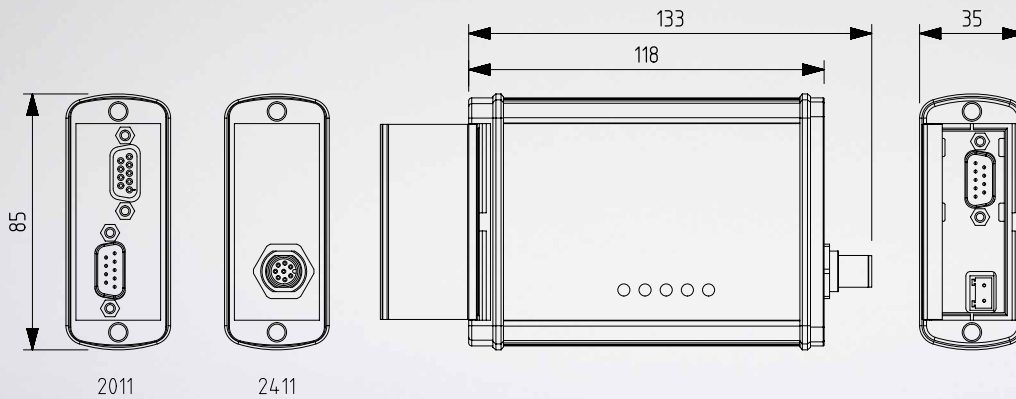
CANview® Gateway 2011 has two CAN interfaces and allows different CAN protocols to be combined in one application. The versatile CAN Gateway is also able to take on smaller controlling tasks.

THE GREATEST AMOUNT OF FLEXIBILITY THANKS TO UNLIMITED CONFIGURABILITY

With its extraordinary mapping feature, CANview® Gateway 2011 serves to transfer data effortlessly even between different CAN protocols. CANview® Gateway 2011 can also be used in a countless number of applications as a protocol and baud rate converter in order to reduce bus load, manipulate data and Restbus simulation. Using tried and tested RM software, the device can be configured without you having to know anything about programming, meaning that you can adjust all the settings to suit each application.

CANview® Gateway

2011 | 2411



| Mechanical Data | 2011 | 2411 |
|----------------------------------------|--------------------------------------------|---------------|
| Dimensions width / height / depth [mm] | 122 / 85 / 35 | 135 / 85 / 35 |
| Degree of protection | IP 20 | IP65 |
| Temperature range | -40 °C ... +80 °C / -40 °F ... +176 °F | |
| Weight | 230 g | |
| Electrical Data | | |
| DC power supply | 10 V – 30 V | |
| Power input @ 24V | < 80 mA | |
| Memory: Program / Configuration / Data | 128 kB / 4 MB / 256 kB | |
| Status LEDs | 4 | |
| Interfaces / Protocols | | |
| CAN | 2 (ISO 11898-2 high speed), galv. isolated | |
| CANopen®, Layer 2, J1939 | ✓ | |
| Customized CAN protocols | on request | |
| RS-232 | 1, for firmware updates and configuration | |
| Software | | |
| RM System Tools CD | 157 002 059 | |
| Accessories / Product number | | |
| CANview® Gateway | 253 002 010 | 253 002 014 |
| CAN cable D-Sub 9-pin female / male | 257 001 002 | - |
| CAN cable D-Sub / D-Sub + power | 136 000 055 | - |
| CAN cable M12 8-pin female / open | - | 136 000 011 |
| Mounting clamp 600 / 800 90° | 142 200 052 | |
| Mounting clamp 800 | 142 200 054 | |
| Wall-mounting set | 142 200 010 | |
| Starter-Kit | | |
| CANview® Gateway Starter-Kit | 253 000 086 | - |
| Certifications | | |
| CE, UL | ✓ | |

CANLOGGER

GPS The newly developed CANlogger is available in various configurations (with /without, with/ without I/Os). The durable housing and the EMC compliant design provide CANlogger adherence to the IP65 protection classification. Thanks to expandable memory capacity, large quantities of CAN messages can be recorded to provide long-term monitoring.

CANlogger models are often implemented in pilot series productions to document operation under test conditions. Vehicles produced in series have the models integrated to record operating parameters and to assist in troubleshooting.





1.

2.

3. CANLOGGER

4.

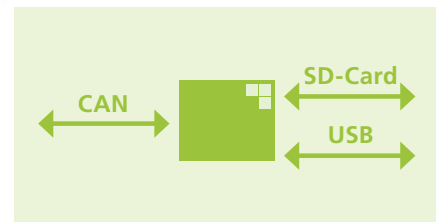
5.

CANLOGGER



LOG CAN MESSAGES ON AN SD CARD

- + Log CAN data without using a computer
- + Large storage capacity
- + Particularly suitable for long-term logging



FOR RECORDING LESS COMMON ERRORS

Using CANlogger® large numbers of CAN messages can be logged without requiring a connection to a computer. Data is either stored onto a SRAM PC card (PCMCIA) or onto an inexpensive SD card which can be read out by an ordinary computer. The cards' large storage capacity enables data to be logged long-term so that critical parameters can be monitored and less common errors can be recorded.

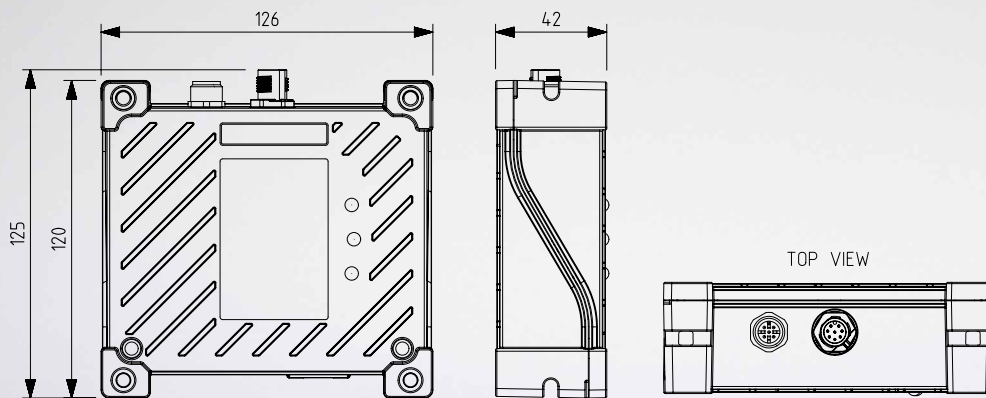
DIFFICULT CONDITIONS ARE NOT A PROBLEM

Robust housing and an EMC-safe design, plus a flap over the place where the cards are inserted make CANlogger® the ideal solution for use in harsh conditions.

NEW SOFTWARE BRINGS FLEXIBILITY

A 16-bit controller with a flash memory makes CANlogger® a high-performance solution. Stored data is configured and evaluated using the easy-to-use Windows®-based software CANlogger® Configurator which features an MS Excel interface. Flashing new software enables the CANlogger® to be adjusted quite flexibly to suit other tasks. Firmware and software can also be customized to meet the customer's requirements.

CANlogger® Series 5000



| Mechanical Data | 5001 | 5002 |
|-----------------------------------------------|----------------------------------------------------------|---------------------------------------------------------------|
| Dimensions width / height / depth [mm] | 126 / 129 / 42 | |
| Degree of protection | IP 20 (with protection cap: IP 65) | |
| Temperature range | -30 °C ... +75 °C / -22 °F ... +167 °F | |
| Weight | 510 g | |
| Electrical Data | | |
| DC power supply | 7 V – 32 V | |
| Power input @ 24 V (sleep mode) | 50 mA (< 60µA) | |
| Memory: Program / Configuraton / Data | 1 MB / 4 MB / 512 kB | |
| Real-time clock with backup capacitor | ✓ | |
| Status LEDs (2-colors) | 2 | 3 |
| Interfaces / Protocols | | |
| CAN (ISO 11898-2 high speed, 2.0 A/B) | 1 | 2 |
| Logging memory interface | SD/SDHC card (up to 32 GB) | |
| USB, RS-232, Acceleration | on request (USB 2.0 B / RxD/TxD / 3 axes, ±16 g, 13 Bit) | |
| CANopen®, Layer 2, J1939 | ✓ | |
| Customized CAN protocols | on request | |
| Inputs / Outputs | - | 1x D-IN (KL15), 1x A-IN 0 ... 10V (12Bit) 1x D-OUT (500mA) |
| Software | | |
| RMsys Dashboard | ✓ | |
| RMsys Converter | ✓ | |
| RM System Tools CD | 157 002 059 | |
| Accessories / Product number | | |
| CANlogger | 253 003 006 | 253 003 007 |
| CAN cable M12 5-pin / 9-pin D-Sub + power | 136 000 028 | |
| CAN cable M12 8-pin / open 5m | 136 000 011 | |
| GPS-antenna roof | 157 000 020 | |
| SD memory card 2GB (industrial grade) | 157 001 009 | |
| Protection cap for SD / USB connectors (IP65) | 140 400 021 | |
| DIN rail mounting kit | 141 000 010 | |
| Starterkit | | |
| CANlogger® Starter Kit | 253 000 116 | 253 000 117 |
| Certifications | | |
| CE, FCC | ✓ | |





Logger®

HAELIDES
Electronics

IO/CAN 2



CAN 1

CANLOGGER



memory capacity
of up to 32 GB

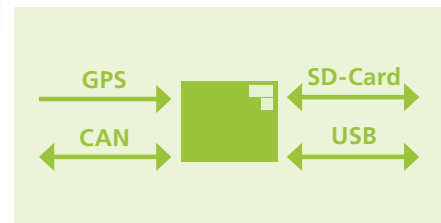
record large
bus loads

logging of CAN
and GPS data

CANlogger® GPS

LOG CAN MESSAGES AND GPS DATA

- + Configurable CAN channels
- + Analog and digital interfaces
- + Optimized energy output



SINGLE-DEVICE SOLUTION

The compact, robust CANlogger® 5102 can be used anywhere where GPS data also needs to be displayed alongside CAN messages.

