

Property	SICOLOG FD	USBDL1 1 st generation 2 nd generation	USBDL1 FD 1 st generation 2 nd generation	USBDL1 GA 1 st generation 2 nd generation	USBDL1 A16 1 st generation 2 nd generation	CFDL1	DL16CAN
Technology (build year)	2016	2016	2016	2016	2016	2003	1998
CPU (Number of)	1	1	1	1	1	2	1
Instruction speed	120 MHz	120 MHz	120 MHz	120 MHz	120 MHz	16 MHz	9.216 MHz
Word size [bit]	32	32	32	32	32	16	16
FPU (32 bit)	✓	✓	✓	✓	✓	-	-
Voltage input signals	16	10	10	10	16	16	8
Bit resolution	12	12	12	12	12	12	10
Multiplex signals	✓	-	-	-	-	✓	✓
Averaging of multiplexed signals	✓	-	-	-	-	-	✓
Memory (measurement data)	Up to 2 TiB	Up to 2 TiB	Up to 2 TiB	Up to 2 TiB	Up to 2 TiB	Up to 4 GiB	8 MiB
Segmented recording	-	-	-	-	-	✓	✓
Ring buffer mode	- (only with TEMES chart recording)	- (only with TEMES chart recording)	- (only with TEMES chart recording)	- (only with TEMES chart recording)	- (only with TEMES chart recording)	✓	✓
Digital input signals	5	5	5	5	5	5	3

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Supported signal types	Frequency signal, switch state, pulse width (for 3 channels), counter	Frequency signal, switch state, pulse width (for 3 channels), counter	Frequency signal, switch state, pulse width (for 3 channels), counter	Frequency signal, switch state, pulse width (for 3 channels), counter	Frequency signal, switch state, pulse width (for 3 channels), counter	Frequency signal, switch state	Frequency signal, switch state, pulse width, counter
Supported timer base frequencies [Hz]	120,000,000 / 60,000,000 / 30,000,000 / 15,000,000 / 7,500,000 / 3,750,000 / 1,875,000 / 468,750 / 117,187.5	120,000,000 / 60,000,000 / 30,000,000 / 15,000,000 / 7,500,000 / 3,750,000 / 1,875,000 / 468,750 / 117,187.5	120,000,000 / 60,000,000 / 30,000,000 / 15,000,000 / 7,500,000 / 3,750,000 / 1,875,000 / 468,750 / 117,187.5	120,000,000 / 60,000,000 / 30,000,000 / 15,000,000 / 7,500,000 / 3,750,000 / 1,875,000 / 468,750 / 117,187.5	120,000,000 / 60,000,000 / 30,000,000 / 15,000,000 / 7,500,000 / 3,750,000 / 1,875,000 / 468,750 / 117,187.5	16,000,000 / 2,000,000 / 500,000	9,216,000 / 1,152,000 / 288,000 / 36,000
Digital output signals	5 (as long as the digital channel is not used as input)	- / 3 (as long as the corresponding digital input channel is not used)	- / 3 (as long as the corresponding digital input channel is not used)	- / 3 (as long as the corresponding digital input channel is not used)	1 / 3 (as long as the corresponding digital input channel is not used)	-	-
Supported signal types	Frequency signal, switch state, PWM	Frequency signal, switch state, PWM	Frequency signal, switch state, PWM	Frequency signal, switch state, PWM	Frequency signal, switch state, PWM	-	-
Integrated GPS receiver	-	-	-	✓	-	-	-
Input for a GPS receiver	✓	✓	✓	✓	✓	✓	✓
32-bit Longitude / Latitude	✓	✓	✓	✓	✓	-	-
Signal Track	✓	✓	✓	✓	✓	-	-

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Signal Latency	-	-	-	-	-	✓	-
Signal Date	✓	✓	✓	✓	✓	-	-
Derived signals such as <i>acceleration</i>	✓	✓	✓	✓	✓	-	-
CAN	2	2	2	2	2	2	1
Maximal number of messages	32 per CAN module	32 per CAN module	32 per CAN module	32 per CAN module	32 per CAN module	16 per CAN module	16
Maximal signal width [bit]	32	32	32	32	32	16	16
CAN listening mode	✓	✓	✓	✓	✓	-	-
CAN scan mode	✓	✓	✓	✓	✓	-	-
CAN FD	2 (with option <i>FD</i>)	-	2	-	-	-	-
Maximal number of messages	Up to 31 per CAN FD module	-	Up to 31 per CAN FD module	-	-	-	-
Maximal signal width [bit]	32	-	32	-	-	-	-
LIN support	✓ (optional)	✓ (optional)	✓ (optional)	✓ (optional)	✓ (optional)	-	✓ (optional)
Calculated Signals (data type)	signed 32-bit integer	signed 32-bit integer	signed 32-bit integer	signed 32-bit integer	signed 32-bit integer	unsigned 16-bit integer	unsigned 16-bit integer
Voltage output signals	8	-	-	-(GA: 2, $T_{update} \geq 0.3$ ms)	-	8	2
Bit resolution	12	-	-	-(GA: 12)	-	12	8

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LIO connector	✓	-	-	-	-	✓	✓
External display connector	✓	- (only via serial port)	- (only via serial port)	- (only via serial port)	- (only via serial port)	✓	- (external display via LIO connector)
Display pages	2	- (2 only via serial port)	- (2 only via serial port)	- (2 only via serial port)	- (2 only via serial port)	2	1
Configurations, Number of	Up to 200 (limited by 63 KiB in total)	1	1	1	1	1	1
Serial port (to PC)	✓	✓	✓	✓	✓	✓ (only for firmware upgrades)	✓
Fast block oriented VCP protocol	✓	✓	✓	✓	✓	-	-
TEMES online signals/chart	✓	✓	✓	✓	✓	-	✓
TEMES online calibration	✓	✓	✓	✓	✓	-	✓
Firmware user-upgradeable	✓	✓	✓	✓	✓	✓	-
Device calibration user-updatable	✓	✓	✓	✓	✓	-	-
Rudimentary support for OBD via CAN	✓	✓	✓	✓	✓	-	✓
OBD via CAN auto-detection	✓	✓	✓	✓	✓	-	-
OBD via CAN GUI	✓	✓	✓	✓	✓	-	-

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Filter (moving average, delay, biquad, timeout)	✓	✓	✓	✓	✓	-	-
Box dimensions	120 mm x 75 mm x 32 mm	73 mm x 60 mm x 26 mm	80 mm x 60 mm x 26 mm	80 mm x 60 mm x 26 mm	85 mm x 60 mm x 26 mm	106 mm x 90 mm x 42 mm	115 mm x 70 mm x 24 mm
Typical box weight	0.315 kg (FD: 0.321 kg)	0.140 kg	0.150 kg	0.152 kg (GA: 0.159 kg)	0.155 kg	0.380 kg	0.241 kg
Splash water protection	optional	-	-	-	-	-	-
Power supply	8 ... 30 V DC	8 ... 16 V DC	8 ... 16 V DC	8 ... 16 V DC	8 ... 16 V DC	8 ... 16 V DC	6 ... 18 V DC
Power consumption (@ 12 V and with unlighted display, and without USB stick)	about 90 mA + 10 mA per used CAN FD channel	about 60 mA	about 60 mA + 10 mA per used CAN FD channel	about 60 mA + 50 mA if GPS receiver is powered	about 60 mA	about 100 mA	about 80 mA
Quiescent current (= Power Off; @ 12 V)	about 150 µA	about 150 µA	about 150 µA	about 150 µA	about 150 µA	about 150 µA	0 A