



Key Features

- 600 channels (512 via CAN)
- 4 CAN lines up to 2 Mbit/s each
- 1000Hz sampling rate for each CAN channel
- CAN routing between all CAN lines
- TCP/IP line
- 1 USB, 1 RS232 serial interface
- 8 GB internal memory
- Base rate 1 kHz / 10 kHz
- up to 1800 kByte/s total recording rate
- GPS input
- Analog inputs are continuously sampled 10kHz, down sampling to selected recording rate with digital filter
- **CAN DB decoding**
- **CAN FD (in development)**

Options:

- Max. 32x analog input channels 16bit, 0 to 5V (selected channels 0-20V)
- up to 10kHz sampling rate per channel
- 4 digital frequency inputs (up to 100kHz max frequency per channel)
- Full CAN routing
- CAN: XCP/CCP option / "Listen only" Mode
- 2nd Ethernet line
- 2nd USB, 2nd RS232 serial interface

- Daisy chain of 2x LG-L9 possible to record up to 64 analog channels with up to 10kHz per channel

Technical specifications

Logging

Memory	GB	8
Sampling frequency	Hz	10 kHz per Channel
CAN channels		512
Max. lap length		No limit

Analog input channels

Single ended inputs	#	Up to 32
Time multiplex (8 CH grouped)		Yes
Input voltage range (switchable)	V	0..5 (max. 16x +5V channels, marked blue, see connector layout)
or	V	0..20 (max. 16x +20V channels, marked green, see connector layout)
pull-up switchable (available @+5V channels)	Ω	4k7, 1%
Input filters (12 dB)		
anti-aliasing	Hz	1600, 1% spec Butterworth
Resolution	Bit	16
Precision	μV	100

Digital input channels

Input capture (DIN1 .. DIN4)	CH	4
Threshold	V	4 x variable
Max. frequency	kHz	100
Pull-up switchable to 12V	Ω	10k
32 bit Counters		4
Source		DIN1 .. DIN4

Output channels

Type open collector (per channel)		2
Trigger		Per channel
Sink current (per channel)	A	1

Communications

CAN-lines		4
Speed	KBaud	125 - 2000
Terminations (software switchable)	Ω	Off / 120
Identifiers standard	Bit	11 and 29
Ethernet		2
Physical	Mbit/s	10/100
Protocol		TCP/IP
USB		2 (USB Slave)
RS232		2
Max write speed	kByte/s	1800

Mechanical characteristics

Dimensions	mm	76 x 90 x 26
Weight	g	245
Housing material		Aluminum

Environmental

Shock	G	40
	ms	10
Vibration tested at	G	12
	Hz	1000
Humidity	%	5 to 95
Sealing class	IP	67

Ordering information

Art. No.:	LG-L9-000
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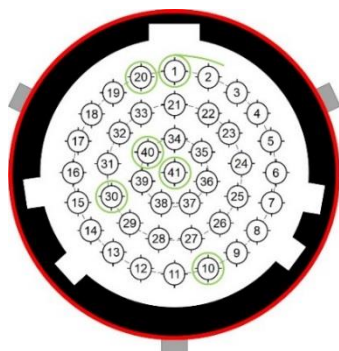
Add-ons for analog inputs

IN-ICP4-000	Add-on interface to convert 4 0-5V channels into 4 ICP inputs
IN-ANA_bp2uni_10-000	Add-on interface to convert 4 0-5V channels into 4 +/-10V inputs
BC-SG4_Aout-000	Add-on interface to have 4 analog highspeed strain gauge channels