EASY TO USE

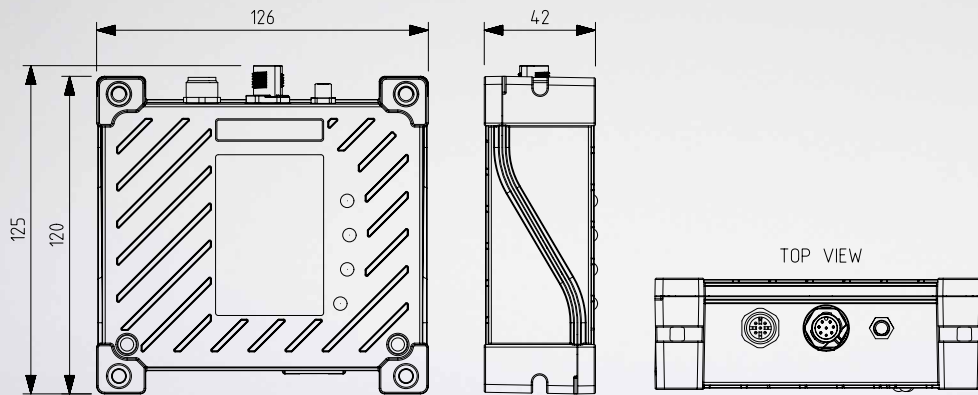
The device has two independently configurable CAN channels that are in accordance with ISO 11898-2, as well as two inputs and one output which can also be used for monitoring and control tasks. The information provided and the GPS coordinates are stored on an SD card that is able to hold up to 32 GB. Energy output is also optimized thanks to an intelligent terminal 15 feature. It also has an additional input which allows CANlogger® 5102 to start via ignition or be subject to a delay, for example.

DIVERSE RANGE OF APPLICATIONS

The device's tried and tested housing has been made even better and can be attached in several different ways. Moreover, the housing is also coated in a special layer which protects the CANlogger® from being damaged by corrosion, for example. The model can be made to meet protection class IP65, if required, by adding an optional lid to the SD card insert and to the USB port.

ALTERNATIVE DATA HANDLING

If you don't want to store CAN messages and GPS data directly onto the object, data can be transferred directly to the server at our affiliated company, PROEMION, via a CAN mobile communications modem such as CANlink®, GSM or UMTS. Data can be displayed separately on the server and can be accessed from around the world.

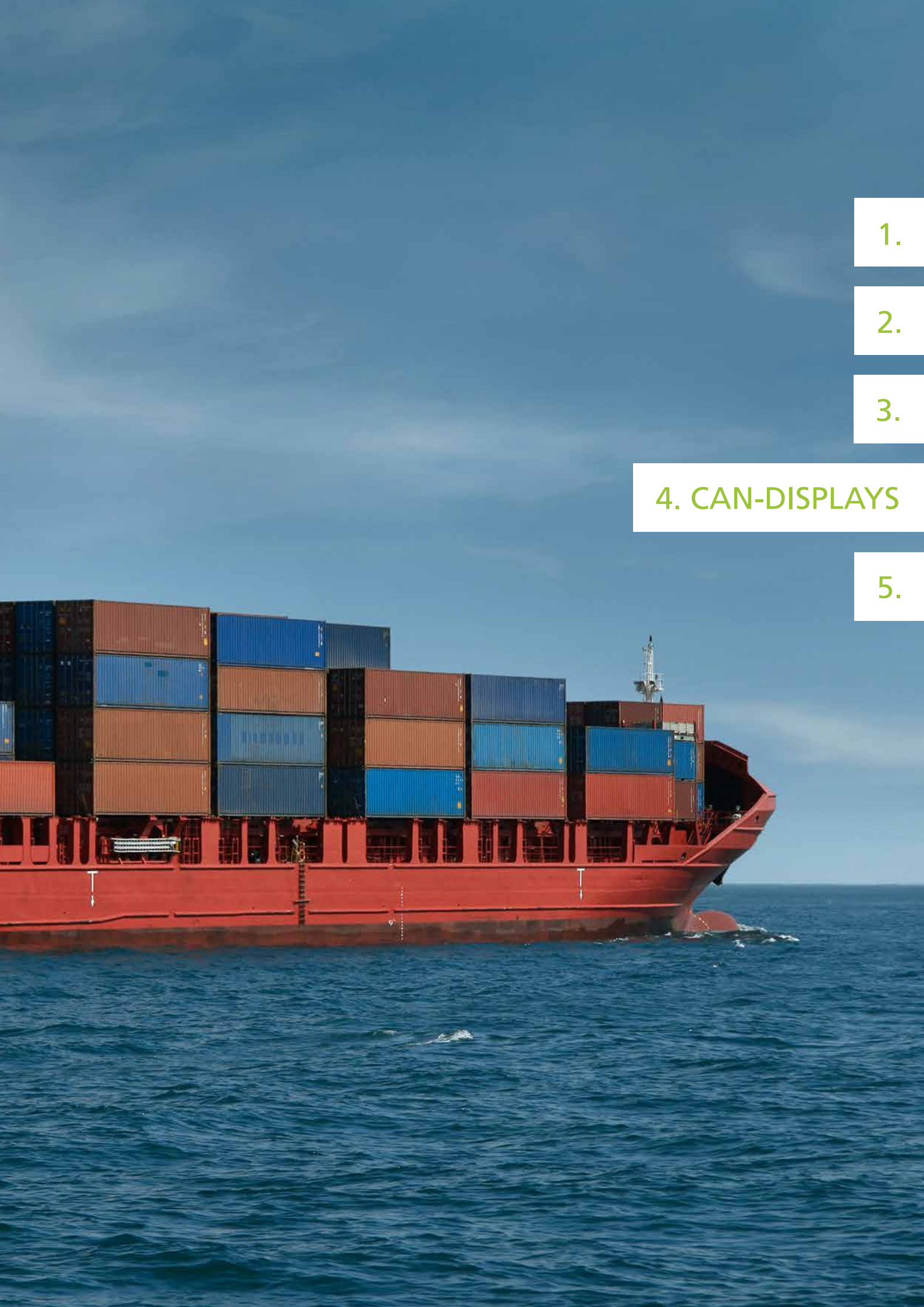


| | | |
|--------------------------------------------------|---------------------------------------------------------------|--|
| Mechanical Data | | |
| Dimensions width / height / depth [mm] | 126 / 129 / 42 | |
| Degree of protection | IP 20 (with protection cap: IP 65) | |
| Temperature range | -30 °C ... +75 °C / -22 °F ... +167 °C | |
| Weight | 510 g | |
| Electrical Data | | |
| DC power supply | 7 V – 32 V | |
| Power input @ 24 V (sleep mode) | 50 mA (< 60µA) | |
| Memory: Program / Configuraton / Data | 1 MB / 4 MB / 512 kB | |
| Real-time clock with backup capacitor | GPS-synchronized | |
| Status LEDs (2-colors) | 4 | |
| Interfaces / Protocols | | |
| CAN (ISO 11898-2 high speed, 2.0 A/B) | 2 | |
| GPS (tracking capability, accuracy, update rate) | 33 ch, 3 m, 1 Hz | |
| Logging memory interface | SD/SDHC Karte (bis zu 32 GB) | |
| USB, RS-232, Acceleration | On request (USB 2.0 B / RxD/TxD / 3 axes, ±16 g, 13 Bit) | |
| CANopen®, Layer 2, J1939 | ✓ | |
| Customized CAN protocols | on request | |
| Inputs / Outputs | 1x D-IN (KL15), 1x A-IN 0 ... 10V (12Bit) 1x D-OUT (500mA) | |
| Software | | |
| RMsys Dashboard | ✓ | |
| RMsys Converter | ✓ | |
| RM System Tools CD | 157 002 059 | |
| Accessories / Product number | | |
| CANlogger | 253 003 005 | |
| CAN cable M12 5-pin / 9-pin D-Sub + power | 136 000 028 | |
| CAN cable M12 8-pin / open 5m | 136 000 011 | |
| GPS-antenna roof | 157 000 020 | |
| SD memory card 2GB (industrial grade) | 157 001 009 | |
| Protection cap for SD / USB connectors (IP65) | 140 400 021 | |
| DIN rail mounting kit | 141 000 010 | |
| Starterkit | | |
| CANlogger Starter Kit | 253 000 111 | |
| Certifications | | |
| CE, FCC | ✓ | |

CAN-DISPLAYS

The CAN Display 5000 uses a control unit for mounting on ship bridges to visualize important operational data. Steering commands are directly controlled via display keys. A speed control knob and a separate emergency stop switch supplement the display to make a complete unit which has been successfully marketed as a plug-and-play expansion of marine equipment. The rugged salt water proof design provide the basis for reliable steering control and the associated maritime certification.





