



GL5000 Logger Family Manual

Version 4.5.1 | English

Imprint

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1 Introduction

In this chapter you find the following information:

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1.1 About this User Manual

Conventions

In the two following charts you will find the conventions used in the user manual regarding utilized spellings and symbols.

Style	Utilization
bold	Blocks, surface elements, window and dialog names of the software. Accentuation of warnings and advices. [OK] Push buttons in brackets File Save Notation for menus and menu entries
Source Code	File name and source code.
Hyperlink	Hyperlinks and references.
<CTRL>+<S>	Notation for shortcuts.

Symbol	Utilization
	This symbol calls your attention to warnings.
	Here you can obtain supplemental information.
	Here you can find additional information.
	Here is an example that has been prepared for you.
	Step-by-step instructions provide assistance at these points.
	Instructions on editing files are found at these points.
	This symbol warns you not to edit the specified file.

1.1.1 Warranty

Restriction of warranty

We reserve the right to change the contents of the documentation and the software without notice. Vector Informatik GmbH assumes no liability for correct contents or damages which are resulted from the usage of the documentation. We are grateful for references to mistakes or for suggestions for improvement to be able to offer you even more efficient products in the future.

1.1.2 Registered Trademarks

Registered trademarks

All trademarks mentioned in this documentation and if necessary third party registered are absolutely subject to the conditions of each valid label right and the rights of particular registered proprietor. All trademarks, trade names or company names are or can be trademarks or registered trademarks of their particular proprietors. All rights which are not expressly allowed are reserved. If an explicit label of trademarks, which are used in this documentation, fails, should not mean that a name is free of third party rights.

- ▶ Windows, Windows 7, Windows 8.1, Windows 10, Windows 11 are trademarks of the Microsoft Corporation.

1.2 Important Notes

1.2.1 Safety Instructions and Hazard Warnings

**WARNING!**

In order to avoid personal injuries and damage to property, you have to read and understand the following safety instructions and hazard warnings prior to installation and use of the loggers. Keep this documentation (manual) always near the logger.

1.2.1.1 Proper Use and Intended Purpose

**WARNING!**

The loggers are measuring devices which are used in the automotive and commercial vehicles industries. The loggers are designed for gathering and recording data of the bus communication, for analyzing and possibly controlling electronic control units. This includes, inter alia, bus systems like CAN, LIN, MOST and FlexRay.

The loggers may only be operated in a closed state. In particular, printed circuits must not be visible. The loggers may only be operated according to the instructions and descriptions of this manual. Only suitable accessories should be used, such as the original Vector accessories or accessories approved by Vector.

The loggers are exclusively designed for use by skilled personnel as its operation may result in serious personal injuries and damage to property. Therefore, only those persons may operate the loggers who (i) have understood the possible effects of the actions which may be caused by the loggers; (ii) are specifically trained in the handling with the loggers, bus systems and the system intended to be influenced; and (iii) have sufficient experience in using the loggers safely.

The logger specific information can be acquired via the specific manuals as well as from the Vector KnowledgeBase at www.vector.com. Please consult the Vector KnowledgeBase for updated information prior to the operation of the loggers. The knowledge necessary for the bus systems used, can be acquired in workshops and internal or external seminars offered by Vector.

1.2.1.2 Hazards

**WARNING!**

The loggers may control and/or otherwise influence the behavior of electronic control units. Serious hazards for life, body and property may arise, in particular, without limitation, by interventions in safety relevant systems (e.g. by deactivating or otherwise manipulating the engine management, steering, airbag and/or braking system) and/or if the loggers are operated in public areas (e.g. public traffic). Therefore, you must always ensure that the loggers are used in a safe manner. This includes, inter alia, the ability to put the system in which the loggers are used into a safe state at any time (e.g. by „emergency shutdown“), in particular, without limitation, in the event of errors or hazards.

Comply with all safety standards and public regulations which are relevant for the operation of the system. Before you operate the system in public areas, it should be tested on a site which is not accessible to the public and specifically prepared for performing test drives in order to reduce hazards.

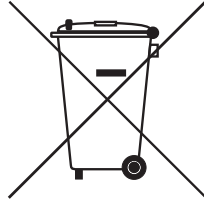
1.2.2 Disclaimer

**WARNING!**

Claims based on defects and liability claims against Vector are excluded to the extent damages or errors are caused by improper use of the loggers or use not according to its intended purpose. The same applies to damages or errors arising from insufficient training or lack of experience of personnel using the loggers.

1.2.3 Disposal of Vector Hardware

Please handle old devices responsibly and observe the environmental laws applicable in your country. Please dispose of the Vector hardware only at the designated places and not with the household waste.



Within the European Community, the Directive on Waste Electrical and Electronic Equipment (WEEE Directive) and the Directive on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS Directive) apply.

For Germany and other EU countries, we offer free take-back of old Vector hardware.

Please carefully check the Vector hardware to be disposed of before shipping. Please remove all items that are not part of the original scope of delivery, e.g. storage media. The Vector hardware must also be free of licenses and must no longer contain any personal data. Vector does not perform any checks in this regard. Once the hardware has been shipped, it cannot be returned to you. By shipping the hardware to us, you have relinquished your rights to the hardware. Before shipping, please register your old device via:

<https://www.vector.com/int/en/support-downloads/return-registration-for-the-disposal-of-vector-hardware/>

2 GL5350/GL5370 Logger

In this chapter you find the following information:

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2.1 General Information

2.1.1 Scope of delivery

Included

- ▶ 1x GL5350 or GL5370 logger (depending on the order)
- ▶ 1x Power supply socket with hoods and contacts
- ▶ 1x Vehicle and extension plug set with contacts
- ▶ 1x Switch Box E2T2L (2 pushbuttons, 2 LEDs)
- ▶ 1x USB cable



Reference

Information on available accessories can be found in the appendix in section **Accessories** on page 36.

2.2 Overview

Data logger

The GL5350/GL5370 is a data logger that logs communication of CAN, CAN FD, LIN, FlexRay and MOST channels as well as analog measurement values. The data is stored on a Solid State Disk (SSD).

The configuration of the logger is done with the **Vector Logger Suite** or the **G.i.N. Configuration Program**. The installation is described in section **Vector Logger Suite** on page 32.



Figure 1: GL5350

Main features

The logger offers the following main features:

- ▶ GL5350: 20x CAN channel (4 CAN FD channels included)
- ▶ GL5370: 24x CAN channel (12 CAN FD channels included)
- ▶ 6x LIN channel
- ▶ 2x FlexRay channel
- ▶ 4x digital input
- ▶ 4x digital output
- ▶ 4x analog input
- ▶ 4x programmable key
- ▶ 1x OLED display
- ▶ 5x programmable LED
- ▶ 3x USB host connector
- ▶ 1x USB device connector
- ▶ 5x 1 Gbit Ethernet, including managed switch for connecting external devices

2.3 Front Side

Device connectors

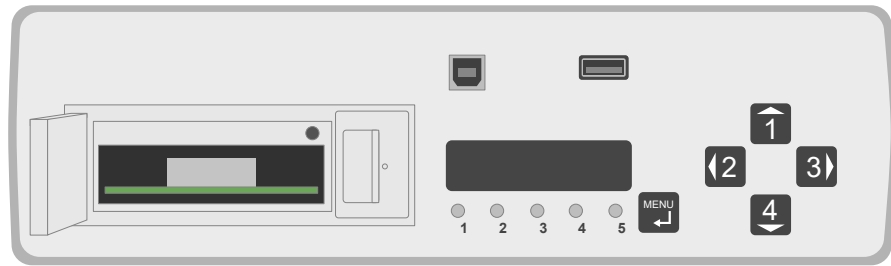


Figure 2: GL5350/GL5370 USB side

► Slot for removable SSD

The logger supports a removable SSD (2.5 inch SATA Solid State Disk) which is available as Vector accessory. The SSD is fixed on a cartridge. The SSD slot is located behind the front flap which can be unlocked and opened. The Disc Reader is available as an accessory for readout and supports high transfer rates through eSATA or USB 3.0. Alternatively, a USB-eSATA adapter can be used if robustness and transfer rate are less important.



