MIC2100S Multi Information Controller

- 10/100/1000 BaseT Ethernet
- 4 x CAN interfaces
- 2 x USB Interfaces
- 2 x RS232
- 4 x Video Inputs
- Audio output
- 45 configurable I/O's
- 2 x Display connectors
- Programmable via Guitu
- Designed for operation at both 12 VDC and 24 VDC
- Real Time Clock

The MIC2100S is embedded Linux based machine controller. It's advanced features and high computing capabilities makes MIC2100S ideal even for very complex control tasks. Easy programming via GUITU-software allows very fast implementation to different kinds of machine platforms. Three CAN interfaces, Ethernet, USB and two serial interfaces ensures that it can be connected to virtually anything. Embedded graphics controller allows displaying complex graphics on remote displays and four different video inputs increases situational awareness around the machine. 43 configurable I/O's allows connection to many kinds of actuators, joysticks and relays.

MIC2100S is commonly used as a CAN network management master to control other nodes in CAN network and making system maintenance tasks very easy.

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Technical Information

- 9 - 32 VDC Operating voltage range (Protected against reverse polarity)
- -40…+85 °C operating temperature range
- ARM Cortex A9 Dual Core 800 MHz main CPU
  - 2 GB DDR3 RAM
  - 8 GB flash memory
- ARM Cortex M4 180 MHz co-processor
  - 2 MB Flash
- 2 x Graphics controllers
- 4 x CAN Interface 2.0 B, ISO 11898
- 2 x Serial port interface RS232
- Battery secured real time clock (RTC)
- Audio output, 1 W 8 Ω
- IP67 aluminium housing
- Weight 0.9 kg
- Main dimensions 145 mm x 195 mm x 35 mm

I/O Interface

- Total of 45 configurable IO-lines
- Separate supply for outputs and electronics
- The I/O interface is protected against short to GND and to supply voltage
- Configurable reference voltage: 5 V / 10 V, max 150 mA

Amount	Configurability	Details
14	Digital input	Low < 2 V, High > 6,5 V, max 100 Hz
8	Digital input Analog input	Low < 0,8 V, High > 2 V, max 100 Hz 12-bit AD conv., 0 – 5,2 V,129 kΩ 0 - 22 mA, 150 Ω
7	Digital input Frequency/pulse input	Low < 2 V, High > 6,5 V, max 100 Hz Low < 2 V, High > 6,5 V, max 8 kHz
16	Digital input Digital output Current controlled PWM output	Low < 2 V, High > 6,5 V, max 100 Hz High side switch, max 2 A (current feedback) High side switch, max 2 A (current feedback)

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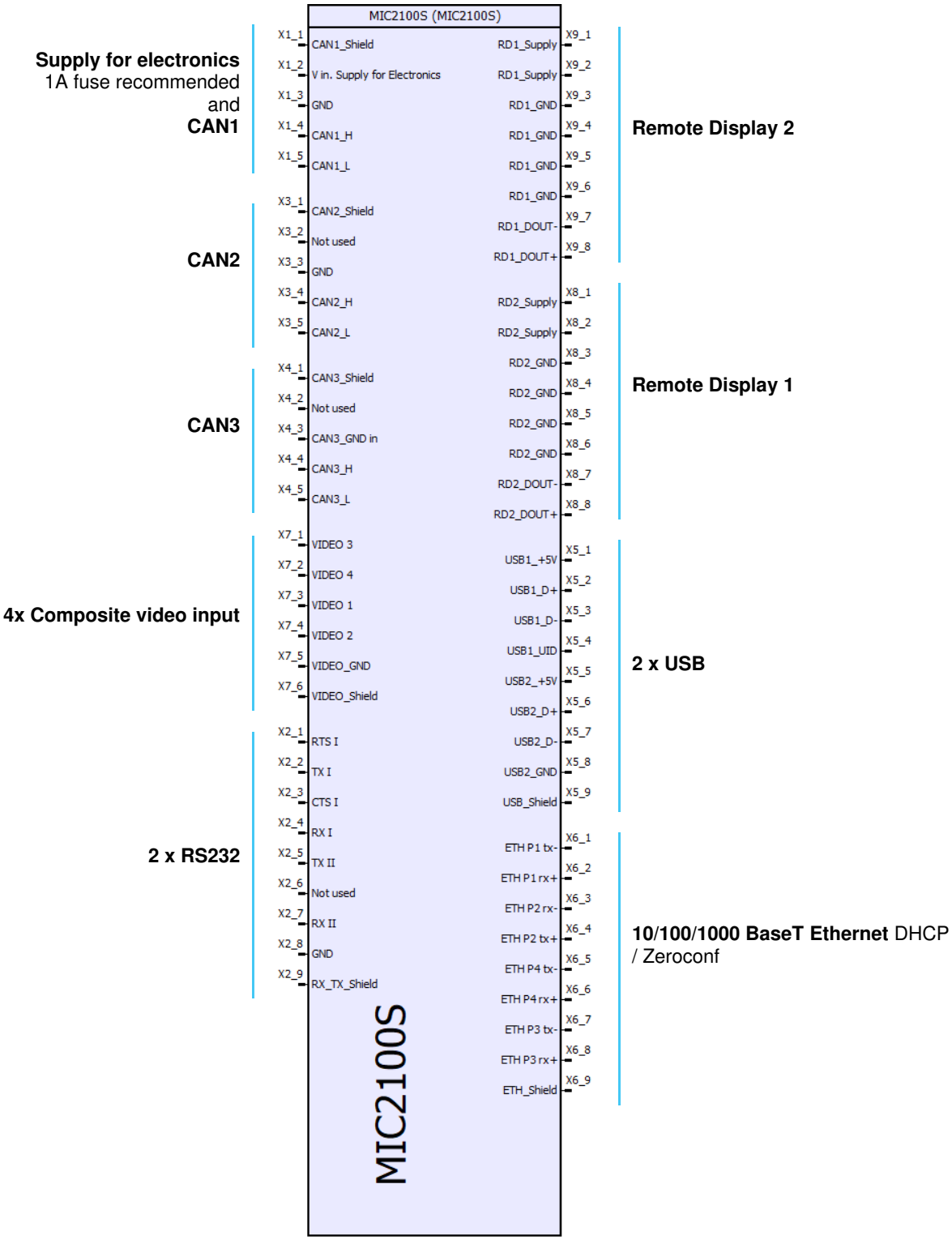
Wiring Diagram for M12 connectors (X1 through to X9):