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4. CAN-DISPLAYS

5.

CAN-DISPLAYS

compact, round casing



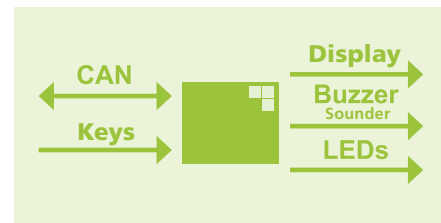
cost effective model

monochrome LCD display

CAN-Display 1000

SMALL DISPLAY, BIG IMPACT

- + Monochrome LC display with CAN connection
- + Compact, round housing
- + OEM version



SMALL BUT VERSATILE

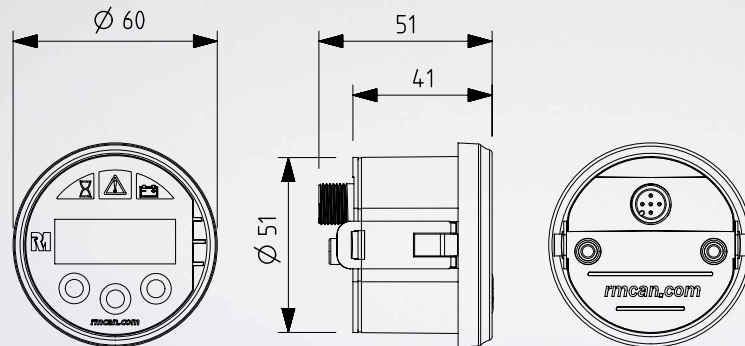
RM Display 1001 is a monochrome, alphanumerical LC display with a CAN connection. Its small, round standard housing means it can be used in all sorts of areas and applications. Consequently, existing, round analogue display instruments can, for example, be replaced with an RM Display 1001. Its LED backlight also means that the display is easy to use in the dark. Data is entered and altered simply using 3 keys which also have a backlight. 3 indicators show the device's status on the display and a buzzer is attached for sounding warning signals.

IDEAL FOR FACILITIES WITH LIMITED SPACE

The standard housing on the RM Display 1001 has an overall diameter of just 60 mm and is therefore ideal for use in facilities with limited space. The display is an integrated element and can either be attached using clamps or springs and fitted into a space that measures just 53 mm in diameter. A wide input power supply ranging from 9 V to 60 V means the device can be used in machines as well as in vehicles with operating voltages of 12 V, 24 V and 48 V. The device can also withstand temperatures ranging from -20 °C to +70 °C allowing it to be used in various different environments. The 5-pole round plug allows the device to be connected to the supply voltage and the CAN bus. The option of coating the housing in a customized film is also available.

FLEXIBLE FIRMWARE

RM Display 1001 acts as a CAN slave. The firmware is able to generate cyclical and asynchronous CAN messages while the display reacts simultaneously to incoming CAN messages. Options for adjusting parameters and communication, as well as the option of parameterizing other CAN users provide a greater amount of flexibility during operation. The RM Display 1001's tried and tested software display and keyboard functions can be designed using configuration software: the RMsys Configurator.



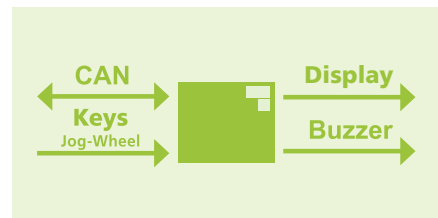
| | | |
|----------------------------------------|--|----------------------------------------------------|
| Mechanical Data | | 1001 |
| Dimensions diameter / depth [mm] | | Ø 60 / 50 |
| Degree of protection | | IP 65 |
| Temperature range | | -20 °C ... +70 °C / -4 °F ... +158 °F |
| Weight | | 63 g |
| Mounting [mm] | | Mounting hole ø 53 |
| Electrical Data | | |
| DC power supply | | 9 V – 60 V |
| Power input @ 24V | | ≤ 100 mA |
| Memory: Program / Configuration / Data | | 96 kB / 65 kB / 3.3 kB |
| Indicator LEDs | | 3 (default symbols: maintenance, caution, battery) |
| Keys (backlit) | | 3 |
| Buzzer | | 1 |
| Display Data | | |
| Display type | | 2 x 8 characters LCD with backlight |
| Interfaces / Protocols | | |
| CAN | | 1 (ISO 11898-2 high speed, 2.0 B) |
| CANopen®, Layer 2, J1939 | | ✓ |
| Software | | |
| RM System Tools CD | | 157 002 059 |
| Accessories / Product number | | |
| RM Display 1001 | | 251 007 020 |
| Rounded seal o-ring 1001 | | 140 700 003 |
| Mounting kit (brackets) | | 141 000 011 |
| CAN cable M12 5-pin / D-Sub + power | | 136 000 028 |
| CAN bus terminator D-Sub / D-Sub | | 157 000 033 |
| Starter-Kit | | |
| RM Display 1001 Starter-Kit | | 253 000 047 |
| Certifications | | |
| CE, FCC, E1 | | ✓ |

CAN-DISPLAYS



HIGHLY FLEXIBLE DISPLAY WITH ADDITIONAL I/O FUNCTIONALITY

- + TFT color displays using transreflective technology
- + 16:9 display format
- + 4 possible installation positions: 0°, 90°, 180° and 270°



HIGH RESOLUTION

The RM Display Color 2501/2503 is a color 6.5" TFT display which can be used universally. A resolution of 400 x 240 pixels and a 16:9 format give the display excellent graphics. Transflective TFT technology also guarantees that the display can still be read in daylight and even when sunlight is shining directly onto it. By illuminating the display and the keys, the display can also be operated easily in the dark. 4 keys and 1 rotary potentiometer with a print function makes it easier to enter or change data. The display can be used in 4 different installation positions: 0°, 90°, 180° and 270°.

FUNCTIONALITY AND FLEXIBILITY

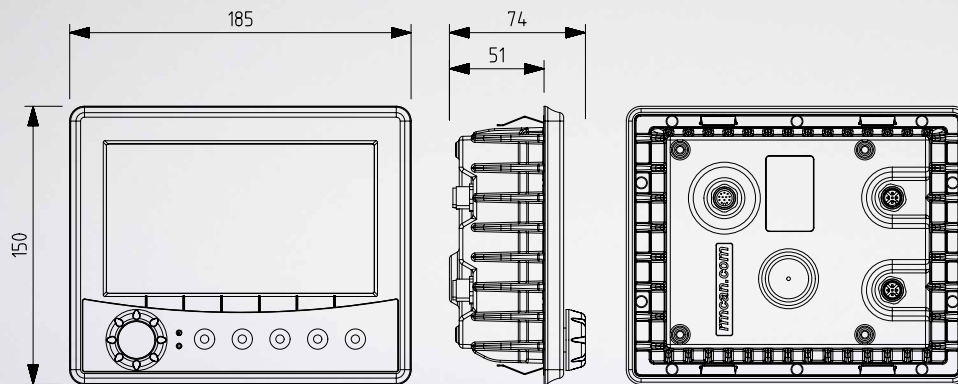
So that the RM Display Color 2501/2503 can be used flexibly in industrial and mobile applications, the display has a wide input power supply that ranges from 9 V to 60 V with an operating voltage of 12 V, 24 V and 48 V. The display can also withstand temperatures between -30 °C and +65 °C. Its 12-pole round plug allows the display to be connected directly to a camera or to a similar terminal that supports up to 4 cameras by using a CameraBox 0401. Two 5-pole round plugs are used to loop through the CAN bus and the supply voltage thus also avoiding having to purchase an expensive T-plug. The RM Display Color 2503 also has 3 analog inputs and 2 digital outputs.

EASY TO EXPAND USING A C INTERFACE

The RM Display Color 2501/2503 can be used as a slave or master device. Firmware generates and transmits cyclical and asynchronous CAN messages while the displays are able to respond to up to 120 incoming CAN messages at the same time. Options for adjusting parameters and communication, as well as the option of parameterizing other CAN users provide a greater amount of flexibility during operation. The firmware also recognizes PAL and NTSC video sources automatically. Customers with C programming skills are able to expand firmware with their own control algorithms via an "open C interface".