Note

While the logger is switched on, the SSD must not be removed until the LED behind the flap is off. While the LED is red, it is not allowed to remove the SSD as the logger closes the log files and shuts down the operating system properly during this time.



Note

The system will only function properly if SSDs purchased from Vector are used. Our support team cannot process support cases involving problems attributable to non-approved SSDs.



Note

The SSD must be partitioned with 10% overprovisioning and formatted with exFAT. Although FAT32 formatting with the maximum cluster size of 64 kByte is generally supported, it is not recommended due to performance issues.

For a proper use of the SSD with exFAT format in the logger, it **must** be formatted with the Vector Logger Suite. After formatting, the SSD has the volume label "GINLOGHDDDEX". Please do not change the volume label, otherwise the SSD will not be recognized by the logger.

The total storage capacity of an exFAT formatted SSD is reduced to 90 %. The remaining 10 % are used for optimization of the write performance.

Please note that exFAT-formatted SSDs cannot be used with the GL3000, GL3100, GL3200, or GL4000 logger family.

► **USB 1 (Type-B)**

Use this connector to read out the inserted SSD or to write a new configuration via the computer. Therefore, the logger will be switched to USB mode. To switch into the USB mode, the logger must be connected to an external voltage supply. The USB connection alone is insufficient to power the logger.

In Windows, the logger is shown as a USB drive (similar to USB hard disks). The **Vector Logger Suite** identifies the logger as device and displays additional information in **Device Information**.



Step by Step Procedure

If the logger is in logging mode, connect the logger with the computer as follows:

1. Check if the logger is already in logging mode. The display shows **Record** and the LEDs lit as configured.
2. First, connect the USB cable to the computer (USB connector Type-A).
3. Then, connect the USB cable with the USB device connector (USB connector Type-B) at the front panel.
4. Wait until the display shows **Stop Rec** and **USB Mode**. The LEDs show a running light from the right to the left.

If logging data is still written to the SSD, the waiting time will be extended respectively. If you connect the logger via USB before rebooting, the logger switches to USB mode after about 40 seconds.



Note

Do not remove the SSD while the logger is in USB mode!



Step by Step Procedure

Please proceed as follows to disconnect USB:

1. In the **Vector Logger Suite**, open the module **Export** and eject the logger with the  menu from .
2. Then, disconnect the USB cable from the logger.
3. The logger will switch off. During this time, the display shows **Shutdown**.
4. In case of remaining bus traffic on the CAN busses, the logger awakes immediately.

- ▶ **USB 2 (Type-A)**
Reserved. Do not use.
- ▶ **Keypads 1...4**
The keypads can be used to navigate through the menu or individually configured, for example as trigger.
- ▶ **Keypad MENU**
Use this keypad to open the main menu or to accept (enter) a menu selection. More information on the keypad functions can be found in section **Navigation** on page 47.
- ▶ **LED 1...5**
These LEDs offer a visual feedback for active measurements and can be individually configured.
- ▶ **Display**
The logger features a 3 x 16 characters OLED display for messages. The display is freely programmable and can be used for any text output, e. g. capital and small letters, numbers or some special characters.

2.4 Back Side

Device connectors

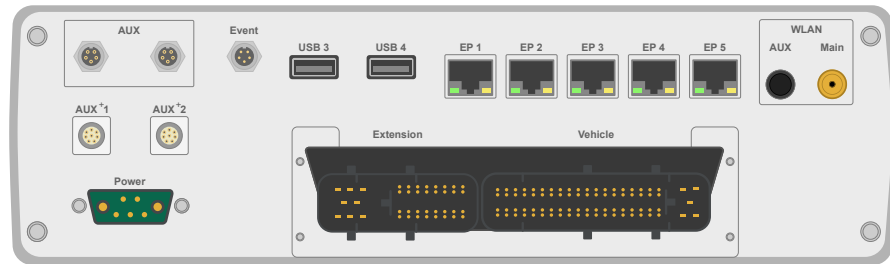


Figure 3: GL5350/GL5370 bus side

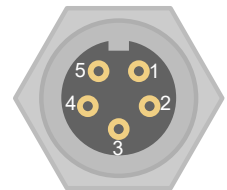
► AUX

The two 5-pin plug connections (Binder type 711) AUX are intended for the connection of the following logger accessories:

- LOGview (external display)
- Switch Box CAS1T3L (with one button, three LEDs and one sound)
- Switch Box CASM2T3L (with two buttons, three LEDs, one sound, and microphone for voice recording)
- VoCAN (for voice recording and output)

The pin assignment on the logger is as follows:

Pin	Description
1	+ 5 V
2	GND
3	CAN High
4	CAN Low
5	Vbat



Note

If additional devices are supplied through the AUX interface, the supply voltage of the GL5350/GL5370 must not exceed the supply voltage range of the connected additional device. High voltage will destroy the accessory.

The AUX connections are internally wired to CAN21 that is not accessible from the outside. This channel is always equipped with a high-speed transceiver without wake-up capability.

► **Event**

This connector is used for the Switch Box E2T2L, which is included in the scope of delivery. The buttons and the LEDs are freely programmable. The buttons can be used as manual trigger or event.



Figure 4: Switch Box E2T2

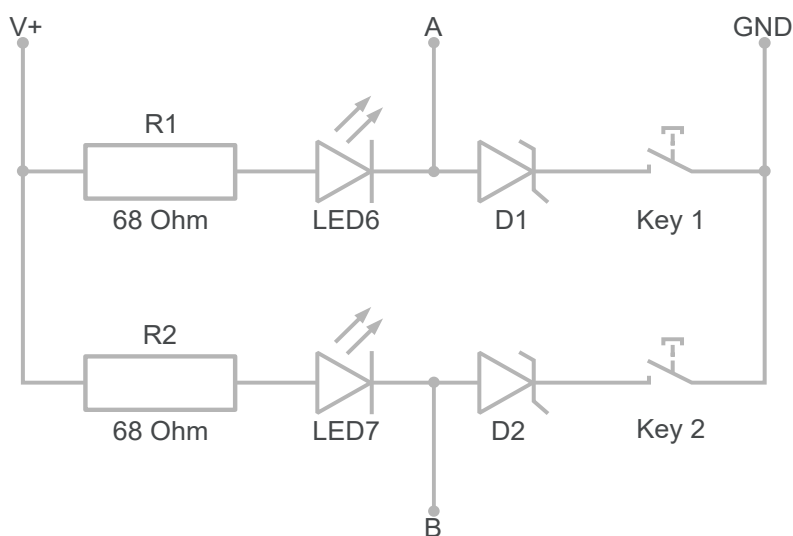
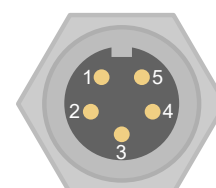


Figure 5: Switch Box E2T2L wiring

The pin assignment on the logger is as follows:

Pin	Description
1	Not connected
2	V+
3	A
4	B
5	GND



► **USB 3/4 (host)**

Reserved. Do not use.

► **Ethernet EP1...EP5**

1 Gbit Ethernet ports for applications like:

- connection of network cameras (all models)
- connection of up to two VX modules
- interface for monitoring mode in CANoe/CANalyzer

► **WiFi (Main)**

Depending on the ordered GL5000 option, the device is equipped with a connector for the WiFi antenna or a plastic plug. The operating frequency of the antenna is approximately 2.4 GHz. Use this port to transfer data to a destination system. This can be configured in **Vector Logger Suite**.



