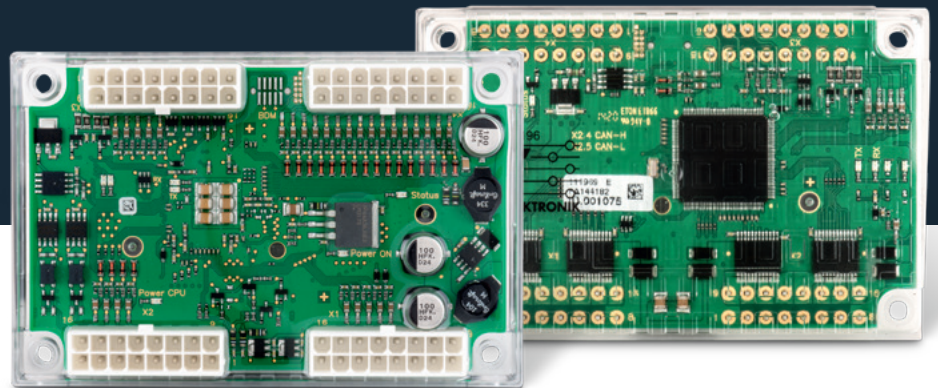


ICCS CAN CONTROLLER 64P

Controllers



The **ICCS CAN Controller 64P** contains a 16 bit processor (HCS12XEQ) with an integrated co-processor has enough computing power to handle complex tasks. The digital information, analogue voltages, currents and signal frequencies can be detected and processed. The two integrated CAN high-speed interfaces allow the data exchange between two independent buses or enable gateway / filter functions. Naturally, these controllers are programmed graphically and are suitable for the use as an extension to the existing CAN bus network. They can be used as a stand-alone solution or for mounting on the PCB.

Applications

- Monitoring of fuses and switching of relay
- Control unit for power distribution units
- Sensor to CAN bus
- CAN to CAN gateway
- Input output extension

Technical data

General information	
Housing	Transparent
Connector	4 x Molex Mini Fit 16 Ways
Dimensions	76 x 116 x 15 mm
Weight	155 g
Operating temperature	-40 °C to 85 °C (no full load at 85 °C)
Storage temperature	-40 °C to 85 °C
Ingress protection	IP 54
Operating voltage Vsupply	9 V to 30 V DC
Pre-fusing	10 A / block (HSD outputs)
Current consumption	70 mA
Processor type	Freescale HCS12XEQ
Clock frequency	100 MHz
Flash memory	384 kB
RAM	24 kB
EEPROM	1 kB available for graphical programming

