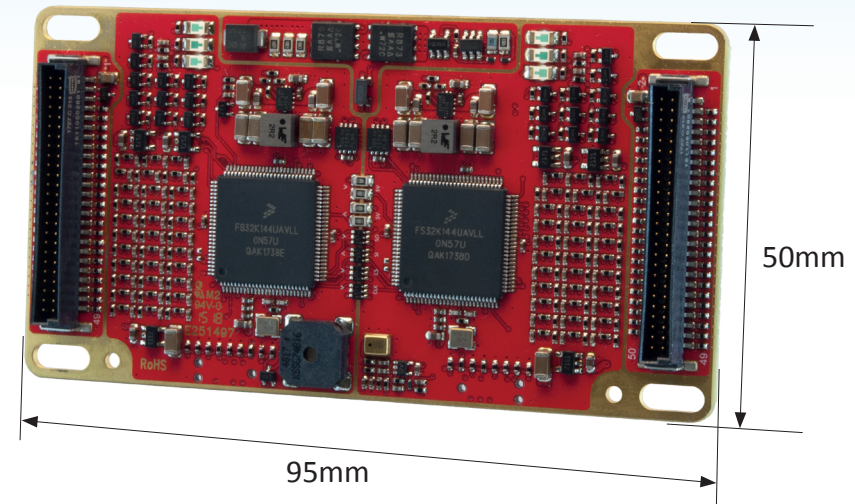


← Safety Cabin Module

The SCM is responsible for sampling analog and digital data from various sensors and switches and presenting the data on a CAN bus in a safe manner. The integrator may use the SCM for collection of both safety and non-safety analog/digital signals. Non-safety signals can be connected to any free input/output pin, whilst safety related signals must be connected in a redundant manner.

- Can be driven from a single 9-32Vdc power supply
- Designed for use in vehicles and mobile machinery
- 52 analog (or digital) inputs 0-5V. 12bit (in addition also 192 I/O's on SPI expansion)
- 20 PWM non safe outputs with a total of 2A
- Internal buzzer with microphone supervision and status LEDs
- Designed according to ISO 13849-1. Fulfilling the requirements for PL d, Cat 3
- -40 - 85°C operating temperature
- Designed for board-to-board connection using two HAR-flex 50p connectors for easier integration into customer products
- Supports CAN 2.0A, 2.0B and FD up to 5Mbit/s

Safety Cabin Module

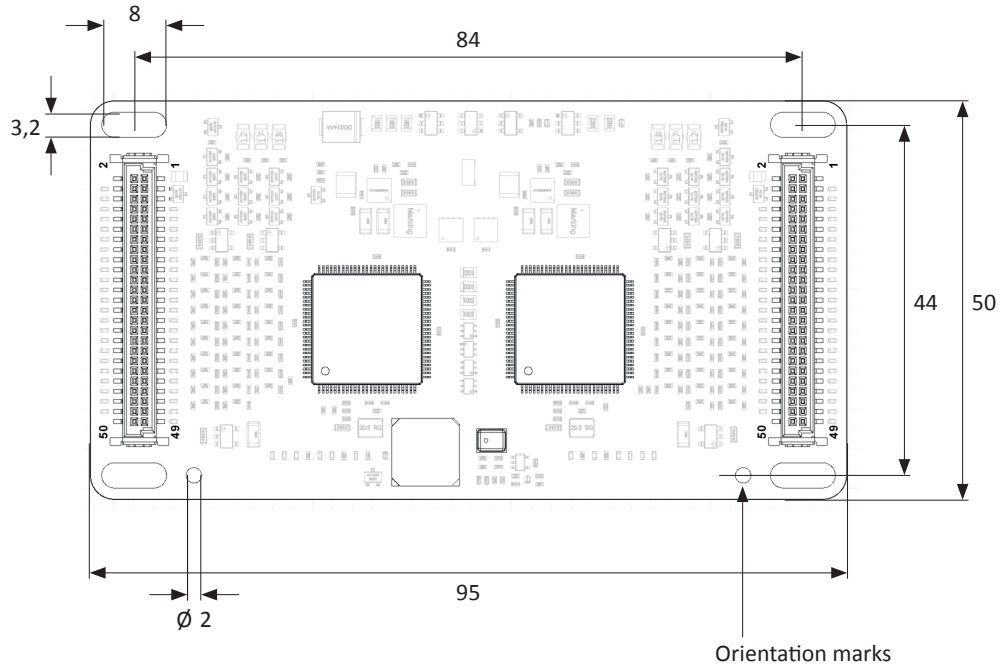


Typical applications includes

- Armrest assemblies
- Joystick assemblies
- Dash panels
- Remote controls

Dimensions & connectors

Attaches to customer product using four M3x6 screws along with standoffs to create a board-to-board configuration.



Communication

- Supports CAN 2.0A, 2.0B and FD with bus speeds up to 5Mbit/s
- Electrum Automation AB is a member of *CAN in Automation* and supports the CANopen protocol
Electrum also has a SAE granted vendor ID for J1939 products
- The SCM module presents itself as two nodes on the CAN bus
- Two node ID inputs available for connecting up to four SCM modules on one CAN bus
- Customized protocols are available on request

Electrical characteristics

Parameter	Condition	Min.	Typ.	Max.	Unit
Operational voltage		9		32	V _{DC}
Power consumption (no outputs sourcing current)	32V < V _{IN} > 9V	0,6	0,7	0,9	W
Operating temperature		-40		85	°C
Analog input voltage		0		5	V _{DC}
Digital input high voltage level ⁽¹⁾		3			V _{DC}
Digital input low voltage level ⁽²⁾				2	V _{DC}
Analog/digital voltage input impedance	Fixed pull-down		100k		Ω
+5V supply output voltage		4,9	5,0	5,1	V

- Note:
1. "Min" means the lowest value where the pin is guaranteed to be read as high
 2. "Max" means the highest value where the pin is guaranteed to be read as low
 3. "Min" means the lowest value guaranteed not to trigger the over current protection

Absolute maximum ratings

Parameter	Condition	Min.	Typ.	Max.	Unit
Input supply voltage ⁽¹⁾		-150		150	V _{DC}
Input voltage CAN _i and CAN _H ⁽¹⁾		-36		36V	V _{DC}
Storage temperature ⁽¹⁾		-40		85	°C

- Note:
1. Stresses beyond those listed under absolute maximum ratings may cause permanent damage to the device. These are stress ratings only, and functional operation of the device at these or any other conditions beyond those indicated under recommended operating conditions is not implied. Exposure to absolute-maximum-rated conditions for extended periods may affect device reliability.

