

Mini Comms Hub Datasheet



The “Mini Comms Hub” or MCH allows complex communications between non-compatible CAN devices. It features twin Ethernet, 2 fully flexible CAN busses and real-time maths capability as well as 10 physical inputs and standalone logging as standard (with or without a Life Racing ECU).

The MCH device is available in two variants: MCH-T (Top side connector) and MCH-E (End side connector).

Processing:

- Powerful RISC CPU for advanced strategy execution
- Real time maths up to 8000 operators a second

Inputs:

- 6 user configurable general purpose analogue sensor inputs
- 4 dedicated digital switch inputs

Interfaces:

- Twin 100 MHz full duplex Ethernet for calibration, configuration and ECU streaming
- Twin CAN 2.0B interfaces with fully flexible CAN configuration
- RS232 serial interface

Memory:

- 1GB onboard logging memory either standalone or streaming from an LR ECU
- External USB connection for expanded logging capacity

Power Supply:

- 8V to 80V input voltage range with reverse polarity protection
- Regulated 5V sensor supply output

Physical:

- 1x Souriau '8STA' High Density 43 pin connector
- CNC machined, black anodised aluminium case
- Maximum dimensions including the connectors are:
 - MCH-T: 113 x 87.5 x 42.55 mm
 - MCH-E: *To follow*
- Total mass ~235 grams

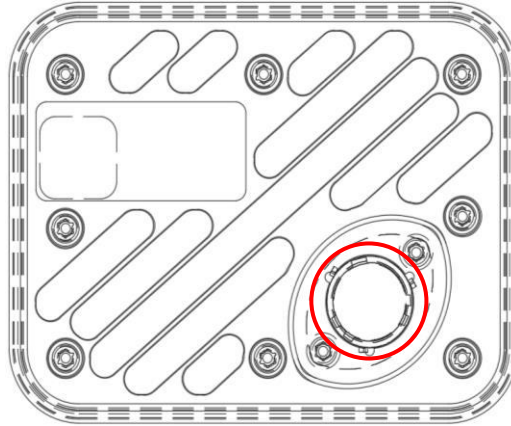
Ordering Information:

Description	Part number
Mini Comms Hub – Top Connector (MCH-T)	ANC-A11
Mini Comms Hub – End Connector (MCH-E)	ANC-A12
MCH-T/E Connector Kit	CON-A21

Wiring Information:

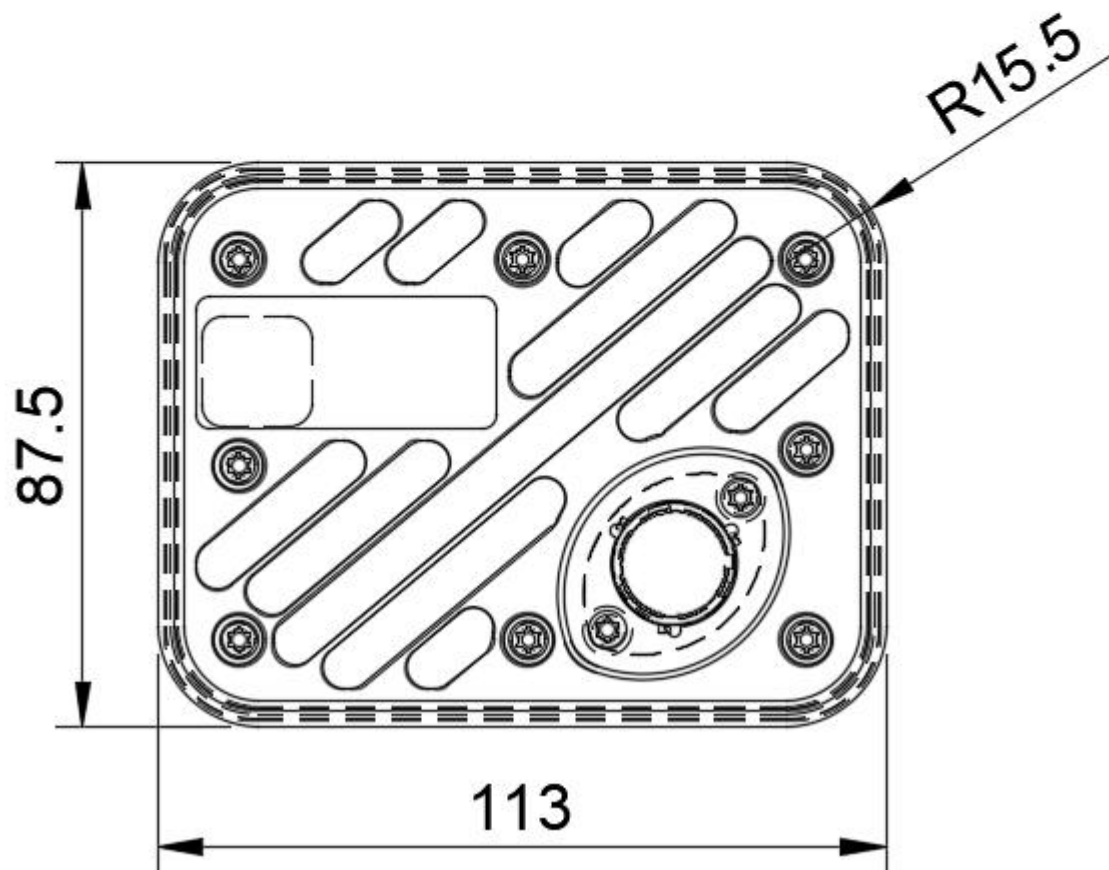
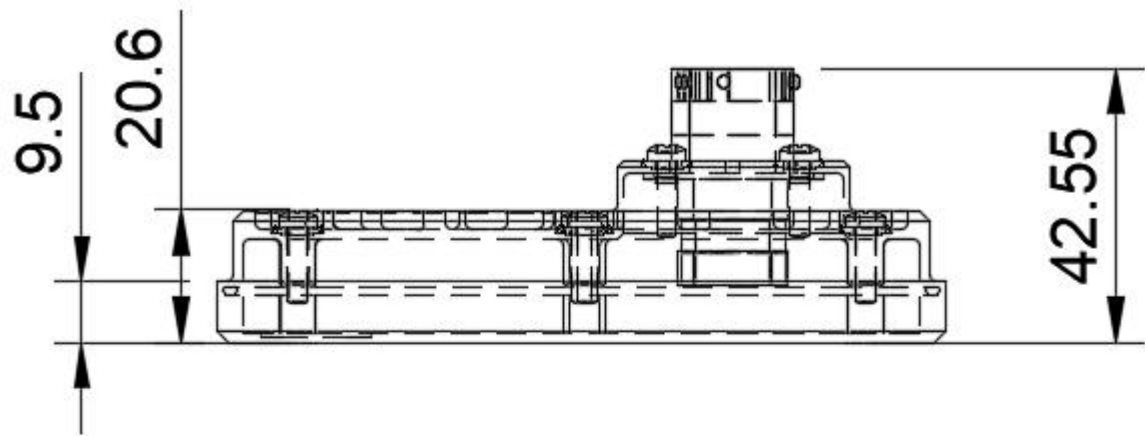
Connector 1