CONFIGURING INSTEAD OF PROGRAMMING

Displays and key functions on the RM Display Color 2501/2503 can be designed using configuration software: the RMsys Configurator.



| | |
|----------------------------------------|------------------------------------------|
| Mechanical Data | 2501 |
| Dimensions width / height / depth [mm] | 185 / 150.5 / 73 |
| Degree of protection | IP 65 |
| Temperature range | -30 °C ... +65 °C / -22 °F ... +149 °F |
| Weight | 1055 g |
| Mounting | Mounting hole 133 mm x 176 mm |
| Electrical Data | |
| DC power supply | 9 V – 60 V |
| Power input @ 24V | < 900 mA |
| Memory: Program / Configuration / Data | 256 kB / 4 MB / 256 kB |
| Keys (backlit) | 5 |
| Jog wheel (backlit) | 1 |
| Buzzer | 1 |
| Display Data | |
| Display type | 6.5" color TFT display |
| Resolution / Brightness | 400 x 240 pixels / 250 cd/m ² |
| Interfaces / Protocols | |
| CAN | 1 (ISO 11898-2 high speed, 2.0 B) |
| CANopen®, Layer 2, J1939 | ✓ |
| Video input | PAL / NTSC |
| Software | |
| RM System Tools CD | 157 002 059 |
| Accessories / Product number | |
| RM Display Color | 251 007 003 |
| Rounded seal 25xx | 140 000 084 |
| CAN cable M12 5-pin / D-Sub + power | 136 000 028 |
| Starter-Kit | |
| RM Display Starter-Kit | 253 000 048 |
| Certifications | |
| CE, FCC | ✓ |



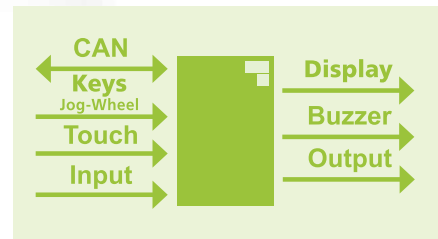


CAN-DISPLAYS



16:9 COLOR DISPLAYS THAT CAN BE USED FLEXIBLY

- + Cost-effective display
- + Also available as touchscreen
- + Version available with I/Os and camera input



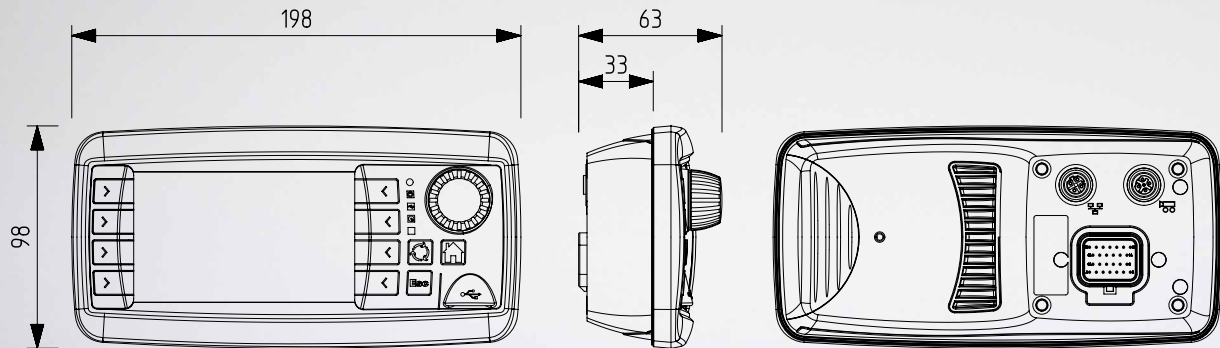
TWO VERSIONS AVAILABLE

The basic version, RM Display 3011, has a 4.3" and a 7.0" display in 16:9 format and two CAN and RS-232 interfaces. There is also the option of establishing a USB connection via the main connector. The 3012 version also has a touchscreen and is therefore able to process input data in addition to serving as a mere display. Moreover, the RM Display 3012 also provides additional features such as integrated I/Os, an Ethernet interface and a camera input. The display modules can be used as integrated or add-on devices. It is possible to fit the display vertically or horizontally. Since the display is also graded in protective class IP 65, it is ideal for use in harsh industrial conditions.

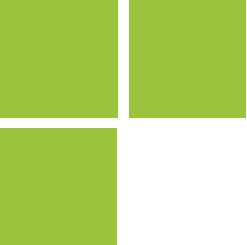
CONFIGURATION USING RMSYS TOOLCHAIN

Versatile RMsys Toolchain is used to configure the displays. You can adjust all the settings quite easily via your computer and design the display to suit your preferences without having to know anything about programming.

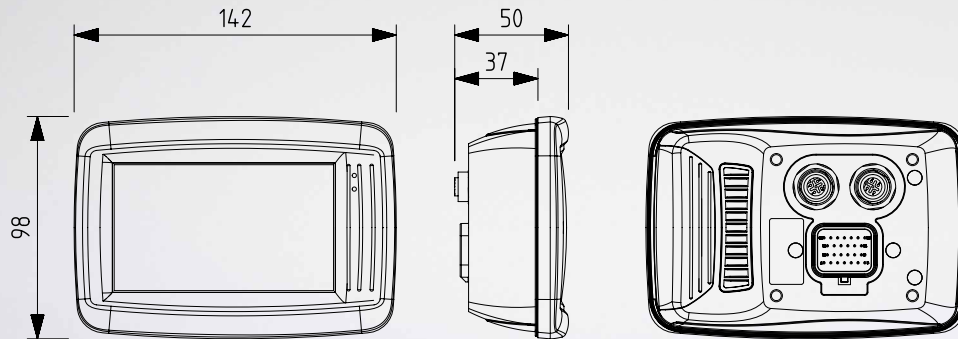
CAN-Display Series 3000



| Mechanical Data | 3001 | 3002 |
|-------------------------------------------------------|--------------------------------------------------------|--------------------------------|
| Dimensions width / height / depth [mm] | 198 / 98 / 63 | |
| Degree of protection | IP 6K5 and 6K7 (ISO 20653) | |
| Temperature range | -30 °C ... +65 °C / -22 °F ... +149 °F | |
| Weight | 430 g | 450 g |
| Electrical Data | | |
| DC power supply | 9 V – 36 V | |
| Power input @ 24 V | < 240 mA | |
| Memory: Configuraton / EEPROM / RAM | 18 MB / 28 kB / 128 MB | |
| Input elements | 8 softkeys, 3 hardkeys, 1 jog-wheel | |
| Status LED (multicolor, dimmable) | 1 | |
| Symbol LEDs (single color) | 3 | |
| Buzzer | - | ✓ |
| Real-time clock with backup / accuracy | Backup-time 2 weeks / ±4 sec/day | |
| Display data | | |
| Display type / resolution / max. brightness | 4.3", 16:9 transmissive TFT / 480 x 272 px / 400 cd/m² | |
| Touch screen | - | ✓ |
| Backlight for keys and display | dimmable | |
| Interfaces / Protocols | | |
| CAN | 2 (ISO 11898-2 high speed, 2.0 A/B) | |
| USB (host) | 1 (USB 2.0, main connector) | 2 (USB 2.0 front / main conn.) |
| Video interface (PAL / NTSC) | - | 1 |
| Inputs / Outputs | - | 4 analog IN, 3 digital OUT |
| Light sensor | ✓ | |
| CANopen®, Layer 2, J1939 | ✓ | |
| Customized CAN protocols | on request | |
| Software | | |
| RM System Tools CD | 157 002 059 | |
| Accessories / Product number | | |
| RM Display Color 3001 / 3002 | 251 007 029 | 251 007 030 |
| Cable RM Display Color 3000, 2m (full occupancy) | 136 000 140 | |
| Cable RM Display Color 3000, 2m (2 CAN / Power / USB) | 136 000 141 | |
| Starterkits | | |
| RM Display Color 3001 / 3002 Starter Kit | 253 000 101 | 253 000 102 |
| Certifications | | |
| CE, FCC, E1 | ✓ | |



CAN-Display Series 3010



| Mechanical Data | 3011 | 3012 |
|-------------------------------------------------------|--------------------------------------------------------|----------------------------|
| Dimensions width / height / depth [mm] | 142 / 98 / 49 | |
| Degree of protection | IP 6K5 and 6K7 (ISO 20653) | |
| Temperature range | -30 °C ... +65 °C / -22 °F ... +149 °F | |
| Weight | 280 g | 300 g |
| Electrical Data | | |
| DC power supply | 9 V – 36 V | |
| Power input @ 24 V | < 240 mA | |
| Memory: Configuraton / EEPROM / RAM | 18 MB / 28 kB / 128 MB | |
| Input elements | - | |
| Status LED (multicolor, dimmable) | 1 | |
| Buzzer | - | ✓ |
| Real-time clock with backup / accuracy | Backup-time 2 weeks / ±4 sec/day | |
| Display data | | |
| Display type / resolution / max. brightness | 4.3", 16:9 transmissive TFT / 480 x 272 px / 400 cd/m² | |
| Touch screen | - | ✓ |
| Backlight | dimmable | |
| Interfaces / Protocols | | |
| CAN | 2 (ISO 11898-2 high speed, 2.0 A/B) | |
| USB (host) | 1 (USB 2.0 full speed, on main connector) | |
| Video interface (PAL / NTSC) | - | 1 |
| Inputs / Outputs | - | 4 analog IN, 3 digital OUT |
| Light sensor | ✓ | |
| CANopen®, Layer 2, J1939 | ✓ | |
| Customized CAN protocols | on request | |
| Software | | |
| RM System Tools CD | 157 002 059 | |
| Accessories / Product number | | |
| RM Display Color 3011 / 3012 | 251 007 031 | 251 007 032 |
| Cable RM Display Color 3000, 2m (full occupancy) | 136 000 140 | |
| Cable RM Display Color 3000, 2m (2 CAN / Power / USB) | 136 000 141 | |
| Starterkits | | |
| RM Display Color 3011 / 3012 Starter Kit | 253 000 103 | 253 000 104 |
| Certifications | | |
| CE, FCC, E1 | ✓ | |