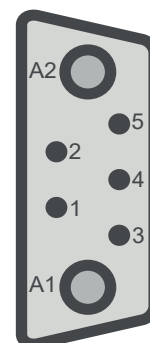
WARNING!

To satisfy FCC RF exposure requirements for mobile transmitting devices, a separation distance of 20 cm or more should be maintained between the antenna of this device and persons during operation. To ensure compliance, operations at closer distances than this are not recommended.

► **Power**

Power connector for voltage supply and KL15/ignition. The pin assignment on the logger is as follows:

Pin	Name	Description
1	GNDSense	Reference ground for terminal 30 Sense.
2	KL30Sense	Measuring voltage for terminal 30 Sense.
3	KL15	Ignition, wakes the data logger, on clamp 15 (connected with Analog In 6).
4	-	Reserved.
5	-	Reserved.
A1	KL31 (GND)	Supplies the data logger, on terminal 31.
A2	KL30 (VCC)	Supplies the data logger, on terminal 30 (connected with Analog In 5).



The supplementary KL15 line (pin 3) can be used to wake up the data logger from sleep mode, in the same way a CAN message wakes up a wake-up capable transceiver on a bus.

If the data logger is powered via terminal 30 (VCC), KL15 can be connected to clamp 15 so the device is woken up immediately after switching on the ignition even if there is no activity on the wake-up-capable buses or if such buses are not yet connected. The applied voltage on this line can be queried using Analog In 6.

When using longer cables to connect the data logger, the voltage drops off on the Terminal 30 and the GND line due to the operating current. As a result, a lower voltage than the actual wiring system voltage is measured with Analog In 5. To prevent this, the KL30Sense and GNDsense pins must be connected close to the wiring system voltage. Analog In 5 then measures the voltage at these pins.

**WARNING!**

It is recommended to connect the logger to the same voltage supply (e. g. battery of the vehicle) as the vehicle or test equipment, respectively. If two different voltage supplies are used for the logger and the test equipment, the ground (GND) pins of the two voltage supplies must be connected.

► Vehicle Plug

The pins of the vehicle plug on the logger have the following assignment:

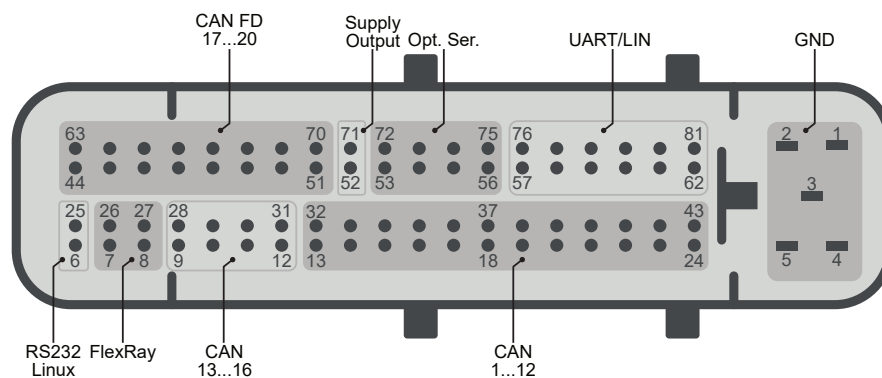


Figure 6: Vehicle plug GL5350

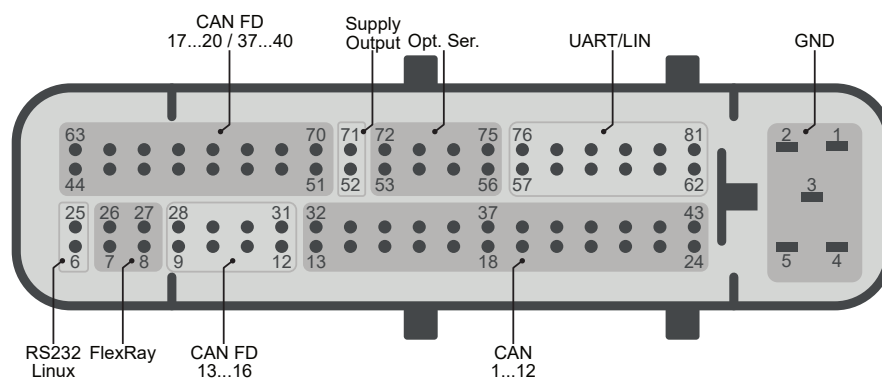


Figure 7: Vehicle plug GL5370

CAN 1...12
on-board transceiver
TJA1043TK

Pin	Assignment	Pin	Assignment
24	CAN 1 High	43	CAN 1 Low
23	CAN 2 High	42	CAN 2 Low
22	CAN 3 High	41	CAN 3 Low
21	CAN 4 High	40	CAN 4 Low
20	CAN 5 High	39	CAN 5 Low
19	CAN 6 High	38	CAN 6 Low
18	CAN 7 High	37	CAN 7 Low
17	CAN 8 High	36	CAN 8 Low
16	CAN 9 High	35	CAN 9 Low
15	CAN 10 High	34	CAN 10 Low
14	CAN 11 High	33	CAN 11 Low
13	CAN 12 High	32	CAN 12 Low

CAN 13...16
optional via
GLT Piggyback
(only GL5350)

Pin	Assignment	Pin	Assignment
12	CAN 13 High	31	CAN 13 Low
11	CAN 14 High	30	CAN 14 Low
10	CAN 15 High	29	CAN 15 Low
9	CAN 16 High	28	CAN 16 Low

CAN FD 13...16
optional via
GLT Piggyback
(only GL5370)

Pin	Assignment	Pin	Assignment
12	CAN 13 High	31	CAN 13 Low
11	CAN 14 High	30	CAN 14 Low
10	CAN 15 High	29	CAN 15 Low
9	CAN 16 High	28	CAN 16 Low

CAN FD 17...20
optional via
GLT Piggyback
(only GL5350)

Pin	Assignment	Pin	Assignment
44	CAN 17 High	63	CAN 17 Low
45	CAN 17 Vbat	64	CAN 17 GND
46	CAN 18 High	65	CAN 18 Low
47	CAN 18 Vbat	66	CAN 18 GND
48	CAN 19 High	67	CAN 19 Low
49	CAN 19 Vbat	68	CAN 19 GND
50	CAN 20 High	69	CAN 20 Low
51	CAN 20 Vbat	70	CAN 20 GND

CAN FD 17...20
optional via
GLT Piggyback
(only GL5370)

Pin	Assignment	Pin	Assignment
44	CAN 17 High	63	CAN 17 Low
46	CAN 18 High	65	CAN 18 Low
48	CAN 19 High	67	CAN 19 Low
50	CAN 20 High	69	CAN 20 Low

CAN FD 37...40
optional via
GLT Piggyback
(only GL5370)

Pin	Assignment	Pin	Assignment
45	CAN 37 High	64	CAN 37 Low
47	CAN 38 High	66	CAN 38 Low
49	CAN 39 High	68	CAN 39 Low
51	CAN 40 High	70	CAN 40 Low

The logger supports recording of either ISO CAN FD or NON-ISO CAN FD frames. The logger can be woken up via all CAN/CAN FD channels. The wake-up capability can be set via configuration.

Replacing Piggybacks:

It is recommended to purchase the logger with the right equipment. Subsequent replacement of the piggybacks is very time-consuming. The piggybacks may only be replaced with costs by Vector Informatik GmbH. For more information, please contact the Vector Support.

FlexRay

Pin	Assignment	Pin	Assignment
8	FlexRay A High	27	FlexRay A Low
7	FlexRay B High	26	FlexRay B Low

With the **Vector Logger Suite**, FlexRay databases in XML format are supported in versions FIBEX 2.0, FIBEX+, FIBEX 3.0, FIBEX 3.1 and ARXML, XCP on FlexRay is also supported with these versions.

