



Systems for mobile machines

CANwireless: wifi and Bluetooth for the CAN bus



Diagnostic and service units



Wifi / Bluetooth connection for mobile machines

Connection, programming, maintenance and diagnosis of machines – without any cables

Supports MaintenanceTool, CODESYS and Service-Tool

“Infrastructure” and “Access Point” operation modes

Compact and robust housing



Wireless connectivity for mobile machines

Using the latest technologies, such as wifi supporting both 2.4 GHz and 5 GHz frequency bands and Bluetooth, multiple ways of connecting to the machine via radio are possible.

CANwireless allows wireless connection to the machine directly from the existing ifm tools for mobile control systems such as CODESYS or the MaintenanceTool.

In addition to the connection between PC or mobile end device and the mobile machine, the machines can also be connected to each other.

Using CANwireless, machines can exchange information and work together.

The device thus supports the technologies of Industry 4.0 and IoT (Internet of Things) and makes the machines even more intelligent.



Functions and features

CANwireless enables a wireless connection to the CAN bus in a vehicle or machine. With the two basic operating modes "Infrastructure" and "Mini Access Point", the module is able to create a connection in different ways.

• Operating mode "wifi Infrastructure"

In the operating mode "Infrastructure", a CANwireless is configured to connect to an existing wifi infrastructure. When connected to the network, the device can connect automatically to another network participant (client) or listen to incoming connection requests (server).

CAN bus data can be exchanged with other connected network participants.

• Operating mode "wifi Mini Access Point"

A CANwireless configured as mini wifi access point will create its own wifi network to which multiple other devices, e.g. other CANwireless devices, PCs, smartphones or tablets, can connect.

As in the operating mode "Infrastructure", the device can act as both client or server in its own network. Data on the CAN bus of the mini AP device will be shared with the other connected network participants.

• CAN to CAN bridge

The operating modes "wifi Infrastructure", "wifi Mini Access Point" or "Bluetooth" also support a wireless CAN bus bridge between several CANwireless devices.

• Wireless diagnoses and debugging

Tools like CODESYS V2.3 and the maintenance tool allow the use of CANwireless as interface to the machine.

• CAN to wifi / Bluetooth filter

If required, CANwireless devices can filter data to be transferred by radio. This reduces the data load and increases the operational reliability.

Products

Description	Order no.
CAN to wifi / Bluetooth, CANwireless with integrated antenna	CR3130
CAN to wifi / Bluetooth, CANwireless for external antenna	CR3131
CANwireless wifi /Bluetooth external antenna for CR3131	EC2118
M12 socket, shielded, 2 m black, PUR cable, 5 poles	EVC544
M12 socket, 2 m black, PUR cable, 5 poles	EVC070

Technical data

CANwireless	
Housing	Plastic
Connection	M12 CAN/power M12 service port
Protection rating	
Internal antenna	IP 67
External antenna	IP 65
Operating voltage	[V DC] 8...32
Current consumption	[mA] 60 mA (24 V DC) sleep mode < 1 mA (24V DC)
Temperature range	[°C] -40...75
Operation	
CAN interface	CAN 2.0 A/B, ISO 11898-2 CANopen, Layer 2, J1939
wifi frequency	2.4 GHz / 5 GHz
wifi protocol	IEEE 802.11 a/b/g/n, IEEE 802.11 d/e/i/h
wifi / Bluetooth - range	75 m (internal antenna), 200 m (external antenna)
Bluetooth	Classic Bluetooth, Version: 2.1 + EDR, Serial Port Profile (SPP)
Indication	1 x status LED (2 colours)
Standards and tests	For further information, please refer to the data sheet: www.ifm.com