Mating connector: 8STA6-12-43PN

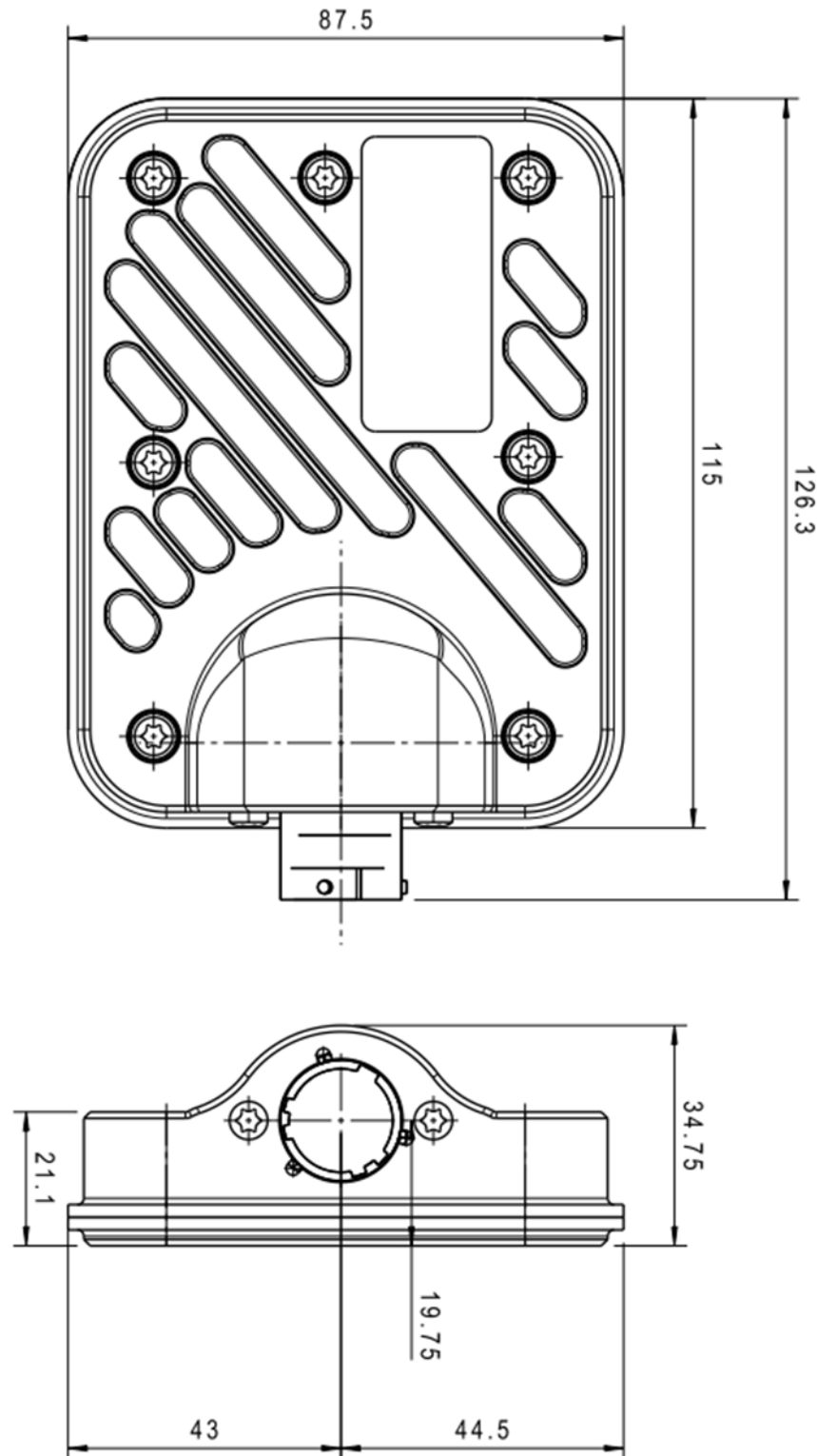


Pin	Gauge	Signal Name	Signal Notes
1	26 AWG	MCHL +12V	Positive power supply
2	26 AWG	MCHL GND	Negative power supply
3	26 AWG	CAN #01 HI	CAN Communication Port
4	26 AWG	CAN #01 LO	CAN Communication Port
5	26 AWG	CAN #02 HI	CAN Communication Port
6	26 AWG	CAN #02 LO	CAN Communication Port
7	26 AWG	ETHERNET1 TX-	Ethernet Communication Port
8	26 AWG	ETHERNET1 TX+	Ethernet Communication Port
9	26 AWG	ETHERNET1 RX-	Ethernet Communication Port
10	26 AWG	ETHERNET1 RX+	Ethernet Communication Port
11	26 AWG	ETHERNET2 TX-	Ethernet Communication Port
12	26 AWG	ETHERNET2 TX+	Ethernet Communication Port
13	26 AWG	ETHERNET2 RX-	Ethernet Communication Port
14	26 AWG	ETHERNET2 RX+	Ethernet Communication Port
15	26 AWG	RS232 RX	RS232 receive
16	26 AWG	RS232 TX	RS232 transmit
17	26 AWG	5V OUT	Regulated 5V sensor supply
18	26 AWG	ANA GND	Protected sensor ground
19	26 AWG	INPUT #01 (5V/TH)	Analogue input 0-5V, 3K software pullup to 5V
20	26 AWG	INPUT #02 (5V/TH)	Analogue input 0-5V, 3K software pullup to 5V
21	26 AWG	INPUT #03 (5V/TH)	Analogue input 0-5V, 3K software pullup to 5V
22	26 AWG	INPUT #04 (5V/TH)	Analogue input 0-5V, 3K software pullup to 5V