LIN 1/2

Pin	Assignment	Pin	Assignment
58	LIN 1	77	Vbat LIN 1
57	LIN 2	76	Vbat LIN 2

The sending of LIN frames is not supported on these channels. A LINprobe X is required for this purpose and is available as optional accessory.

The logger can be woken up over the LIN channel. The wake-up capability can be set via the configuration.

**Note**

The LIN channels are supplied with max. 12 V from the supply voltage of the data logger. If the reference voltage for a LIN channel is higher than 12 V, this voltage (e. g. 24 V) must be applied to the according Vbat pins. In all other cases the Vbat pins are not connected.

UART 1...4

Pin	Assignment	Pin	Assignment
62	UART1_Rx	81	UART1_Tx
61	UART2_Rx	80	UART2_Tx
60	UART3_Rx	79	UART3_Tx
59	UART4_Rx	78	UART4_Tx

For recording and transmitting data, the serial interfaces (UART1...4) of the logger can be used. The baud rate of the interface can be set. Received data can be stored as CAN messages. The serial interfaces cannot be used to load a configuration or to read out logging data.

OptSer 1...4
optional via Piggybacks

Pin	Assignment	Pin	Assignment
56	OptSer 1: Rx or Vbat LIN 3	75	OptSer 1: Tx or LIN 3
55	OptSer 2: Rx or Vbat LIN 4	74	OptSer 2: Tx or LIN 4
54	OptSer 3: Rx or Vbat LIN 5	73	OptSer 3: Tx or LIN 5
53	OptSer 4: Rx or Vbat LIN 6	72	OptSer 4: Tx or LIN 6

The optional serial interfaces can be equipped either with RS232 interfaces (UART) or for LIN. If only LIN interfaces are equipped, they are assigned to the lower OptSer channels.

RS232 Linux

Pin	Assignment	Pin	Assignment
6	RS232LinuxRx	25	RS232LinuxTx

This Linux interface is not required in logging mode. It can be used for diagnosis of the data logger when specific errors occur. This requires a terminal or a computer with terminal emulation to be connected to this socket. The pin assignment for this connection is as follows:

D-SUB9 (to computer) Pin	Assignment (Vehicle Plug)
2	RS232LinuxTx
3	RS232LinuxRx
5	GND

GND

Pin	Assignment
1...5	GND. Connected internally and located on the potential of the supply ground.

Supply output

Pin	Assignment	Pin	Assignment
52	Supply output 5 V	71	GND for 5 V (out)

Pin 52 provides the supply voltage 5 V via a switch. This pin is switched off when the device is in sleep mode. This output can supply currents up to 500 mA in sum with the two 5 V outputs (pin 1) at the AUX connectors.

► Extension Plug

The pins of the extension plug on the logger have the following assignment:

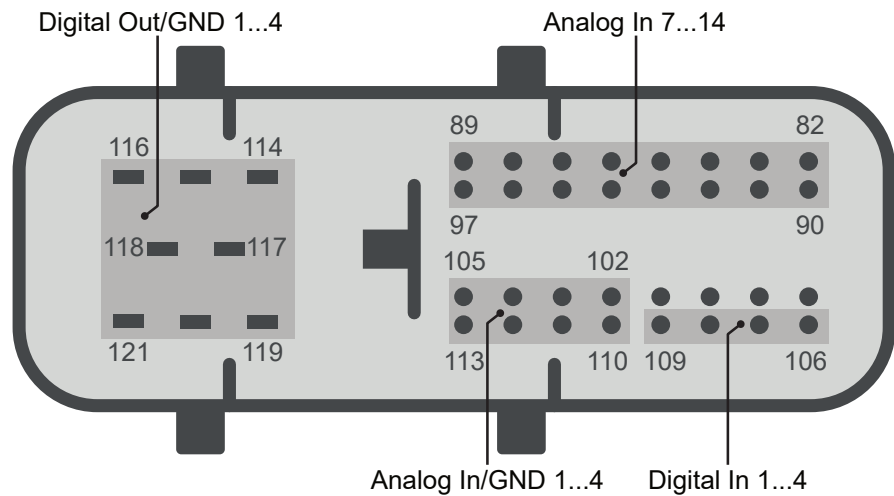


Figure 8: Vehicle plug

Digital Out/GND

Pin	Assignment	Pin	Assignment
119	Digital Out 1	114	Common Digital Out GND (DigOutGND)
120	Digital Out 2	115	
121	Digital Out 3	116	
117	Digital Out 4	118	

A digital output can be used to operate e. g. external hardware.

The digital output pins use so-called low side switches, i. e., when an output is activated, it will be connected through to Digital Out GND. The load to be switched must therefore be connected between the respective Digital Out and the vehicle voltage.

The four Digital Out GND pins are connected to one another internally and are used to divert possible high currents that could flow in on the digital output.

For high currents, the ground Digital Out GND must be connected to the vehicle ground (GND at power plug).

Digital In

Pin	Assignment
106	Digital In 1
107	Digital In 2
108	Digital In 3
109	Digital In 4

The digital input pins are set to low (FALSE) in unconnected state.

Analog In/GND 1...4

Pin	Assignment	Pin	Assignment
102	Analog In 1	110	Analog In 1 GND
103	Analog In 2	111	Analog In 2 GND
104	Analog In 3	112	Analog In 3 GND
105	Analog In 4	113	Analog In 4 GND



Note

The GND pins 110...113 are not directly connected to each other internally. Instead, they are individually connected to the supply ground with a high impedance of approximately 500 kOhm.

Analog In 7...14 optional via analog extension board A8I

Pin	Assignment	Pin	Assignment
82	Analog In 7 +	90	Analog In 7 -
83	Analog In 8 +	91	Analog In 8 -
84	Analog In 9 +	92	Analog In 9 -
85	Analog In 10 +	93	Analog In 10 -
86	Analog In 11 +	94	Analog In 11 -
87	Analog In 12 +	95	Analog In 12 -
88	Analog In 13 +	96	Analog In 13 -
89	Analog In 14 +	97	Analog In 14 -

The logger can be expanded by eight independent analog inputs using the analog extension board A8I. The inputs are freely available as channels 7 through 14 and can be configured separately. These channels are differential and provide higher resolution and better precision than the internal analog inputs.

The extension boards are calibrated after production. The calibration data is stored on the board.

After start, the extension board needs 100 ms before data can be measured. The logger starts considerably faster (40 ms after switching on). As the analog values and the values from the digital inputs are latched together with the CAN data in the pre-logger, the measurement values of the first approx. 90 ms are lost.

The expansion board may only be installed by Vector Informatik GmbH. For more information, please contact the Vector Support.