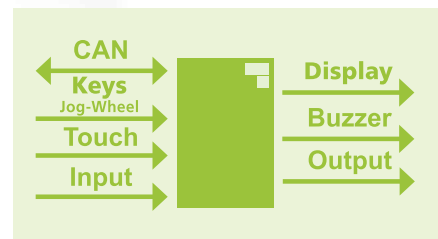
CAN-DISPLAYS



CAN-Display Series 3100
CAN-Display Series 3110

16:9 COLOR DISPLAYS THAT CAN BE USED FLEXIBLY

- + Cost-effective display
- + Also available as touchscreen
- + Version available with I/Os and camera input



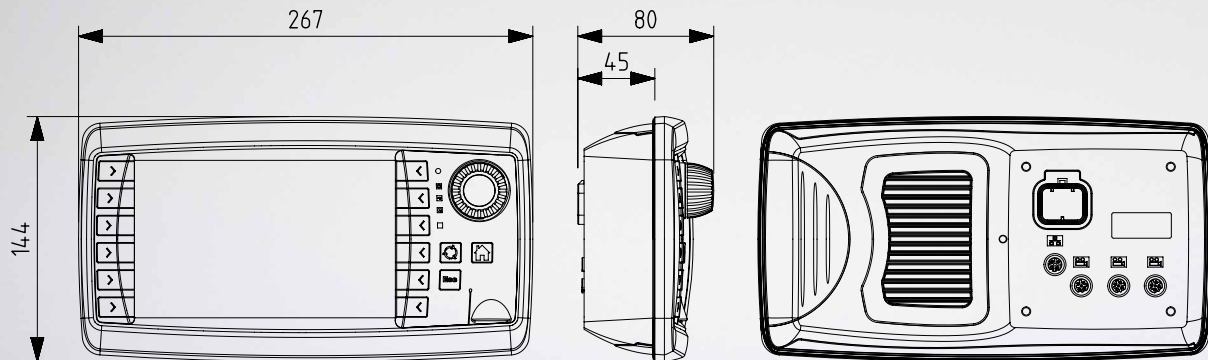
TWO VERSIONS AVAILABLE

The basic version, RM Display 3011, has a 4.3" and a 7.0" display in 16:9 format and two CAN and RS-232 interfaces. There is also the option of establishing a USB connection via the main connector. The 3012 version also has a touchscreen and is therefore able to process input data in addition to serving as a mere display. Moreover, the RM Display 3012 also provides additional features such as integrated I/Os, an Ethernet interface and a camera input. The display modules can be used as integrated or add-on devices. It is possible to fit the display vertically or horizontally. Since the display is also graded in protective class IP 65, it is ideal for use in harsh industrial conditions.

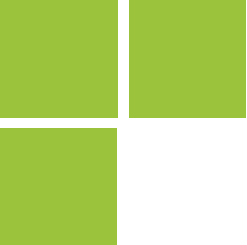
CONFIGURATION USING RMSYS TOOLCHAIN

Versatile RMsys Toolchain is used to configure the displays. You can adjust all the settings quite easily via your computer and design the display to suit your preferences without having to know anything about programming.

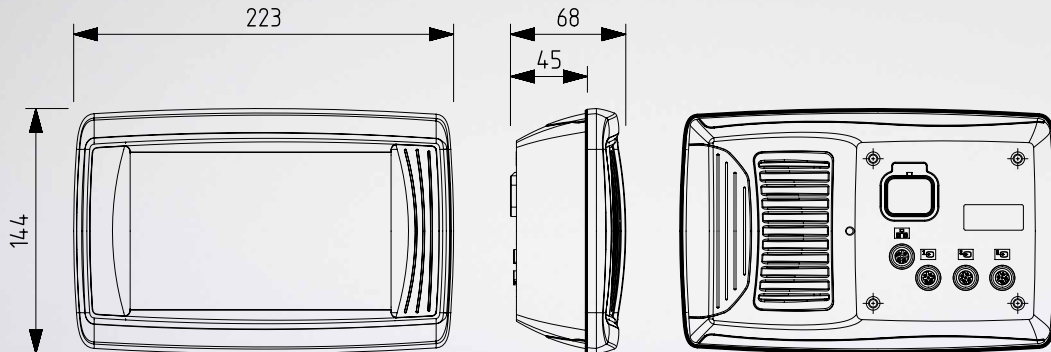
CAN-Display® Series 3100



| Mechanical Data | 3101 | 3102 |
|-------------------------------------------------------|----------------------------------------------------------|--------------------------------|
| Dimensions width / height / depth [mm] | 267 / 144 / 80 | |
| Degree of protection | IP 6K5 and 6K7 (ISO 20653) | |
| Temperature range | -30 °C ... +65 °C / -22 °F ... +149 °F | |
| Weight | 1060 g | 1080 g |
| Electrical Data | | |
| DC power supply | 9 V – 36 V | |
| Power input @ 24 V | < 550 mA | |
| Memory: Configuraton / EEPROM / RAM | 64 MB / 28 kB / 128 MB | |
| Input elements | 12 softkeys, 3 hardkeys, 1 jog-wheel | |
| Status LED (multicolor, dimmable) | 1 | |
| Symbol LEDs (single color, dimmable) | green, yellow | green, yellow, red |
| Buzzer | ✓ | |
| Real-time clock with backup / accuracy | Backup-time 2 weeks / ±4 sec/day | |
| Display data | | |
| Display type / resolution / max. brightness | 7", 15:9 transmissive TFT / 800 x 480 pixels / 400 cd/m² | |
| Touch screen | - | ✓ |
| Backlight for keys and display | dimmable | |
| Interfaces / Protocols | | |
| CAN | 2 (ISO 11898-2 high speed, 2.0 A/B) | |
| USB (host) | 1 (USB 2.0, main connector) | 2 (USB 2.0 front / main conn.) |
| Video interface (PAL / NTSC) | 1 | 3 |
| Inputs / Outputs | - | 4 analog IN, 3 digital OUT |
| Light sensor | ✓ | |
| CANopen®, Layer 2, J1939 | ✓ | |
| Customized CAN protocols | on request | |
| Software | | |
| RM System Tools CD | 157 002 059 | |
| Accessories / Product number | | |
| RM Display Color 3101 / 3102 | 251 007 033 | 251 007 034 |
| Cable RM Display Color 3000, 2m (full occupancy) | 136 000 140 | |
| Cable RM Display Color 3000, 2m (2 CAN / Power / USB) | 136 000 141 | |
| Starterkits | | |
| RM Display Color 3101 / 3102 Starter Kit | 253 000 112 | 253 000 113 |
| Certifications | | |
| CE, FCC, E1 | ✓ | |