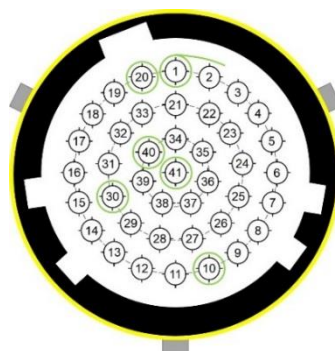
Connector layout

Connector type

“LIFE” Connector



“EXT” Connector



ASDD2 12-41 PN			ASDD2 12-41 PA		
PIN	CON	DESCRIPTION	PIN	CON	DESCRIPTION
1	Vext	Logger Supply Input (5-20V)	1	VOUT(5-20V)	Logger Supply Output
2	BGND	Logger Supply Ground	2	BGND	Logger Supply Ground
3	ON/OFF	Switched Power (8-20V⇒ON)	3	+12V-Supply	+12V Sensor Supply
4	USB1 Power(IN)	USB Power for BUS Powered	4	+5V-Supply	+5V Sensor Supply (Ratio to ADC)
5	AGND	Logger Analog Sensor Ground	5	AGND	Logger Analog Sensor Ground
6	CAN1 H	High Level CAN1	6	CAN3 H	High Level CAN3
7	CAN1 L	Low Level CAN1	7	CAN3 L	Low Level CAN3
8	CAN2 H	High Level CAN2	8	CAN4 H	High Level CAN4
9	CAN2 L	Low Level CAN2	9	CAN4 L	Low Level CAN4
10	TxD1	RS-232 TxD1 (GPS)	10	TxD2	RS-232 TxD2
11	RxD1	RS-232 RxD1 (GPS)	11	RxD2	RS-232 RxD2
12	USB1 D+	USB1 Data Line +	12	USB2 D+	USB2 Data Line +
13	USB1 D-	USB1 Data Line -	13	USB2 D-	USB2 Data Line -
14	ETH1 T+	Ethernet1 Tx D+	14	USB2 PowerOut	USB2 Power Supply Stick
15	ETH1 T-	Ethernet1 Tx D-	15	+12V-Supply	+12V Sensor Supply
16	ETH1 R+	Ethernet1 Rx D+	16	+5V-Supply	+5V Sensor Supply (Ratio to ADC)
17	ETH1 R-	Ethernet1 Rx D-	17	AGND	Logger Analog Sensor Ground
18	CAN3 H	High Level CAN3	18	AIN9	Analog input9 / SW Pull Up@+5V
19	CAN3 L	Low Level CAN3	19	AIN10	Analog input10 / SW Pull Up@+5V
20	CAN4 H	High Level CAN4	20	AIN11	Analog input11 / SW Pull Up@+5V
21	CAN4 L	Low Level CAN4	21	AIN12	Analog input12 / SW Pull Up@+5V
22	DIN1	Digital Input1 (SW-PU/SW-PD/Current-Sensor)	22	AIN13	Analog input13 / SW +20V
23	DIN2	Digital Input2 (SW-PU/SW-PD/Current-Sensor)	23	AIN14	Analog input14 / SW +20V
24	DIN3	Digital Input3 (SW-PU/SW-PD/Current-Sensor)	24	AIN15	Analog Input15 / SW +20V
25	DIN4	Digital Input4 (SW-PU/SW-PD/Current-Sensor)	25	AIN16	Analog Input16 / SW +20V
26	DOUT1	Digital Output1 (OC/max.2A)	26	AIN17	Analog Input17 / SW Pull Up@+5V
27	DOUT2	Digital Output2 (OC/max.2A)	27	AIN18	Analog Input18 / SW Pull Up@+5V
28	+5V-Supply	+5V Sensor Supply (Ratio to ADC)	28	AIN19	Analog Input19 / SW Pull Up@+5V
29	+12V-Supply	+12V Sensor Supply	29	AIN20	Analog Input20 / SW Pull Up@+5V
30	ETH2 T+	Ethernet2 Tx D+	30	AIN21	Analog Input21 / SW +20V
31	ETH2 T-	Ethernet2 Tx D-	31	AIN22	Analog Input22 / SW +20V
32	ETH2 R+	Ethernet2 Rx D+	32	AIN23	Analog Input23 / SW +20V
33	ETH2 R-	Ethernet2 Rx D-	33	AIN24	Analog Input24 / SW +20V
34	AIN1	Analog input1 / SW Pull Up@+5V	34	AIN25	Analog Input25 / SW Pull Up@+5V
35	AIN2	Analog input2 / SW Pull Up@+5V	35	AIN26	Analog Input26 / SW Pull Up@+5V
36	AIN3	Analog input3 / SW Pull Up@+5V	36	AIN27	Analog Input27 / SW Pull Up@+5V
37	AIN4	Analog input4 / SW Pull Up@+5V	37	AIN28	Analog Input28 / SW Pull Up@+5V
38	AIN5	Analog input5 / SW +20V	38	AIN29	Analog Input29 / SW +20V
39	AIN6	Analog input6 / SW +20V	39	AIN30	Analog Input30 / SW +20V
40	AIN7	Analog Input7 / SW +20V	40	AIN31	Analog Input31 / SW +20V
41	AIN8	Analog Input8 / SW +20V	41	AIN32	Analog Input32 / SW +20V