2.5 Technical Data

CAN channels	Max. 20 (GL5350) - 12x CAN High-Speed (TJA1043TK) - 4x optional CAN High-Speed (TJA1043TK) or CAN Low-Speed (TJA1055) - 4x optional CAN High-Speed/CAN FD (TJA1043TK) - CAN: up to 1 Mbit/s - CAN FD: up to 5 Mbit/s - Wake-up capability Max. 24 (GL5370) - 12x CAN High-Speed (TJA1043TK) - 4x optional CAN High-Speed/CAN FD (TJA1043TK) or CAN Low-Speed (TJA1055) - 8x optional CAN High-Speed/CAN FD (TJA1043TK) - CAN: up to 1 Mbit/s - CAN FD: up to 5 Mbit/s - Wake-up capability
LIN channels	Max. 6 - Transceiver TJA1021 - Wake-up capability
FlexRay channels	2x - Transceiver: TJA1081BTS - Channels A and B of a cluster for Rx/Tx with XCP on FlexRay or - Channels A independent for Rx only, without XCP on FlexRay - Data transmission: 10 Mbit/s - Wake-up capability
Analog inputs	6x (single-ended) - Input 1...4: freely available - Input 5: connected with KL30 (VCC) (Pin A2 at power connector) - Input 6: connected with KL15 (Pin 3 at power connector) - Voltage range: 0 V ... 32 V - Resolution input 1...4: 10 bit - Resolution input 5/6: 12 bit - Precision: 1 % ± 300 mV - Sampling rate: Max. 1 kHz - Type: Single-ended to GNDSense, unipolar - Input resistance (to GND): 515.6 kOhm - Reverse-polarity protection: None
Analog expansion card (optional)	8x input (differential, unipolar) - Input 7...14: freely available - Voltage range: 0 V ... 18 V - Resolution: 12 bit (5 mV) - Precision 0.2 % - Sampling rate: Max. 1 kHz for each channel

	- Differential input impedance: 231.8 kOhm - Input impedance to GND: 115.9 kOhm - Reverse-polarity protection: -50 V ... +50 V - Boot-up: 100 ms
Digital inputs	4x - Voltage range: 0 V ... Vbat - Sampling rate: 1 kHz - Low level: < 2.3 V - High level: ≥ 3.1 V - State unwired input: Low (FALSE) - Input resistance: 100 kOhm
Digital outputs	4x - Voltage range: 0 V ... Vbat - Load current: Max. 0.5 A (Short-circuit protection circuit: 0 V ... 36 V) - Input resistance (on-resistance): 0.5 Ohm - Leakage current: 1 µA - Circuit time: 50 µs
USB	2.0
Ethernet	5x 1 Gbit interface
Wi-Fi	- IEEE 802.11g / 54 Mbit/s - Encoding algorithm: WEP and WPA/WPA2 - Security protocol: EAP/TLS, TKIP, RADIUS - Operating frequency of the antenna approx. 2.4 GHz
Extras	Real-time clock
Start-up time	Max. 40 ms
Battery	Lithium primary cell, CR 2/3 AA type Lithium primary cell, BR2032 type
Power supply	7 V...50 V, typ. 12 V
Power consumption	Typ. 10.3 W @ 12 V Typ. 60 W @ 12 V (AUX+)
Current consumption	Operation: typ. 860 mA Sleep mode: < 2 mA Standby mode: 180 mA All data in each case with 12 V. At startup higher current consumption possible.
Temperature range	-40 °C...+70 °C
Dimensions (LxWxH)	Approx. 290 mm x 212 mm x 80 mm
Operating system requirements	Windows 10 (64 bit) Windows 11 (64 bit)

3 First Steps

In this chapter you find the following information:

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3.1 Switching the Logger On/Off

3.1.1 Automatic Switching

Power management For permanent use in vehicles, the loggers are permanently connected to the vehicle battery. Due to the sleep-/wake functionality, the logger will be switched on and off automatically by bus activity. This implements an effective power management with very quick start times without stressing the vehicle battery in idle times (e. g. during night).

Sleep mode The logger can be configured to switch to sleep mode automatically if no CAN, LIN or FlexRay message was received within a defined time. This time can be defined in the configuration program (maximum 18,000 s = 5 hours). In sleep mode, LED2 flashes every 2 seconds. The sleep mode has a very low current consumption of less than 2 mA.

Wake-up The logger wakes up from sleep mode:

- ▶ after reception of a CAN message
- ▶ after reception of a LIN message
- ▶ after reception of a FlexRay message
- ▶ positive edge on the wake-up line (clamp 15)
- ▶ wake-up timer via real-time clock

After wake-up, messages will be recorded after maximum 40 ms.

3.1.2 Manual Switching

- ▶ The logger is switched on by applying the supply voltage.
- ▶ The logger is shut down and switched off by opening the front access panel. After opening the front access panel, the display shows **Door opened** and then **Stop Rec.** During the following shutdown of the logger and the writing of the logging files from RAM to SSD, **Shutdown** is displayed. During all these steps a running light from right to left is displayed by the LEDs. If the display is off, the logger is shut down.
- ▶ The SSD can be removed after the red LED is off.
- ▶ The logger can be started by closing the front access panel.
- ▶ Depending on the configuration, bus activity after the shutdown can wake up the logger immediately.



Note

The logger must not be switched off by disconnecting the voltage. By interrupting the voltage supply, files are closed and the operating system shuts down properly. The logging data in the RAM gets lost.

3.1.3 Logging after Start

General information

After starting the logger, the full functionality is guaranteed. The following restrictions in the first few seconds are to be considered:

- ▶ No connection to the camera (all models)
- ▶ No LAN/WiFi connection
- ▶ No mobile connection
- ▶ Saving to the SSD hard disk is not possible
- ▶ Monitoring mode with CANoe/CANalyzer not possible
- ▶ At most, two trigger events are possible for each ring buffer. After a second trigger event no further data can be recorded within this time, since copying from the triggered ring buffer to the SSD hard disk is not possible.
- ▶ For long time recording, the size of the ring buffer should be set to fit the recorded data.

3.1.4 Behavior in Case of Power Failure

Power supply

In case of an unexpected power failure, the logger is able to close the file system of the SSD and shut down the operating system in an orderly manner. The logger has a short-term buffering of the supply for this purpose. However, this is not sufficient for saving the open ring buffers in the RAM.

If the power failure occurs too short after the logger start and therefore the buffer could not be fully charged, the orderly shutdown of the operating system is not guaranteed. In extreme case, this can cause damage to the operating system. The same applies to unstable power supply and frequent short-time power failures.

3.2 Vector Logger Suite

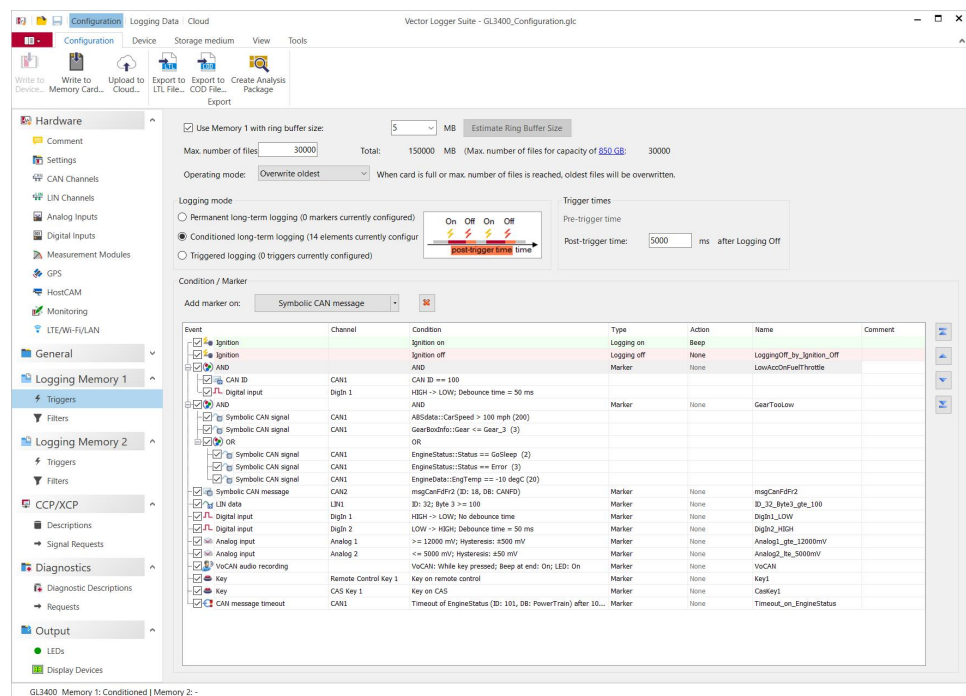
3.2.1 General Information

Overview

Vector Logger Suite enables the configuration of all loggers of the GL Logger family and offers a wide range of settings. You may set baud rates for CAN and LIN, define triggers and filters, set LEDs and manage logging files on the storage media. Furthermore for the CAN bus diagnostics and CCP/XCP can be configured. For CCP/XCP the logger needs an installed license. For Seed & Key CANape is required. Vector Logger Suite also supports trigger and filter access by symbolic names defined in CAN, LIN and FlexRay databases.