23	26 AWG	INPUT #05 (5V)	Analogue input 0-5V
24	26 AWG	INPUT #06 (5V)	Analogue input 0-5V
25	26 AWG	SWITCH INPUT #01	All switch inputs feature a 10k pullup to 3.3V
26	26 AWG	SWITCH INPUT #02	All switch inputs feature a 10k pullup to 3.3V
27	26 AWG	SWITCH INPUT #03	All switch inputs feature a 10k pullup to 3.3V
28	26 AWG	SWITCH INPUT #04	All switch inputs feature a 10k pullup to 3.3V
29	26 AWG	USB D+	External USB Connection Port
30	26 AWG	USB D-	External USB Connection Port
31	26 AWG	USB GND	External USB Connection Port
32	26 AWG	USB VCC	External USB Connection Port
33	26 AWG	USB SCREEN GND	External USB Connection Port
34	26 AWG	USB SCREEN GND	External USB Connection Port
35	26 AWG	USB SCREEN GND	External USB Connection Port
36	26 AWG	DO NOT CONNECT	DO NOT CONNECT
37	26 AWG	DO NOT CONNECT	DO NOT CONNECT
38	26 AWG	DO NOT CONNECT	DO NOT CONNECT
39	26 AWG	DO NOT CONNECT	DO NOT CONNECT
40	26 AWG	DO NOT CONNECT	DO NOT CONNECT
41	26 AWG	DO NOT CONNECT	DO NOT CONNECT
42	26 AWG	DO NOT CONNECT	DO NOT CONNECT
43	26 AWG	DO NOT CONNECT	DO NOT CONNECT

MCH-T Dimensions:



MCH-E Dimensions:



Warranty and Servicing:

- 1-year limited warranty when used within supplied specification.