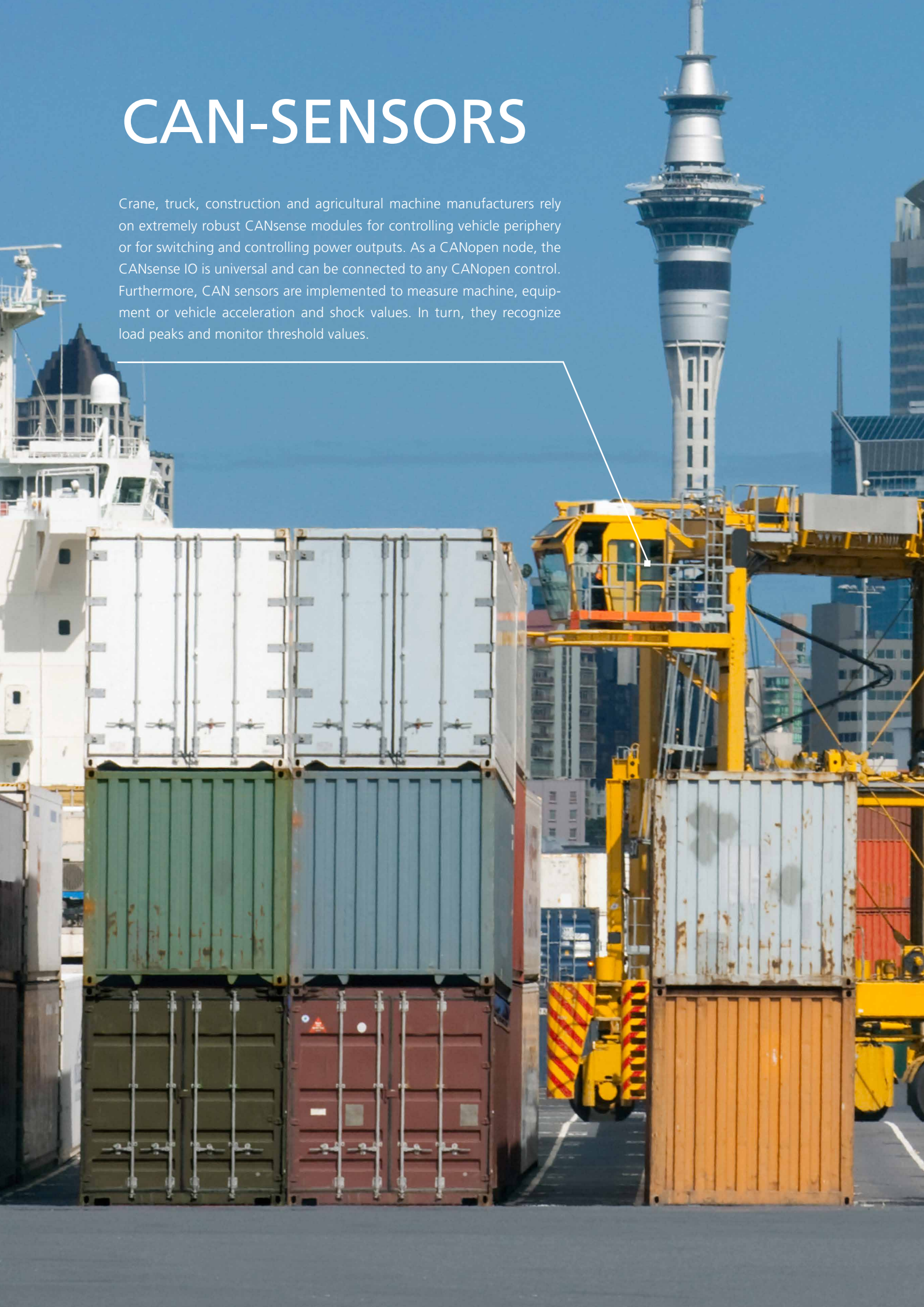
CAN-Display® Series 3110



| Mechanical Data | 3111 | 3112 |
|-------------------------------------------------------|---------------------------------------------------------|----------------------------|
| Dimensions width / height / depth [mm] | 223 / 144 / 68 | |
| Degree of protection | IP 6K5 and 6K7 (ISO 20653) | |
| Temperature range | -30 °C ... +65 °C / -22 °F ... +149 °F | |
| Weight | 910 g | 930 g |
| Electrical Data | | |
| DC power supply | 9 V – 36 V | |
| Power input @ 24 V | < 500 mA | |
| Memory: Configuraton / EEPROM / RAM | 64 MB / 28 kB / 128 MB | |
| Input elements | - | |
| LEDs | - | |
| Buzzer | ✓ | |
| Real-time clock with backup / accuracy | Backup-time 2 weeks / ±4 sec/day | |
| Display data | | |
| Display type / resolution / max. brightness | 7", 15:9 transmissive TFT / 800 x 480 Pixel / 400 cd/m² | |
| Touch screen | - | ✓ |
| Backlight | dimnable | |
| Interfaces / Protocols | | |
| CAN | 2 (ISO 11898-2 high speed, 2.0 A/B) | |
| USB (host) | 1 (USB 2.0 full speed, on main connector) | |
| Video interface (PAL / NTSC) | 1 | 3 |
| Inputs / Outputs | - | 4 analog IN, 3 digital OUT |
| Light sensor | - | |
| CANopen®, Layer 2, J1939 | ✓ | |
| Customized CAN protocols | on request | |
| Software | | |
| RM System Tools CD | 157 002 059 | |
| Accessories / Product number | | |
| RM Display Color 3111 / 3112 | 251 007 035 | 251 007 036 |
| Cable RM Display Color 3000, 2m (full occupancy) | 136 000 140 | |
| Cable RM Display Color 3000, 2m (2 CAN / Power / USB) | 136 000 141 | |
| Starterkits | | |
| RM Display Color 3111 / 3112 Starter Kit | 253 000 114 | 253 000 115 |
| Certifications | | |
| CE, FCC, E1 | ✓ | |

CAN-SENSORS

Crane, truck, construction and agricultural machine manufacturers rely on extremely robust CANsense modules for controlling vehicle periphery or for switching and controlling power outputs. As a CANopen node, the CANsense IO is universal and can be connected to any CANopen control. Furthermore, CAN sensors are implemented to measure machine, equipment or vehicle acceleration and shock values. In turn, they recognize load peaks and monitor threshold values.





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5. CAN-SENSORS

CAN-SENSORS



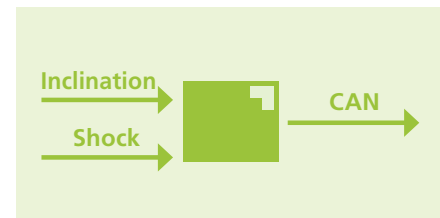
measuring accelerations and inclinations

automatic output on CAN bus

CANsense® ACC

CAN SENSOR MODULE FOR MEASURING ACCELERATION AND TENDENCY

- + Measures accelerations and tendencies
- + Universal mini housing
- + Available in different versions



RELIABLE AND PRECISE MEASUREMENTS

CANsense® ACC is a compact sensor module for recording acceleration and tendency values and which can be added into an existing CAN network via its integrated CAN interface. Depending on the version, accelerations in up to 3 axes at +/- 50 g and tendencies in 2 axes of up to +/- 30° can be measured using CANsense® ACC. All sensor modules can be combined with each other in any way. Modules with customized sensitivity settings are also available upon request. The innovative, robust CANsense® ACC sensor modules have an integrated temperature gage* and an adjustable threshold monitoring system and are mainly used to display acceleration or shock values in machines, systems or vehicles. These displays either serve as a record of proof and/or for generally controlling and regulating systems.

SPECIAL PLASTIC HOUSING

The housing on CANsense® ACC models is made from premium special plastic and can be adjusted to suit the customer's requirements. The housing is molded and so conforms with protective class IP 67 and has a high resistance to shock. 2 integrated CAN plugs that are designed to transfer data and supply power allows the module to save space and be cost-effective. The supply voltage ranges from 9 V to 36 V and allows the module to be used in various different stationary and mobile applications.

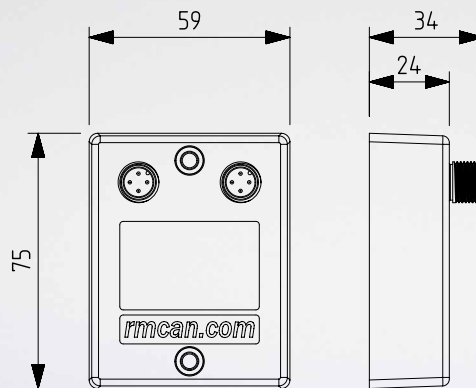
CUSTOMIZED PROTOCOLS CAN BE IMPLEMENTED

CANsense® ACC is delivered with a CANopen® protocol as standard. Other CAN protocols, such as J1939, DeviceNet or other customized protocols can also be implemented upon request. Software updates and configuration are performed via the CAN bus. The RM CAN Device Monitor is used to display and send CAN messages as well as implement CANopen® functions.

*only when connected to a tendency sensor

CANsense® ACC

1301 | 1302 | 3501 | 2201



| Mechanical Data | 1301 | 1302 | 3501 | 2201 |
|----------------------------------------|---------------------------------------|------------------------|------------------------|--------------------|
| Dimensions width / height / depth [mm] | 59 / 75 / 33 | | | |
| Degree of protection | IP 67 | | | |
| Temperature range | -20 °C ... +85 °C / -4 °F ... +185 °F | | | |
| Weight | 200 g | | | |
| Electrical Data | | | | |
| DC power supply | 9 V – 36 V | | | |
| Power input @ 24V | < 100 mA | | | |
| Memory: Program / Configuration / Data | 64 kB / 512 kB / 128 kB | | | |
| Interfaces / Protocols | | | | |
| CAN | 1 (ISO 11898-2, high speed) | | | |
| CANopen®, Layer 2 | ✓ | | | |
| Customized CAN protocols | on request | | | |
| Acceleration | + / -50 g (x, y, z) | + / -10 g (x, y, z) | + / -50 g (x, y, z) | - |
| Tilt / Inclination | - | - | + / -30° (x, y) | + / -30° (x, y) |
| Software | | | | |
| RM System Tools CD | 157 002 059 | | | |
| Accessories / Product number | | | | |
| CANsense® ACC | 251 009 001 | 251 009 006 | 251 009 002 | 251 009 003 |
| CAN cable M12 4-pin / D-Sub + power | 136 000 029 | | | |
| CAN cable M12 4-pin / D-Sub | 136 000 030 | | | |
| CAN cable M12 4-pin 90° / open | 136 000 022 | | | |
| Protection cap for connector M12 | 140 400 003 | | | |
| Starter-Kit | | | | |
| RM CANsense® ACC Starter-Kit | 253 000 050 | | | |
| Certifications | | | | |
| CE | ✓ | | | |