Main features are:

- ▶ Customizable filters for CAN and LIN messages and FlexRay frames/PDUs
- ▶ Customizable triggers
- ▶ Support of CAN databases (DBC) and LIN databases (LDF)
- ▶ Support of FlexRay databases (FIBEX 2.0, FIBEX+, FIBEX 3.0 and FIBEX 3.1 each with XCP)
- ▶ Support of AUTOSAR description files (ARXML), version 3.0 to 4.4
- ▶ Diagnostic support
- ▶ File management
- ▶ CCP/XCP (optional)



Requirements

The following software requirements must be fulfilled to run the Vector Logger Suite: Windows 10 (64 bit) or Windows 11 (64 bit)

**Reference**

The Vector Logger Suite is described in detail in the user manual of this configuration program. The user manual is available as PDF and can be opened in the Vector Logger Suite via **Backstage | Documentation**.

3.2.2 Quick Start

3.2.2.1 Installation

**Step by Step Procedure**

The Vector Logger Suite can be installed as a 64 bit program as follows:

1. Execute the setup, which is found on the installation DVD:
`.\VLSuite\Setup_VLSuite_64Bit.exe`.
2. Please, follow the instructions in the setup program to complete the installation.
3. After successful installation, the Vector Logger Suite can be found in the start menu (if selected during installation).
4. Also install the basic software e. g. for wireless transmission. The software can be found on the installation DVD under
`.\MLtools\setup.exe`.

3.2.2.2 Configuring the Logger

**Step by Step Procedure**

Follow the instructions below to configure the logger with an SSD, start long-term logging and read out logging data.

1. Start the program.
2. Create a new project in the backstage via **New Project...** In the displayed dialog, select the logger type.
3. Select suitable baud rates for CAN and/or LIN (**Hardware | CAN Channels** and/or **Hardware | LIN Channels**), respectively.
4. Select the timeout to sleep mode (value > 0) in **Hardware | Settings**.
5. Connect the logger via USB to your computer, power it up and wait until the display shows USB Mode.
6. Load the configuration via **Configuration | Write to Device...** on the connected logger.
7. Open the module **Logging Data** and eject the logger with the  menu from . Disconnect the logger from USB.
8. Connect the logger e.g. to your test system (CAN bus). During the configuration update the logger starts up first and displays approx. 30 s **Record** and afterwards approx. 30 s **Update in progress**. After a successful update **Update finished** is displayed for 3 seconds. As soon as **Record** is displayed again, the new configuration is active.

**Note**

During update, the logger must not be disconnected from the power supply. Please allow up to 5 minutes for extensive firmware updates (e. g. including Linux update).

9. The logger then starts the configuration and the data logging. LED1 flashes continuously (default setting for a new configuration, LED 1 configurable).
10. Open the module **Logging Data**.
11. Stop recording by connecting the logger to your computer via USB. Wait until the display shows **USB Mode**.
12. The data from the logger is automatically displayed if the **Measurement Selection** list was empty before. Otherwise click on **Backstage**  and select the logger from the **Attached Hardware** list.
13. Click on **Destination Format** and select the file format (e. g. BLF logging file) and further settings.
14. Click on **File Storage** and select the target directory and further settings.
15. Click on **Export** to initiate the readout of the logging data and the automatic conversion to the selected file format. The files will be stored in a new sub-folder (Destination Subdirectory) of the target directory.
16. Eject the logger with the  menu from . Disconnect the logger from USB.

3.2.2.3 Setting the Real-Time Clock

**Step by Step Procedure**

The following example describes how to set the date and the time of the logger. Before delivery the logger is set to CET.

1. Connect the logger via USB to your computer.
2. Start the logger (if it is not switched on yet) by supplying power. Wait until the display shows **USB Mode**. The logger must be switched on during the whole procedure.
3. Start the Vector Logger Suite. Make sure a configuration for GL5000 is active.
4. Select **Device | Set Real-Time Clock....** The current computer system-time is displayed.
5. With **[Set]** the current computer system-time is set in the logger. The logger is then automatically ejected.

4 Appendix

In this chapter you find the following information:

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4.3 System Messages	43
4.4 Menu Navigation and Commands	47

4.1 Accessories

4.1.1 GLT Piggybacks

A GLT piggyback is a plug-in PC-board which implements the interconnection of the logger to a specific CAN bus by the use of various transceivers. The piggybacks are also used in other loggers.

Piggyback	Transceiver	Description
GLT Piggyback 1043	TJA1043TK	Electrically decoupled CAN High-Speed, wake-up capable.
GLT Piggyback 1055	TJA1055	Electrically decoupled CAN Low-Speed, wake-up capable.



Note

It is recommended to purchase the logger with the right equipment. Subsequent replacement of the piggybacks is very time-consuming. The piggybacks may only be replaced with costs by Vector Informatik GmbH. For more information, please contact the Vector Support.

4.1.2 Cameras

Overview

The logger supports logging image sequences via network cameras, also known as HostCAMs. The following models can be used as HostCAMs:

- ▶ AXIS P1214_E
- ▶ AXIS F44
- ▶ AXIS F9114

Therefore, the cameras must be connected to one of the Ethernet ports EP1 to EP5 on the back of the logger. The cameras can be configured directly in the **Vector Logger Suite**. For logging of the image sequences, a camera license must be installed either on the logger or the camera. The F9114 camera model does not support licenses installed on the camera. Please note that the licenses cannot be transferred.



Reference

Further information on configuring and connecting the camera can be found in

- ▶ the HostCAM user manual (for model P1214_E) and
- ▶ the HostCAM F44 user manual (for model F44).

The initial setup of F9114 is described in `GettingStartedWithHostCAM_F9114.pdf`, which is supplied with the Vector Logger Suite.

**Note**

- ▶ The simultaneous operation of more than four P1214_E cameras or of more than four sensor units of the F44 or F9114 camera is not recommended due to performance reasons.
- ▶ If multiple cameras are triggered simultaneously, the storage of recorded bus data to the SSD may be delayed during the image transmission. That may lead to a temporary impossibility to record any bus data.
- ▶ A **Factory Reset** at the P1214_E and F44 via web interface removes the camera license. Afterwards, the license has to be reinstalled. Please perform a Factory Reset (if required) by using the HostCAM Setup from the Vector Logger Suite. A previously installed license file is retained.

4.1.3 GLA150 (MOST)

**Note**

This product is no longer available.

General information

For MOST150 the accessory GLA150 is required. It will be connected to the logger via Ethernet. With the GLA150 selectively the following MOST events can be logged:

- ▶ Status Events (bus state, system state, register, allocatable ...)
- ▶ Control Message Events
- ▶ MOST Data Packet Events (MDP)
- ▶ MOST Ethernet Frame Packet Events (MEP)

Normally, the status event is logged only at the occurrence of changes. Additionally it can be configured that the status event is written automatically to the logging file cyclically once per second. This ensures that also at a triggered logging with only a few occurred state changes the current state will be logged.

The configuration of the GLA150 is handled via the Vector Logger Suite.

Please note that older GLA150 up to and including serial number 000005 require a hardware modification for use on the GL5350/GL5370. Please contact the Vector support for more information.