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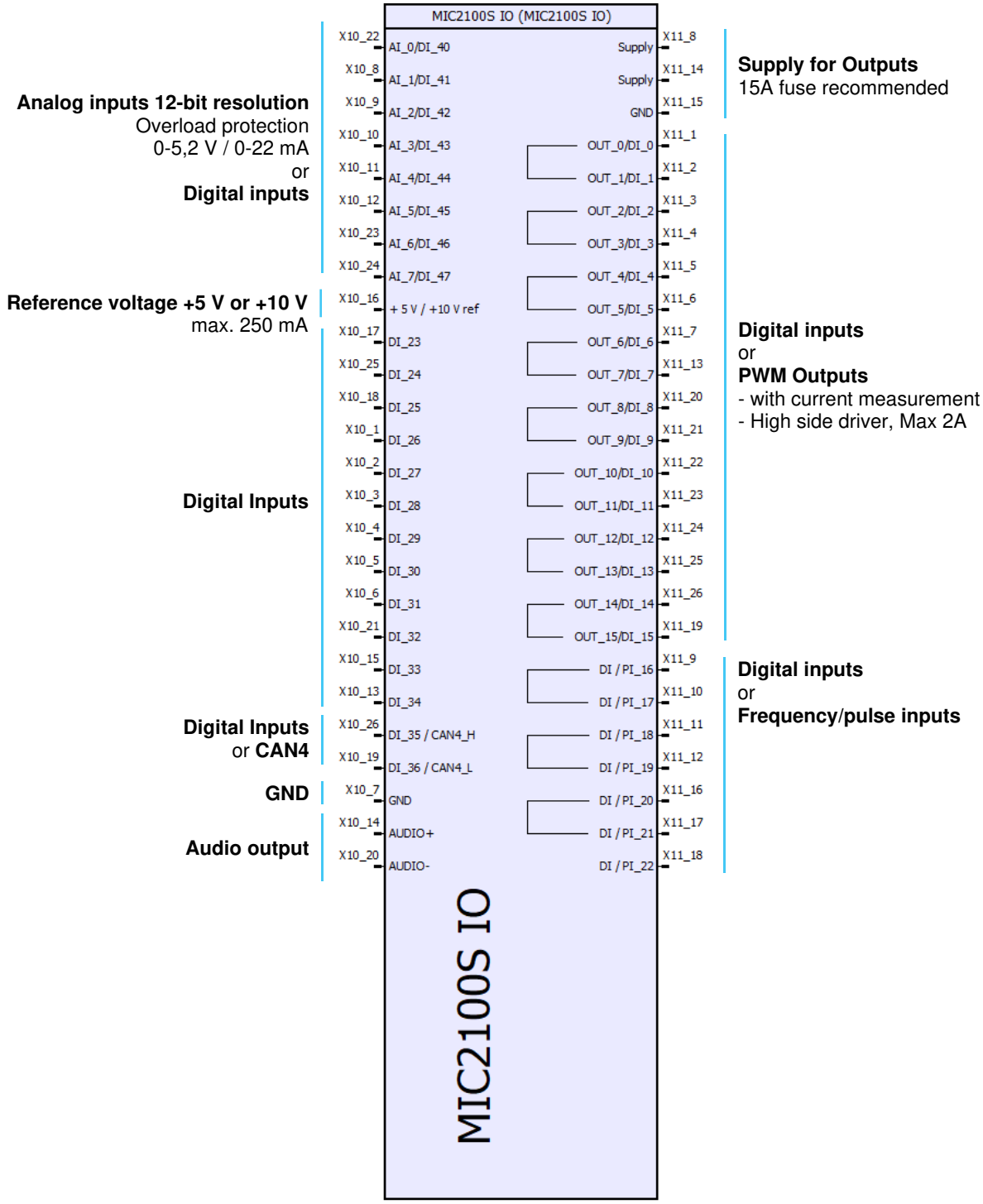
Wiring Diagram for AMP Superseal Connectors (X10 and X11):