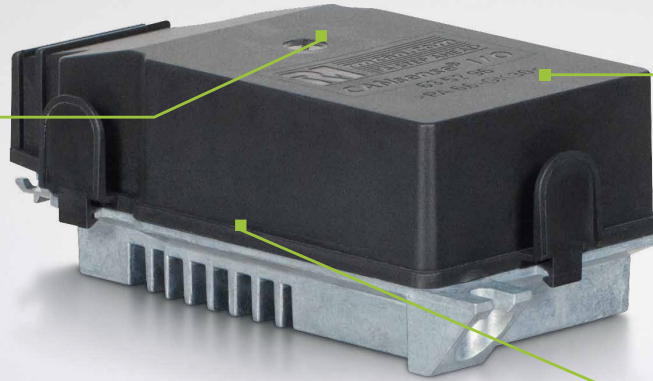


micron.com



CAN-SENSORS

intelligent switching and querying



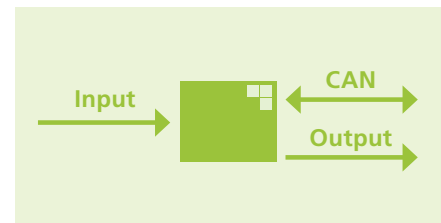
8 digital inputs

CANsense® I/O

12 digital outputs

CUSTOMIZABLE, INTELLIGENT I/O UNIT

- + Customizable CAN I/O unit
- + 8 digital inputs and 12 digital outputs
- + Possible to implement company-specific protocols



INTELLIGENT SWITCHING AND SCANNING

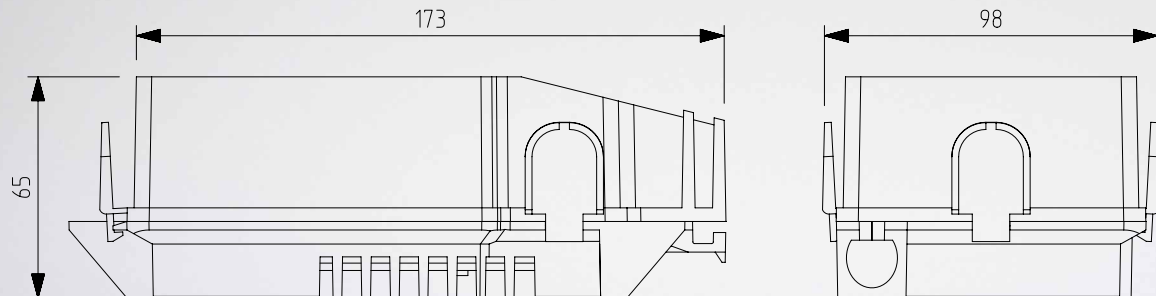
CANsense® I/O is an intelligent, customizable I/O unit which is ideal for switching and scanning digital performance outputs in vehicles.

SWITCH TO HIGHER CURRENTS

CANsense® I/O has 8 digital inputs and 12 digital outputs in its standard configuration. 4 of the digital outputs are high-current outputs and can switch to up to 10 A currents. All outputs are not only current-limited and short-circuit-proof (overload protection) but also have a diagnosis function. An internal RS-232 interface also allows for software and configurations to be updated. A galvanically isolated CAN interface is also an option.

ADJUSTABLE BAUD RATES

CANsense® I/O acts as a CANopen® slave in a CANopen® network and supports the CANopen® Device Profile DS 401. Program software for updating firmware easily is also included in the delivery.

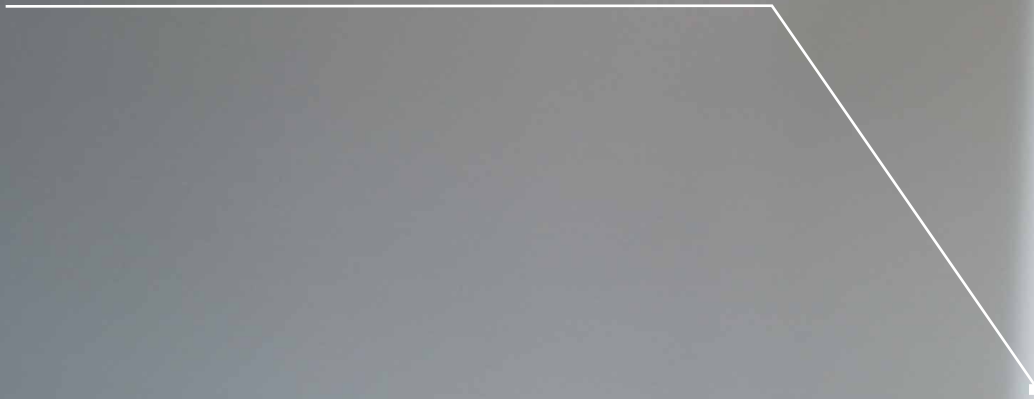


| | |
|----------------------------------------|---------------------------------------|
| Mechanical Data | I/O |
| Dimensions width / height / depth [mm] | 192 / 100 / 68 |
| Degree of protection | IP 10 |
| Temperature range | -20 °C ... +70 °C / -4 °F ... +158 °F |
| Weight | 750 g |
| Electrical Data | |
| DC power supply | 10 V – 30 V |
| Power input @ 24 V | 60 mA |
| Memory: Program / Configuration / Data | 32 kB / 2 kB / 1 kB |
| Status LEDs | 2 |
| Interfaces / Protocols | |
| CAN | 1 (ISO 11898-2 high speed) |
| CANopen®, Layer 2 | ✓ |
| Customized CAN protocols | on request |
| Inputs | digital: 8 |
| Outputs | digital: 12 (4 x 10A, 8 x 1.5A) |
| Software | |
| RM System Tools CD | 157 002 059 |
| Accessories / Product number | |
| CANsense® I/O | 251 006 002 |
| CAN cable M12 4-pin 90° / open | 136 000 022 |
| I/O connector Combicon 8-pin | 132 300 033 |
| RS-232 / TTL-configuration adapter | 257 005 003 |
| RS-232 cable D-Sub 9-pin | 136 000 004 |
| Starter-Kit | |
| CANsense® I/O Starter-Kit | 253 000 016 |
| Certifications | |
| CE | ✓ |

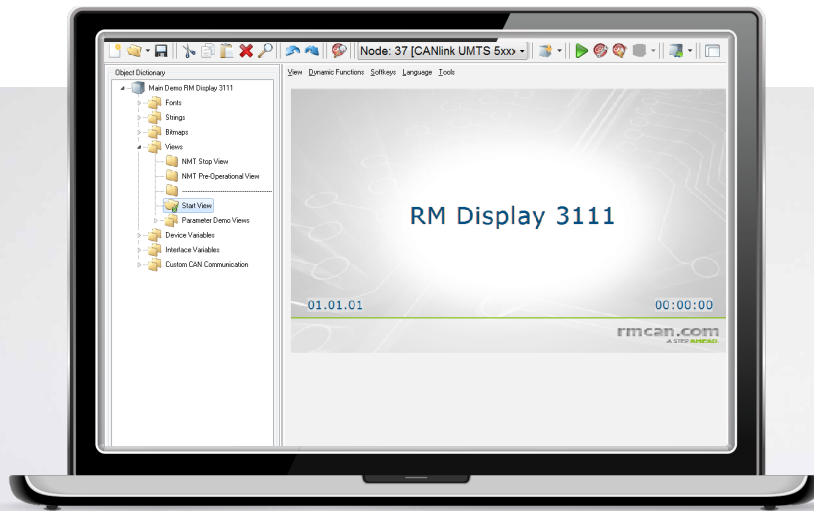
RM-TOOLS

To read CAN data from mobile machines and vehicles the CANlink® mobile module is implemented worldwide. Machine, system and vehicle data are retrieved via cellular networks and individually displayed with RMtools Dashboard.

Prior to the implementation of the versatile RMtools and the optimized interaction of hardware and software, there was no comparable option for remote diagnostics. Thanks to the company's own server and the secure CAN data encryption, visualization is made possible by custom instrument displays in real time or as a log.







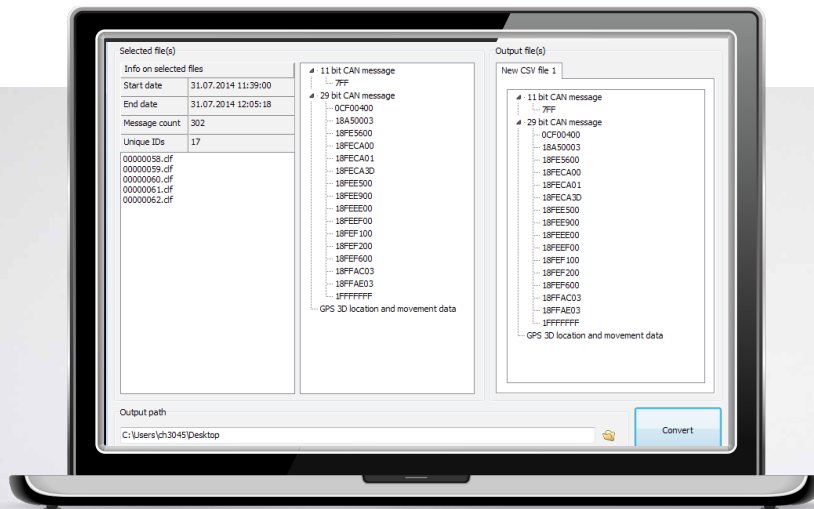
A RANGE OF CONFIGURATION OPTIONS

With the help of the RMtools Configurator, users can also influence the application behavior of RM Michaelides devices according to their individual requirements and carry out a range of adjustments without programming experience. The configuration of the devices is carried out via a direct connection or via a CAN network. The local and global radio connections of the target devices are also available for the configuration via corresponding gateways. In this way all of the settings can be adapted to the individual requirements at any time, worldwide.