Logging of MOST events

The logging of the MOST events will start a few seconds after the logger's wake up.

After the logger switched to sleep mode, the GLA150 remains active and thereby holds the MOST ring closed until the first time Light off will be detected at the input. Afterwards the GLA150 will be woken up by the logger.

The time stamps of the MOST events are synchronized automatically with events of other bus systems, e.g. CAN or LIN.

Connectors

At the GLA150, the following connectors are available:

- ▶ **MOST150**
Connection for fiber optic cable.
- ▶ **Network**
Connection for Ethernet cable. The cable is connected to connector Eth 3 at the logger's backside.
- ▶ **Power/Sync**
Connection for GLA150 adapter cable PWR-SYNC. The cable is connected to the logger's AUX+ connector, to supply the GLA150 with power.

LEDs

▶ **Power**

LED which indicates the power state.

Color	Description
Green	Device is running.

▶ **Communication**

LED which indicates the communication state.

Color	Description
Green	Data connection to the logger is ready.

▶ **MOST Activity**

LED which indicates the MOST state.

Color	Description
Yellow	Ethernet packets, data packets or control messages received.

▶ **Error**

LED which indicates the error state.

Color	Description
Red	Connection problem to the logger or data overflow.

▶ **Info**

Unused.

▶ **MOST Lock**

LED which indicates the MOST Lock state.

Color	Description
Yellow	Stable Lock.

4.1.4 Miscellaneous Accessories

- Optional hardware and software
- ▶ Analog extension card A8I with 8 analog inputs
 - ▶ LTE Router RV50X (external module)
 - ▶ SSD with cartridge. Must be ordered from Vector.
 - ▶ Disc Reader for fast readout of logging data from an SSD
 - ▶ CANgps to record the position via GPS
 - ▶ VoCAN for voice recording, voice output and to trigger events
 - ▶ CASM2T3L for voice recording and to trigger events
 - ▶ CAS1T3L to trigger events and output a signal tone
 - ▶ LOGview for displaying signal and status information
 - ▶ LINprobe for additional LIN channels
 - ▶ VX1060 for read-out of ECU-internal signals via XCP on Ethernet
 - ▶ CAN and ECAT measurement modules for advanced measurement technology
 - ▶ GLA710 as an Uninterruptible Power Supply (UPS) for special use cases
 - ▶ GLA618 as AUX Distributor for additional accessories
 - ▶ CCP/XCP license for CAN, FlexRay and Ethernet
 - ▶ Online Data Transfer License for data transmission to the cloud
 - ▶ License for HostCAM:
 - Logger- or camera-based for P1214_E and F44
 - Logger-based for F9114
 - ▶ vLoggerCloud as easy-to-use infrastructure for logging data in the cloud

4.2 Miscellaneous Features

4.2.1 Beep

Speaker

The logger has a speaker that acoustically alerts the user e.g. in case of a trigger. Triggers and beep can be defined using the configuration program.

4.2.2 Real-Time Clock and Battery

General information

The logger has an internal real-time clock, which is battery supplied, and thus continues running even if the logger is disconnected from power supply. The real-time clock inside the logger is required to store the date and time together with the logged data. It is recommended to set the real-time clock before first logging.

Primray cells

The logger has two Lithium primary cells:

- ▶ For supply of the real-time clock (type designation: BR2032). This battery has a typical durability of approximately 5 to 10 years under the following conditions:
 - T = +40 °C ... +80 °C for at most 40 hours per week
 - T = -40 °C ... +40 °C in the rest of the time
- ▶ For the maintaining of the classification data (type designation: CR 2/3 AA). This battery has a typical durability of approximately 4 to 7 years under the following conditions:
 - T = +40 °C ... +70 °C for at most 40 hours per week
 - T = -40 °C ... +40 °C in the rest of the time

Replacing battery

The batteries may only be replaced by Vector Informatik GmbH. For more information, please contact the Vector Support.

4.2.3 Wireless Data Transfer

The logger supports wireless data transmission to the cloud via LTE. An LTE router with a GLA600 adapter is required. A SIM card is not included, i. e. a separate contract with a provider is required.

In the Vector Logger Suite, you can define which events should trigger an LTE connection and which logged data should be transferred from the logger to the cloud.

vLoggerCloud (Software-as-a-Service) is the easy-to-use infrastructure for all steps around data acquisition in vehicle testing. Starting with the creation of a measurement configuration and its distribution in the fleet, the loggers deliver measurement data via LTE to the cloud, where it can be managed, converted and analyzed.

4.3 System Messages

System start

System Message	Duration	Description
Welcome to GL5xxx Header Revision HI.LO hh:mm:ss dd:mm:yyyy	1 s	Information about revision and time/date.
Welcome to GL5xxx Header Revision HI.LO Dispatcher Version HI.LO	1 s	Information about revision and dispatcher firmware.

System update

System Message	Duration	Description
Update in progress: 1/14 Keep device powered on!	-	Update of firmware, configuration, Linux files etc. (step 1 of 14).
Update finished	3 s	Update successful.

Events

System Message	Duration	Description
~ Door Opened!	500 ms	Protective cover opened.
~ Door Closed!	500 ms	Protective cover closed.
~ Leaving Menu Mode	2 s	The menu mode was exited by pressing left or by the menu item "Exit Menu".
~ Device Shutdown now	2 s	Linux CPU finished the shutdown process. The device enters to sleep mode.
~ Waiting for Logger	2 s	Dispatcher waits for a shutdown message from logger CPU before switching to sleep mode.
~ Reboot Device	2 s	Logger reboots instead of switching to sleep mode.
~ Linux CPU started	2 s	Linux CPU is ready.
~ Logger CPU started	2 s	Logger CPU is ready.
~ Wakeup from CAN1	2 s	Display the wakeup source sent from the logger CPU. The following wakeup sources are known: - CAN1 ... CAN24 (and CAN37...CAN40 for GL5370) - LIN1 ... LIN6 - FR1, FR2 - AUX
~ Wakeup from 2 Sources CAN1 CAN2	2 s	Display the wakeup source sent from the logger CPU when multiple sources actively wakeup the system simultaneously.
~ Power Cycle requested	2 s	Logger requested power cycle of logger/prelogger voltage.

Errors

System Message	Duration	Description
~ Linux Version too old!	500 ms every 5 s	Linux version is too old that it causes compatibility problems.
~ ADC is not working!	2 s	Dispatcher does not get any new ADC values anymore and tries a recovery, otherwise it goes to sleep mode.
~ Restarted Display	2 s	Display is reinitialized after an error has been detected.

Errors

System Message	Duration	Description
~ SSD not usable	2 s	Linux has requested a system shutdown because the SSD is not functioning.
~ Fallback COD broken!	2 s	Linux has requested system shutdown because the fallback COD is not useable
~ Config Inconsistency!	2 s	Linux has requested system shutdown because the COD is corrupt or incompatible.
~ Infrastructure Error!	2 s	Linux has requested system shutdown due to an unexpected error.
~ Linux Error!	2 s	Linux has requested system shutdown because the Linux software is defect.
~ Logger not reachable!	2 s	Linux has requested system shutdown because it doesn't reach the logger (no response within 25 s).
~ AUX Error on AUX/AUX+ X!	2 s	Fuse on AUX+/AUX connector has disconnected the line. Connected devices are not supplied anymore!
~AUX turned Off by Fuse	2 s every 5 s	AUX/AUX+ error during this run, AUX supply is switched off.
~Press Menu+1 to ignore	2 s every 5 s	Note on how to ignore the AUX error message.
~ Timeout Linux	5 s	Received no messages for 1 minute from the Linux CPU. Either communication is defective or the CPU no longer responds. The device enters to sleep mode.
~ Timeout Logger	5 s	Received no messages for 50 s from the logger CPU. Either communication is defective or the CPU no longer responds. The device enters to sleep mode.
~ No Linux Watchdog 15 s	500 ms every 1 s	At least 3 watchdog messages were not received from the Linux CPU.
~Sleepmode Mismatch	2 s	Logger reports wakeup from different sleep mode than anticipated, data loss of the first frames.
~Unreliable Power Supply	5 s	Shutdown due to persistent problems with the supply voltage.