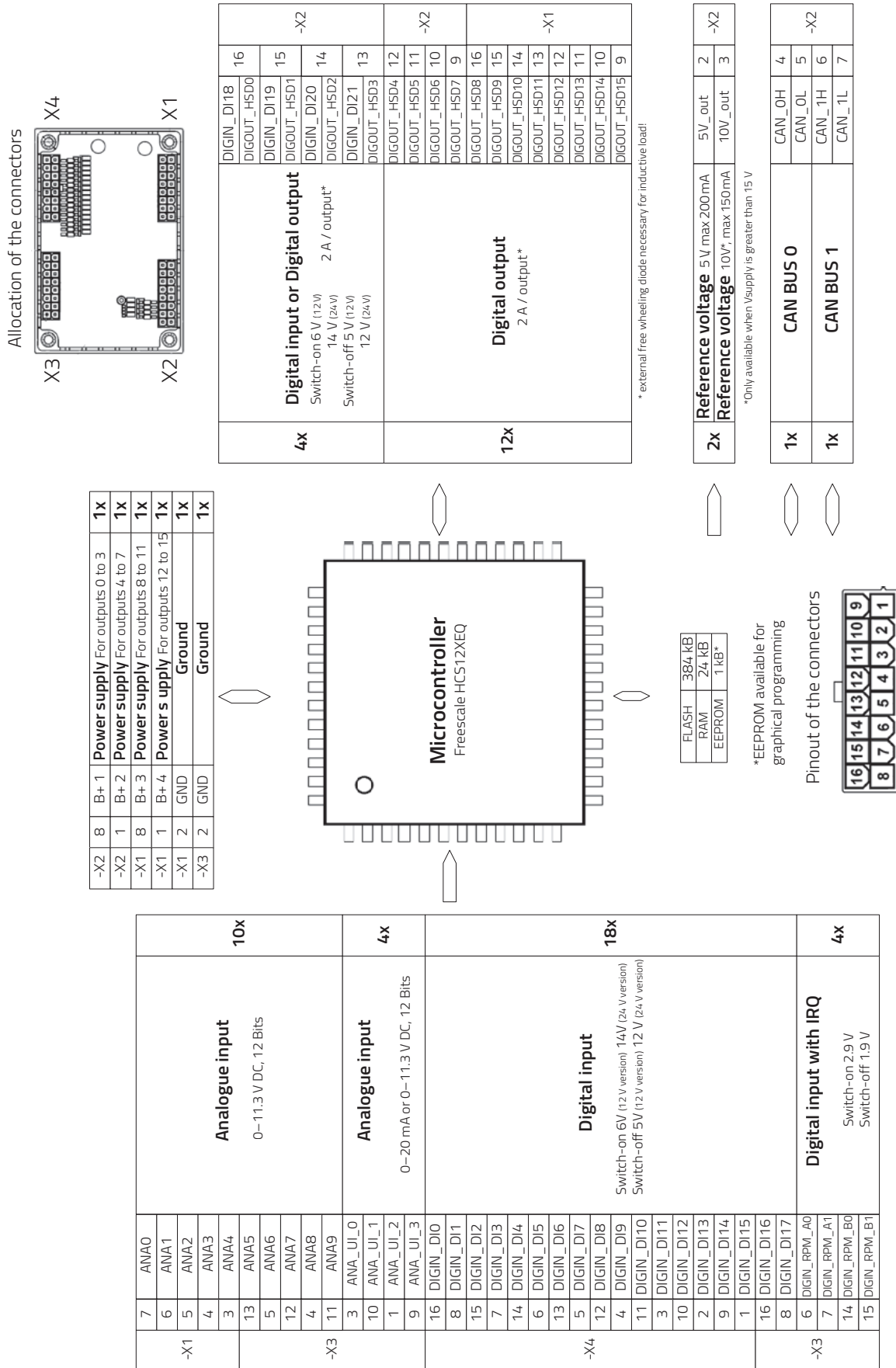
CAN Bus	
acc. ISO 11898-2	High speed
acc. CAN 2.0B	29 Bits extended address identifier
acc. CAN 2.0A	11 Bits address identifier
Baud rate	20 kBit/s to 1000 kBit/s (125 kBit/s default value)

Inputs / outputs overview		
4	Analogue inputs	0–11.4 V DC / 0–23 mA
10	Analogue inputs	0–11.4 V DC
18	Digital inputs	Switch-on / switch-off level: see details
4	Digital inputs with IRQ	Switch-on / switch-off level: 2.9 V / 1.9 V DC
4	Digital inputs or digital outputs	Switch-on / switch-off level: see details High side outputs max 2 A
12	Digital outputs	High side outputs max 2 A

Inputs / outputs details	
Analogue inputs	
Input voltage max	Vsupply
Measuring range	0–11.4 V DC / 0–23 mA
Resolution	12 Bits
Input resistance	22.6 kΩ
Pull-down resistance	Switchable 0.5 / 1 kΩ in 0–20 mA mode
Digital inputs	
Input voltage	0 V DC to Vsupply
Switch-on level	6 V (12 V version) 14 V (24 V)
Switch-off level	5 V (12 V version) 12 V (24 V)
Input resistance	7.88 kΩ
Digital outputs	
High side	
Load current	max 2 A diagnostic current sense
IRQ inputs	
Input resistance	100 kΩ
Input frequency	5 kHz

* Every analogue input is also usable as a digital input in the programming software

