

COMfalcon[®] plus

High-end VCI with LUA scripting and Linux operating system





COMfalcon[®] plus

COMfalcon[®] plus is a powerful VCI with WLAN/LAN and optional Bluetooth communication and various equipment options. Use it for monitoring, flashing or analyzing CAN networks and handling layer-7 protocols like CANopen or SAE J1939. Profit also from a Linux operating system and LUA scripting.

Key Features

-  **4x independent CAN channels**
-  **WLAN interface**
-  **Bluetooth optional**
-  **RS232**
-  **K-Line**
-  **Protocolhandling**
-  **Optional with data logging, scripting, CAN voltage level Oscilloscope functionality**
-  **Optional with integrated SD card**
-  **Compact housing with protection class IP65**

Interfaces

The COMfalcon[®] plus has four independent CAN channels and a Freescale PowerPC architecture. WLAN/LAN and optional Bluetooth is used to connect to a diagnostic device. In addition to the CAN interfaces a various of other interfaces such as RS232 or K-Line are available for diagnostic purposes.

Housing and status indicators

The device has a fairly rugged housing built of aluminium with IP65 protection and a easy to use trigger button for logging data. Thanks to the compact design and high shock resistance, the VCI can be used in various fields of the automotive industry. A double 14-segment display and nine LEDs are always showing the current status/error code of the device.

LUA Scripting

Own embedded applications are running directly on the COMfalcon[®] plus in LUA without the need of a third device. Several scripts can be run in parallel. Among other things, it's possible to create and implement own information, such as flash routines, ECU descriptions and more, and thus, for example, access to the CAN or file system. The embedded applications are portable and reusable for future Sontheim VCI generations.

Technical Data

CPU	Freescale PowerPC
RAM	64 MB
Memory	4 GB (up to 32 GB)
CAN interface	4× CAN interface acc. to ISO 11898
Baud rates	50 Kbit/s up to 1 Mbit/s
CAN termination resistance measurement	Terminating resistor of the vehicle CAN network with active bus
CAN Port	2× 7-pole M16 port (like Sontheim CANUSB)
RS232, K-/L-Line interface	M12 5-Pin female connector
LAN	M12 4-pin female connector 10/100 Mbit LAN
WLAN	1× acc. IEEE 802.11b,g,n,d,e,i up to 65 Mbit/s
Bluetooth (optional)	2.1+EDR, Power Class 1.5, BLE 4.0 and ANT
USB	Type mini-B
14-segment display	Boot information, K-line mode, RS-mode, measurement, error codes
LEDs	LAN status LED (green and yellow) WLAN/Bluetooth status LED (green and yellow) 4× CAN status LED (green and yellow) RS232, K-/L-Line status LED (green and yellow)
Dimensions (l×w×h)	110 mm × 150 mm × 35 mm
Housing	Aluminium, protection class IP65
Storage temperature	−40 °C up to +85 °C
Operating temperature	−40 °C up to +60 °C
Supply	via CAN 12 V – 24 V

Pin assignment

CAN 1/2



1	CAN2 low
2	CAN2 high
3	CAN GND
4	CAN1 low
5	CAN1 high
6	Vbat
7	oV

CAN 3/4



1	CAN4 low
2	CAN4 high
3	CAN GND
4	CAN3 low
5	CAN3 high
6	Vbat
7	oV

RS232 / K-/L-Line



1	RS232_RX
2	RS232_TX
3	K_Line
4	L_Line
5	GND

USB



1	VCC
2	USB_D−
3	USB_D+
4	USB_ID
5	GND

LAN (green)



1	ETH_TX+
2	ETH_RX+
3	ETH_TX−
4	ETH_RX−



Error frame detection

This feature allows surveillance and monitoring of a CAN network. The COMfalcon® possesses an own logic for detecting error frames and counting them up in a specific internal memory area. That is used for finding intermittent errors like falsified messages of a CAN participant.

ID-based level measurement – resistance measurement/current measurement

This feature allows to read the CAN level even IO-related and to measure active and passive termination resistors, for example for various diagnostics on a vehicle or a machine. This is especially important if the network may lose data caused for example by short circuits.

The Sontheim Modular Diagnostic Tool Chain

You can easily create your individual and professional diagnostic solution for automotive application with the help of the Sontheim interfaces and diagnostic software. Some use cases by linking hardware and software are:

- CAN data visualization, monitoring and processing
- Parameterization and control of whole CAN networks
- Vehicle diagnostics
- Flash processes of electronic control units (ECUs)

Order information

V930232400

COMfalcon® plus



Mobile Automation



Industrial Automation



Diagnostics



Connectivity

We are looking forward to your enquiry!

Sontheim Industrie Elektronik GmbH

Georg-Krug-Straße 2
D-87437 Kempten
Phone: +49 (0)831 575900-0
Fax: +49 (0)831 575900-72
Email: info@s-i-e.de

Sontheim Electronic Systems L.P.

201 West 2nd Street
Davenport, IA 52801, USA
Phone: +1 563 888 1471
Email: info@sontheim-esys.com

www.s-i-e.de