*) Use DI_30 only with reference voltage (Max 15V)

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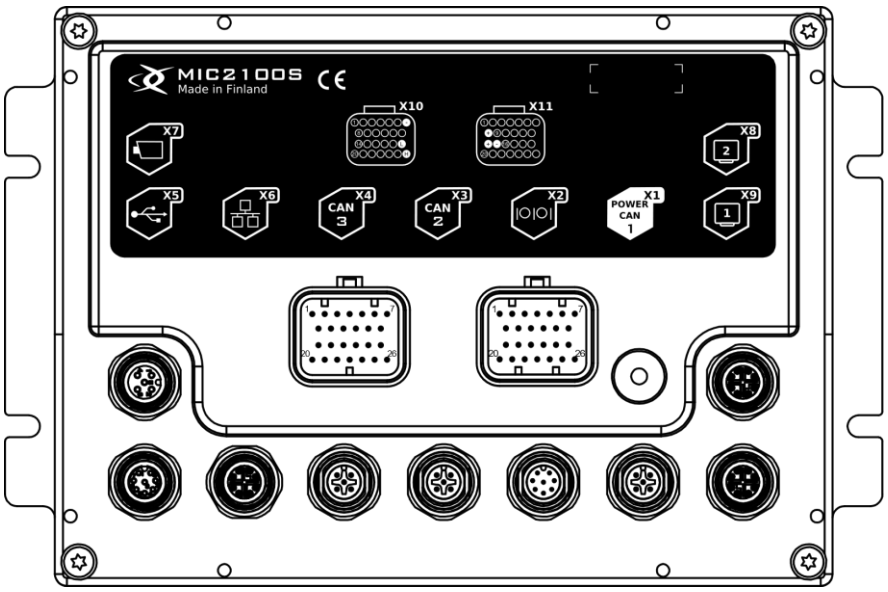
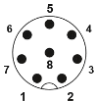
Connectors

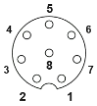


X2



X1, X3, X4

X5



X6, X8, X9

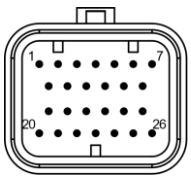
X7

M12 Connectors

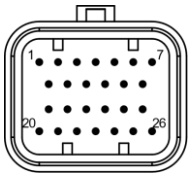
	M12 Connector needed:
X1 : CAN 1 + Power Supply	5 pin, Female A-coded
X2 : Serial Interface 1 & 2	8 pin, Female A-coded
X3 : CAN 2	5 pin, Female A-coded
X4 : CAN 3	5 pin, Female A-coded
X5 : USB 1	8 pin, Male A-coded
X6 : Ethernet	8 pin, Male X-coded[1]
X7 : Composite Video Inputs 1 – 4	5 pin, Male A-coded
X8 : Remote Touch Display	8 pin, Male X-coded[2]
X9 : Remote Touch Display	8 pin, Male X-coded[2]
Protective cap for Male M12[3]	Erni 374342
Protective cap for Female M12[3]	Erni 374343

1. We recommend using Phoenix Contact network cable: NBC-MSX / 1,0-94F/R4AC SCO – 1407471
2. CAT6 category cable is recommended for connecting screen to controller
   E.g. Network cable - NBC-MSX/ 5,0-94F/MSX SCO - 1407485
3. Protective caps must be used on unused connectors to reach waterproofness

X10



X11



Superseal connectors

As seen from cable entry side

	Superseal connector needed:
X10 : Super Seal Connector Plug Housing	Ø1.6 - 2.2 mm - AMP 3-1437290-7
X11 : Super Seal Connector Plug Housing	Ø1.6 - 2.2 mm - AMP 3-1437290-8
Receptacle Contact (0.75 – 1.25mm^2)	AMP 3-1447221-3
Filler Plug *)	AMP 4-1437284-3 Deutsch 0413-204-2005