Hardware map

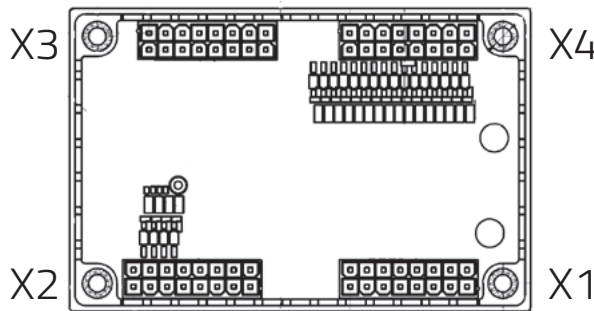


Pin assignment

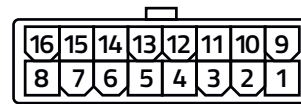
X3 Connector		
Pin	Description	Function
1	Ana_UI_2	Analogue input 0–10 V or 0–20 mA
2	GND	Ground
3	Ana_UI_0	Analogue input 0–10 V or 0–20 mA
4	ANA8	Analogue input 0–10 V
5	ANA6	Analogue input 0–10 V
6	DIGIN_RPM_A0	Digital input with IRQ
7	DIGIN_RPM_A1	Digital input with IRQ
8	DIGIN_DI17	Digital input
9	Ana_UI_3	Analogue input 0–10 V or 0–20 mA
10	Ana_UI_1	Analogue input 0–10 V or 0–20 mA
11	ANA9	Analogue input 0–10 V
12	ANA7	Analogue input 0–10 V
13	ANA5	Analogue input 0–10 V
14	DIGIN_RPM_B0	Digital input with IRQ
15	DIGIN_RPM_B1	Digital input with IRQ
16	DIGIN_DI16	Digital input

X4 Connector		
Pin	Description	Function
1	DIGIN_DI15	Digital input
2	DIGIN_DI13	Digital input
3	DIGIN_DI11	Digital input
4	DIGIN_DI9	Digital input
5	DIGIN_DI7	Digital input
6	DIGIN_DI5	Digital input
7	DIGIN_DI3	Digital input
8	DIGIN_DI1	Digital input
9	DIGIN_DI14	Digital input
10	DIGIN_DI12	Digital input
11	DIGIN_DI10	Digital input
12	DIGIN_DI8	Digital input
13	DIGIN_DI6	Digital input
14	DIGIN_DI4	Digital input
15	DIGIN_DI2	Digital input
16	DIGIN_DIO	Digital input

Allocation of the connectors



Pinout of the connectors



X2 Connector		
Pin	Description	Function
1	B + 2	Power Supply for outputs 4–7
2	+5V Out	+5 V / 200 mA Voltage reference
3	+10V Out	+10 V* / 150 mA Voltage reference
4	CAN0-H	CAN Bus 0 High
5	CAN0-L	CAN Bus 0 Low
6	CAN1-H	CAN Bus 1 High
7	CAN1-L	CAN Bus 1 Low
8	B + 1	Power supply for outputs 0–3
9	DIGOUT_HSD7	Digital output max 2 A
10	DIGOUT_HSD6	Digital output max 2 A
11	DIGOUT_HSD5	Digital output max 2 A
12	DIGOUT_HSD4	Digital output max 2 A
13	DIGIN_DI21	Digital input
	DIGOUT_HSD3	Digital output max 2 A
14	DIGIN_DI20	Digital input
	DIGOUT_HSD2	Digital output max 2 A
15	DIGIN_DI19	Digital input
	DIGOUT_HSD1	Digital output max 2 A
16	DIGIN_DI18	Digital input
	DIGOUT_HSD0	Digital output max 2 A