Text messages

System Message	Duration	Description
Hold Menu Button and press Button 3 to enter Menu Menu	5 s	Note for how to enter the menu mode.
Vin < 6V! Device will Shutdown!	10 s	Device enters to sleep mode because supply voltage is too low.
Vin > 52V! Device will Shutdown!	10 s	Device enters to sleep mode because supply voltage is too high.
Started without SSD, insert to continue or	5 s	Device displays the message continuously and beeps until an SSD is inserted or the

Text messages

System Message	Duration	Description
open door to sleepmode		front cover is opened.
Wakeup without SSD, insert to continue or open door to sleepmode	5 s	Device displays the message continuously and beeps until an SSD is inserted or the front cover is opened.
Media removed without permission!	10 s	The hard disk was removed while the device was running (glowing LED) or during an uncompleted PowerFail . PowerFail: Short period of bypassing power supply with built-in USV
Menu Mode Timeout No Input for 20 s Leaving Menu Mode	5 s	The menu mode is exited if no keypress is detected for 20 s.
Started with Open Door Entering sleepmode	-	Device was started with opened protective cover and enters to sleep mode.
Power On Again! Device will restart	-	If the power supply is re-established during a PowerFail, the device restarts automatically. The start of the PowerFail process is not shown on the display but it is signaled with a flashing LED1.
In Maintenance Mode! Do manual reboot in Linux bash	5 s every 5 s	Device is in maintenance mode.
Pin correct! Starting Linux in Maintenance Mode!	5 s	You have started the maintenance mode and entered the pin correctly.
Shutdown Requested Switch to Sleepmode Do not remove SSD!	10 s	Shutdown was requested via the menu.
Record	-	Configuration is executed.
Stop Rec	-	Configuration is stopped.
Save XX%	-	Configuration is stopped. The progress of saving the data is shown (if data > 100 KB).
Shutdown	-	Logger enters to sleep mode.
Connect	max. 70 s	LAN/WiFi connection establishment before the shutdown.
CTimeXX	-	WiFi connection establishment with display of the passed time in seconds.

Wake-up events

System Message	Duration	Description
~ Wakeup Reboot	5 s	Wakeup of the device via Linux reboot.
~ Wakeup from KL15	5 s	Wakeup of the device via KL15.
~ Wakeup from rising KL15	5 s	Wakeup of the device via KL15 status change.
~ Wakeup from Sleeper	5 s	Wakeup of the device via bus activity.
~ Wakeup from RTC	5 s	Wakeup of the device via the real-time clock set by LTL.
~ Wakeup from Door	5 s	Wakeup of the device via closing the protective cover.
~Restart after Timeout	5 s	Logger restarts after logger shutdown timeout switched it off.

Wake-up events

System Message	Duration	Description
~ Wakeup from Prelogger	5 s	Wake-up from standby mode via bus activity (via the preloggers).
~ Wakeup from Menu	5 s	Wakeup via menu command.
~ Wakeup from Vin Stable	5 s	Wake-up via stable supply voltage (after shutdown due low voltage).
~ Autorestart after Error	5 s	Device restarts for troubleshooting.

4.4 Menu Navigation and Commands

4.4.1 Navigation

The following table describes the keypad functions.

Keypad	Description
 	The [menu] key, in combination with key [3] , opens the main menu. Keep the [menu] key pressed and then press key [3] .
	This key is used to accept a menu selection.
   	Navigation keys, PIN input: Allow navigating the menus. Only the numbers 1, 2, 3 and 4 are available for entering the PIN, with the corresponding keys. The system created PIN has 4 digits and is randomly created every time. Specific settings can be secured by the user with a personal PIN (up to 12 digits).
 	Key [1] and [4] allow navigating up- or downwards in the menu tree. The keys have a "repeat function"; this means that a longer keypress activates the key multiple times, as long as it is pressed.
 	Key [2] and [3] allow navigating horizontally through the menu.
	Forward key: One step forwards in the menu (one layer deeper in the menu structure).
	Back key, Exit key: One step backwards in the menu with every keypress (one layer higher in the menu structure). One long keypress exits the menu. If no key is pressed for 20 seconds, the menu will be exited automatically.

4.4.2 Commands

In order to support navigation in the menu, the following characters are shown (at the beginning or end of a line):

Character	Description
▲▼	Additional menu item above/below
T┘	Topmost/lowermost menu item
▶	Submenu (one layer deeper)
└	Enter key needed to initiate action (e. g. shutdown logger)
◀▶	Menu selection in editing mode

Exit Menu
Shutdown Logger

Menu Command	Description
Exit Menu	Exits the menu.
Shutdown Logger	Device enters sleep mode.

System Info

Menu Command	Description
yyyy-mm-ddThh:mm:ss	System Info Timezone1: none/±xx:xx.
Timezone1: none/±xx:xx	Displays the data logger time zone. "none" if it is not set.
Hardware	Information about the built-in hardware.
Sernum	Serial number of the device.
Carname	Current vehicle name of the device is shown with the enter key.
MAC1	MAC address of the logger CPU.
MAC2	MAC address of the Linux CPU.
MAC3	Reserved
CAN13-20	Built-in CAN13-20. Sub menu shows the order designation.
SER4-7	Built-in Opt.Ser.1-4. Sub menu shows the order designation.
Software	Information regarding the installed software.
AUX Sleepmode is ON/OFF	If activated, Vbat is supplied to the AUX-/“AUX+“ sockets in sleep mode. This is needed to supply add-on devices like GLX427, GLX415 or GLX504 in sleep mode (fast wake-up of add-on devices). Please note: Providing Vbat during sleep mode needs approx. 10 mA at 12 V.
Comp. Time	Compiling time of the installed configuration.
Comp. Date	Compiling date of the installed configuration.
Comp. Timezone	Time zone of the installed configuration. "none" if it is not set.
COD size	Size of the installed configuration in MB.
COD ver.	Currently used COD version.
Disp:	Currently used Dispatcher version.
FW Infos	Sub menu with detailed firmware information

System Info

Menu Command	Description
	of the device.
Environment	Environmental conditions of the device (system temperature and internal voltages).
Licenses	Installed licenses on the device.
Show Error Log	Display of all recently occurred errors (up to 255 entries).
Show Event Log	Display of all recently events (up to 127 entries).
Watchdog Status	Displays the current watchdog counter (50 s for logger and 60 s for Linux) .

Settings

Menu Command	Description
AUX in Sleepmode ON/OFF	Provision of Vbat to the AUX-/“AUX+“ sockets during sleep mode can be activated or deactivated.
AUX Fuse Reset	Resets the fuses of the AUX-“AUX+“ connectors
Linux Maintenance	Reserved

Advanced Services

Menu Command	Description
System not up!	Linux is starting, please wait!
Update Dispatcher	Leads to pin input for dispatcher update. The pin is “1234”.
Full Reconfiguration	Reserved
Set Time/Date	Sets system date and system time in the logger.
IP Settings	Set/change IP address.
Flush Syslog	The file <code>console.log</code> is immediately written to the SSD.
Toogle Debug logging	Reserved
Toogle Protocol logging	Reserved
Service Report	A service report is generated and written to the SSD. This report is required for the analysis by Vector in individual problem cases.

**Note**

All menu functions (e. g. setting time/date, shut down logger etc.) are not usable during a logger update process (firmware update, configuration, Linux files etc.).



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