*) Filler plugs must be used on empty cavities to reach waterproofness

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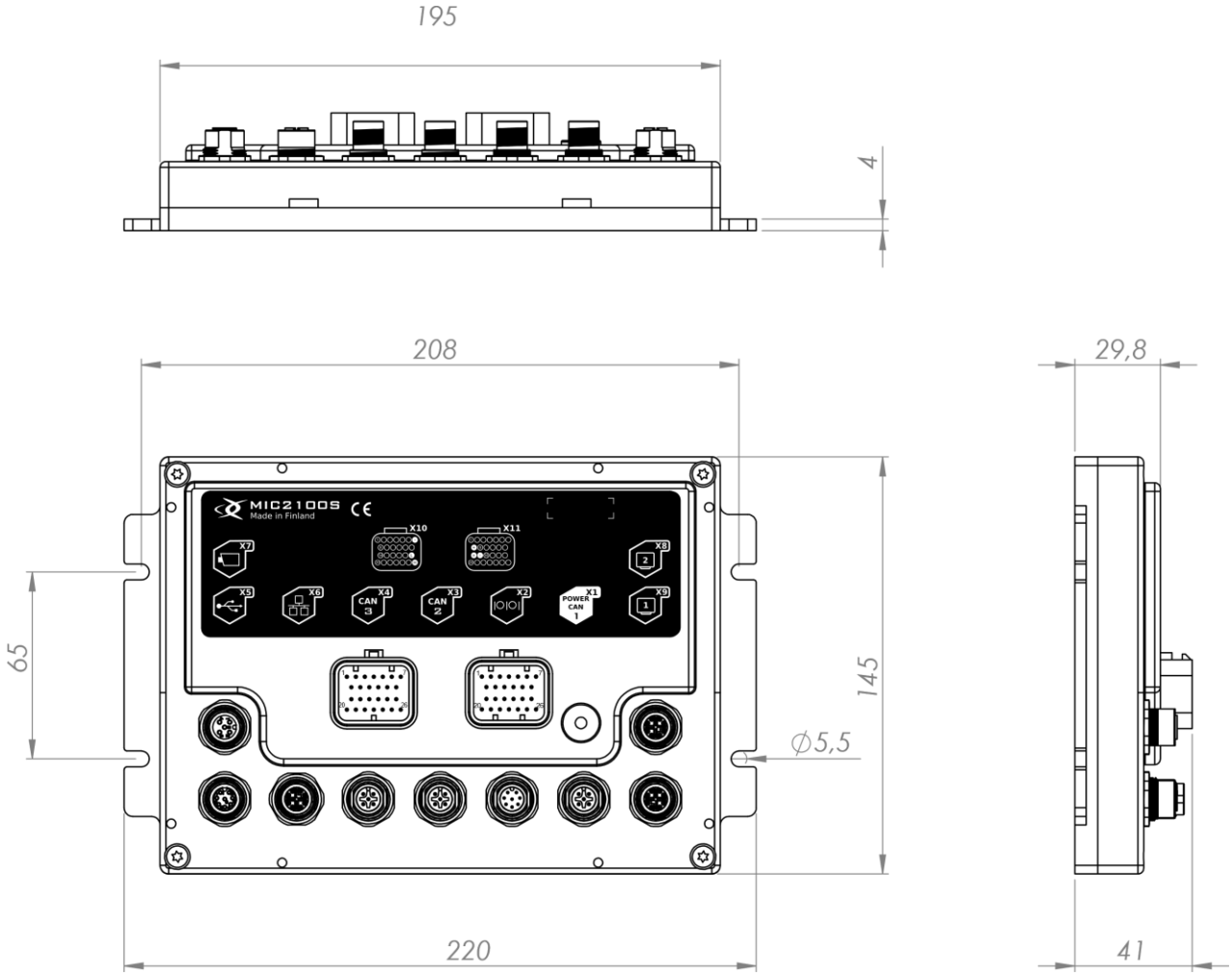
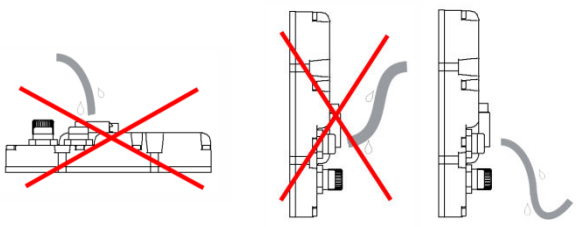
Mounting and Housing Information

MIC2100S is fixed to mounting panel or flat surface with four M5 screws.



Note! Extra care should be paid on grounding of MIC2100S. It is recommended to use star lock washer under fastening bolt. Also, extra attention should be paid that lock washer goes through the paint layer.

The preferred mounting position is connectors pointing downwards. If the unit is mounted connectors pointing to the side, then it is vital to leave some loose cable with a downward cue to prevent the ingress of moisture through connector.



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