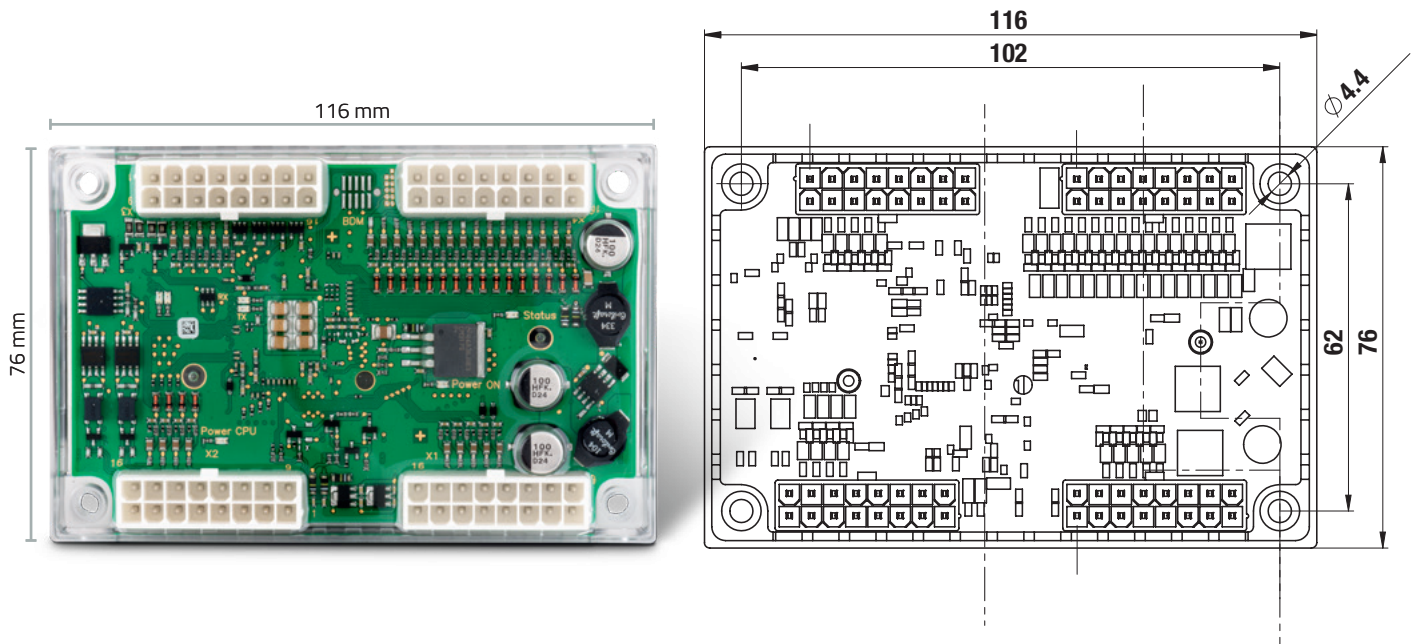
X1 Connector		
Pin	Description	Function
1	B + 4	Power supply for outputs 12–15
2	GND	Ground
3	ANA4	Analogue input 0–10 V
4	ANA3	Analogue input 0–10 V
5	ANA2	Analogue input 0–10 V
6	ANA1	Analogue input 0–10 V
7	ANA0	Analogue input 0–10 V
8	B + 3	Power Supply for outputs 8–11
9	DIGOUT_HSD15	Digital output max 2 A
10	DIGOUT_HSD14	Digital output max 2 A
11	DIGOUT_HSD13	Digital output max 2 A
12	DIGOUT_HSD12	Digital output max 2 A
13	DIGOUT_HSD11	Digital output max 2 A
14	DIGOUT_HSD10	Digital output max 2 A
15	DIGOUT_HSD9	Digital output max 2 A
16	DIGOUT_HSD8	Digital output max 2 A

* The 10 V reference is only available when Vsupply is greater than 15 V.

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Controllers

Dimensions



Order information

Available References	Part number WE ICS
ICCS CAN Controller 64 P (24 V version)	ICS-97194
ICCS CAN Controller 64P (12 V version)	ICS-97196

Mating connector	Part number WE eiSos
Housing: Female Dual Row Plug WR-MPC4, 16 Pins, Pitch 4.2 mm	649 016 113 322
Crimp contact: WR-MPC4, AWG 16	649 005 137 22
Crimp contact: WR-MPC4, AWG 24-18	649 006 137 22
Crimp contact: WR-MPC4, AWG 28-22	649 007 137 22

For 100 pieces packages, please add „DEC“ at the end of the reference.

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