

Data Logger C 80



The data logger C 80 is a professional data logging system for motorsport applications. This allows for synchronized acquisition of engine data from the ECU and chassis data from up to 26 analog and 4 digital input channels. Additional input devices can be connected via Ethernet and CAN buses. Recorded data from the up to 16 GB logger can be downloaded via high speed Ethernet. Software upgrades for the C 80 (field upgradable by entering a key) activate tailored configurations like a second logging partition of 4 GB, USB recording, CCP/XCP-master for simple data access to third party devices, as well as additional input channels.

Application

Converters	10 kHz 12 bit AD converters with digital low pass filter
Configurable math channels	
User configurable CAN in/out messages	
Sampling rate	Max. 1,000 Hz for all channels
Online data compression	
Logging rate	600 kB/s with FULL_LOG_1, 800 kB/s with FULL_LOG_1 & PERF_LOG_1
Recording channels	Up to 1,440
Logged data download speed	Max. 1,000 kB/s
Internal storage capacity	Partition 1: 4 GB with FULL_LOG_1, 16 GB with FULL_LOG_1 & PERF_LOG_1

- ▶ Aluminum housing
- ▶ Powerful data logger with up to 20 GB memory
- ▶ Supports Bosch multi-logger configuration
- ▶ USB recording and full telemetry support

Partition 2:
additional 4 GB with
FULL_LOG_2

3-port network switch

Telemetry Support via Ethernet (recommended) and RS232

RS232 GPS input

CCP/XCP-Master, data acquisition from ECU that support CAN calibration protocol (optional)

Technical Specifications

Mechanical Data

Size	105 x 34.5 x 137.5 mm
Weight	462 g
Protection Classification	IP67 to DIN 40050, Section 9, Issue 2008
Operating temperature (internal)	0 to 65°C
Max. vibration	Vibration profile 1 (see Appendix or www.bosch-motorsport.com)

Electrical Data

Supply voltage	8 to 18 V
Max. power consumption (w/o loads)	10 W at 14 V

Inputs

Analog channels	6
Input range	0 to 5 V
Resolution	12 bit
Switchable pull up resistor	3 kOhm

Outputs

PWM outputs (low side switch 2 A each) 4

Sensor supply 5 V $\pm$ 1 % (250 mA) 1

Environment

Software Upgrade CCP_MASTER / XCP_MASTER

CCP/XCP-Master (ASAP 2 file from ECU manufacturer required)

Software Upgrade FULL_LOG_1

Enable logging partition 1 with 4 GB memory, 600 kB/s (666 MHz)

Software Upgrade PERF_LOG_1 (requires FULL_LOG_1)

Increase logging partition 1 from 4 GB to 16 GB memory, 800 kB/s (866 MHz)

Software Upgrade FULL_LOG_2

Enable logging partition 2 with 4 GB memory. Ideally for protected access by different teams or to use as long-term logger.

Software Upgrade I_O EXTENS

Additional analog channels 20

Rotational channels (input Hall/inductive) 4

Additional sensor supply 5 V (250 mA each) 3

Sensor supply 10 V (250 mA) 1

Sensor supply 12 V (1 A), non-regulated 1

RS232 GPS

USB Kit for C 80

Rugged USB flash drive Bosch File System (BFS) format included, works with BFS preformatted USB flash drive only

Adapter cable to USB-Port

Adapter for wiring harness

SW license USB-Port unlocked

Connectors and Wires

Motorsport connectors double density 2 x 41 pins

Mating connector I F02U.002.216-01 ASDD612-41SN

Mating connector II F02U.004.180-01 ASDD612-41SA

Pin Layout ASDD212-41PN

Pin	Name	Description
1	KL30	
2; 3	KL15	
4; 5	KL31	
6	Ethernet Channel0 Tx plus	Wire Ethernet_0 - TX+