THE FOLLOWING RM MICHAELIDES DEVICES ARE SUPPORTED:

- + CANview® Gateway
- + CANview® GPS
- + CANlink® mobile
- + CANlogger®
- + CAN-Display 1000
- + CAN-Display 2500
- + CAN-Display 3000

| SYSTEM REQUIREMENTS | |
|------------------------|-------------------------------------|
| CPU | 2 GHz Intel Core 2 Duo or later |
| RAM | 1 GB RAM (2 GB recommended) |
| Operation system | Microsoft Windows XP (SP3) or later |
| Hard disk storage unit | 500 MB |



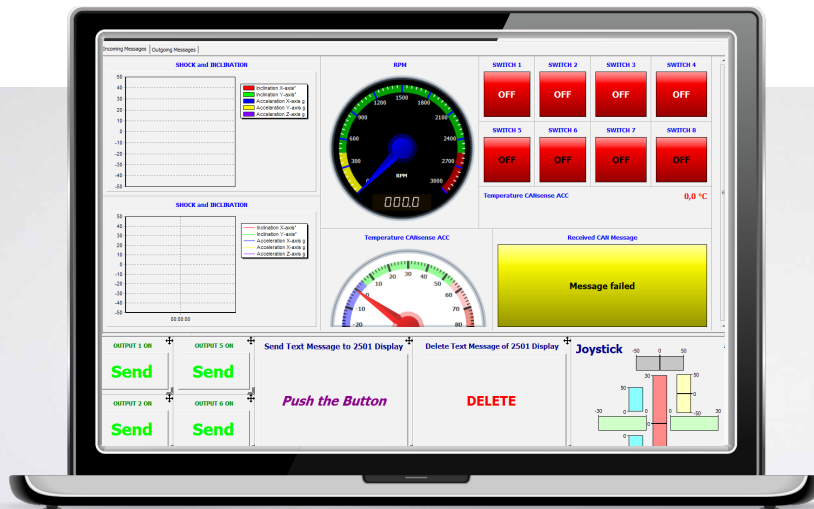
SIMPLE CONVERSION OF LOGGED CAN DATA

With the RMtools Converter, data logged by the RM Michaelides devices on a mobile basis can be converted into different fileformats. Among others, these include CSV, Vector® ASC and Google® KML.

THE FOLLOWING RM MICHAELIDES DEVICES ARE SUPPORTED:

- + CANlink® mobile
- + CANlogger®

| SYSTEM REQUIREMENTS | |
|------------------------|-------------------------------------|
| CPU | 2 GHz Intel Core 2 Duo or later |
| RAM | 1 GB RAM (2 GB recommended) |
| Operation system | Microsoft Windows XP (SP3) or later |
| Hard disk storage unit | 50 MB |



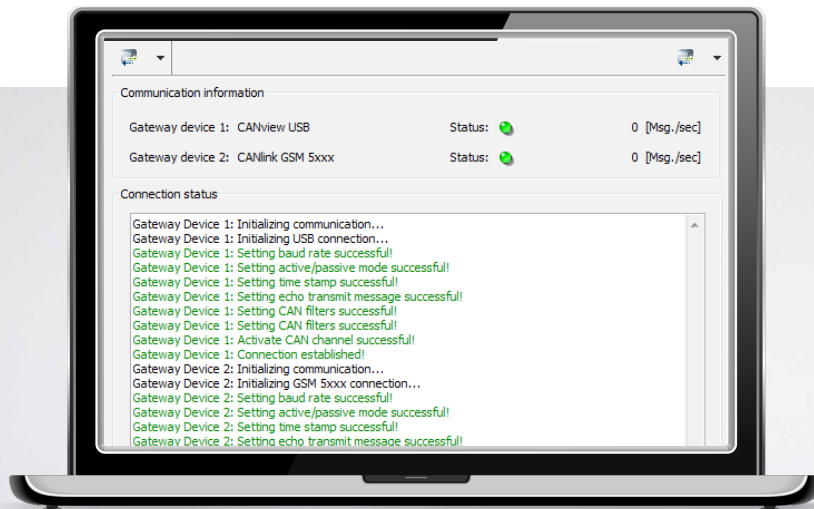
INDIVIDUAL VISUALIZATION OF CAN DATA

The RMtools Dashboard, which is available as a full version, installation-free portal download or Android app, enables the visualization of differing CAN data, such as operating hours, oil pressure, coolant temperature, revs or speed. Here, among others, numerical displays, pointer instruments and column and line diagrams can be adjusted as required, moved and edited in terms of their size and design.

THE FOLLOWING RM MICHAELIDES DEVICES ARE SUPPORTED:

- + CANview® RS-232
- + CANview® USB
- + CANview® Ethernet
- + CANlink® Bluetooth
- + CANlink® mobile
- + CANlink® WLAN

| SYSTEM REQUIREMENTS | |
|------------------------|-------------------------------------|
| CPU | 2 GHz Intel Core 2 Duo or later |
| RAM | 2 GB RAM (4 GB recommended) |
| Operation system | Microsoft Windows XP (SP3) or later |
| Hard disk storage unit | 100 MB |



CONNECTION OF CAN NETWORKS

The RMtools SoftGateway enables the connection of two remote CAN networks to enable the exchanging of CAN messages between the networks. This type of communication is especially interesting for being able to access remote networks without having to extend one's own applications. Due to the option of being able to configure filter settings, certain CAN messages can be allowed through or blocked.

THE FOLLOWING RM MICHAELIDES DEVICES ARE SUPPORTED:

- + CANview® RS-232
- + CANview® USB
- + CANview® Ethernet
- + CANlink® Bluetooth
- + CANlink® mobile
- + CANlink® WLAN

SYSTEM REQUIREMENTS

| | |
|------------------------|-------------------------------------|
| CPU | 2 GHz Intel Core 2 Duo or later |
| RAM | 1 GB RAM (2 GB recommended) |
| Operation system | Microsoft Windows XP (SP3) or later |
| Hard disk storage unit | 50 MB |



STRAIGHTFORWARD UPDATING OF DEVICE FIRMWARE

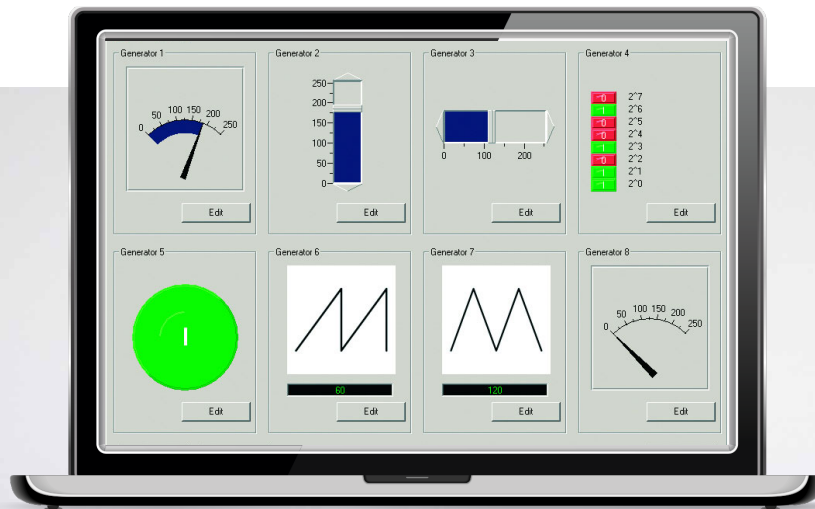
The RMtools Firmware Programmer enables the straightforward and rapid updating of the firmware of differing RM Michaelides devices.

The updating of the firmware can take place either via a direct connection, connection via a CAN network, or via the internet on devices which have an internet connection.

THE FOLLOWING RM MICHAELIDES DEVICES ARE SUPPORTED:

- + CANlink® mobile
- + CANlogger®
- + CAN-Display 3000
- + CANbooster

| SYSTEM REQUIREMENTS | |
|------------------------|-------------------------------------|
| CPU | 2 GHz Intel Core 2 Duo or later |
| RAM | 1 GB RAM (2 GB recommended) |
| Operation system | Microsoft Windows XP (SP3) or later |
| Hard disk storage unit | 50 MB |



RECEIVE, EDIT AND TRANSMIT CAN MESSAGES EASILY WITH THE PC

The RMtools Monitor is a tool for the receiving, editing and transmitting of CAN messages with the help of the PC. The RMtools Monitor also enables the carrying out of CANopen functions.

THE FOLLOWING RM MICHAELIDES DEVICES ARE SUPPORTED:

- + CANview® RS-232
- + CANview® USB
- + CANview® Ethernet
- + CANlink® Bluetooth
- + CANlink® WLAN

SYSTEM REQUIREMENTS

| | |
|------------------------|-------------------------------------|
| CPU | 2 GHz Intel Core 2 Duo or later |
| RAM | 1 GB RAM (2 GB recommended) |
| Operation system | Microsoft Windows XP (SP3) or later |
| Hard disk storage unit | 50 MB |



www.rmcan.com

DE

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