Pin	Name	Description
7	Ethernet Channel0 Tx minus	Wire Ethernet_0 - TX-
8	Ethernet Channel0 Rx plus	Wire Ethernet_0 - RX+
9	Ethernet Channel0 Rx minus	Wire Ethernet_0 - RX-
10	Ethernet Schirm	Ethernet Schirm
11	Ethernet Channel1 Tx plus	Wire Ethernet_0 - TX+
12	Ethernet Channel1 Tx minus	Wire Ethernet_0 - TX-
13	Ethernet Channel1 Rx plus	Wire Ethernet_0 - RX+
14	Ethernet Channel1 Rx minus	Wire Ethernet_0 - RX-
15	Ethernet Channel2 Tx plus	Wire Ethernet_0 - TX+
16	Ethernet Channel2 Tx minus	Wire Ethernet_0 - TX-
17	Ethernet Channel2 Rx plus	Wire Ethernet_0 - RX+
18	Ethernet Channel2 Rx minus	Wire Ethernet_0 - RX-
19	CAN_A_H	CAN_A - HIGH
20	CAN_A_L	CAN_A - LOW
21	CAN_B_H	CAN_B - HIGH
22	CAN_B_L	CAN_B - LOW
23	USB Power	500mA USB_Power
24	USB Data Plus	USB_OTG_Plus
25	USB Data Minus	USB_OTG_Minus
26	USB GND	USB_Ground
27	SENSPWR5_1	
28	SENSGND	
29	Timestamp	
30	LS_GND_1	Low-Side Ground2
31	LS_SWITCH_1	lowside switch 2A
32	LS_SWITCH_2	lowside switch 2A
33	LS_SWITCH_3	lowside switch 2A
34	LS_SWITCH_4	lowside switch 2A
35	LS_GND_2	Low-Side Ground2
36	ANAIN_M1_1	0 to 5V Analog
37	ANAIN_M1_2	0 to 5V Analog
38	ANAIN_M1_3	0 to 5V Analog
39	ANAIN_M1_4	0 to 5V Analog
40	ANAIN_M1_5	0 to 5V Analog
41	ANAIN_M1_6	0 to 5V Analog

Pin Layout ASDD212-41PA

Pin	Name	Description
1	UBATT_FUSE1	
2	SENSPWR10_1	
3	SENSPWR5_2	
4	SENSPWR5_3	
5	SENSPWR5_4	
6; 7	SENSGND	
8	RS232A TX	RS232A - Transmit
9	RS232A RX	RS232A - Receive
10	RS232B TX	RS232A - Transmit
11	RS232B RX	RS232A - Receive
12	RS232_GND	RS232_GND
13	REV1_P	DHE I/P or Inductive - KW+
14	REV1_M	DHE I/P or Inductive - KW-
15	REV2_P	DHE I/P or Inductive - KW+
16	REV2_M	DHE I/P or Inductive - KW-
17	REV3_P	DHE I/P or Inductive - KW+
18	REV3_M	DHE I/P or Inductive - KW-
19	REV4_P	DHE I/P or Inductive - KW+
20	REV4_M	DHE I/P or Inductive - KW-
21	ANAIN_M1_7	0 to 5V Analog
22	ANAIN_M1_8	0 to 5V Analog
23	ANAIN_M1_9	0 to 5V Analog
24	ANAIN_M1_10	0 to 5V Analog
25	ANAIN_M1_11	0 to 5V Analog
26	ANAIN_M1_12	0 to 5V Analog
27	ANAIN_M1_13	0 to 5V Analog
28	ANAIN_M1_14	0 to 5V Analog
29	ANAIN_M1_15	0 to 5V Analog
30	ANAIN_M1_16	0 to 5V Analog
31	ANAIN_M2_1	0 to 5V Analog
32	ANAIN_M2_2	0 to 5V Analog
33	ANAIN_M2_3	0 to 5V Analog
34	ANAIN_M2_4	0 to 5V Analog
35	ANAIN_M2_5	0 to 5V Analog
36	ANAIN_M2_6	0 to 5V Analog
37	ANAIN_M2_7	0 to 5V Analog
38	ANAIN_M2_8	0 to 5V Analog
39	ANAIN_M2_9	0 to 5V Analog
40	ANAIN_M2_10	0 to 5V Analog
41	LAPTRIGGER	

Communication

Configuration via RaceCon over Ethernet or MSA-Box II

CAN interfaces	2
Ethernet 100BaseT	3
Telemetry	Ethernet or RS232
Lap trigger input	1

Installation Notes

Inspection services recommended after 220 h or 2 years, no components to replace.

Depending on your experience calibrating Bosch ECUs, we recommend calibration support from Bosch Motorsport.

Please remember that the mating connectors and the programming interface MSA Box II are not included and must be ordered separately.

Not reverse polarity protected on supply or outputs.

Software

The required software (.pst file) for this device is available in the download area of our homepage www.bosch-motorsport.com.

Download data and save configurations before sending device as it will be reset during service.

Ordering Information**Data Logger C 80 Logger Pack**

Incl. FULL_LOG_1

Order number **F02U.V03.083-01**

Data Logger C 80 Sensor Interface Pack

Incl. I_O EXTENS

Order number **F02U.V03.082-01**

Software Options**CCP_MASTER / XCP_MASTER**

Order number **F02U.V02.213-01**

FULL_LOG_1

Order number **F02U.V02.304-01**

FULL_LOG_2

Order number **F02U.V02.305-01**

I_O EXTENS

Order number **F02U.V02.205-01**

ADV_TELEM

Order number **tbd.**

PERF_LOG_1

Order number **F02U.V03.054-01**

Accessories**USB Kit for C 70, C 80, DDU 9, DDU 10 and VCU**

Order number **F02U.V02.214-01**

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