

Mini Comms Hub Datasheet



The “Mini Comms Hub” or MCH is purposed with bridging communications between non compatible CAN devices. It features twin Ethernet, 2 fully flexible CAN buses and real-time maths capability as well as 10 physical inputs and standalone USB logging as standard (with or without an LR ECU).

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 user configurable switch inputs

Interfaces:

- Twin 100 MHz full duplex Ethernet for calibration, configuration and ECU streaming
- 2 CAN 2.0B interfaces with fully flexible CAN configuration
- RS232 serial interface
- USB 2.0 for bulk data storage on USB stick

Memory:

- Unlimited USB logging memory
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Power Supply:

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

- 2x Deutsch Autosport connectors with a total of 44 pins
 - 1x Datakey receptacle for Datakey USB
 - CNC machined, black anodised aluminium case
 - Maximum dimensions including the connectors are 106x100x38 mm
 - Total mass is ~235 grams
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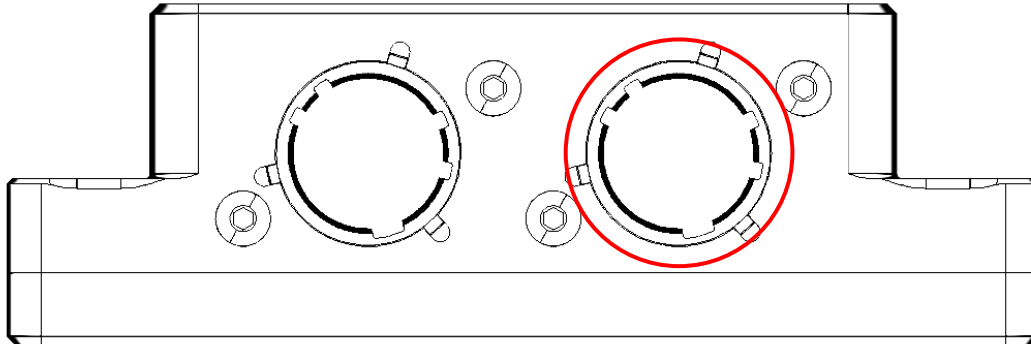
Ordering Information:

Description	Part number
Mini Comms Hub (MCH)	ANC-A03
MCH Connector Kit	CON-A12
Nexus USB	UFX4GB
Nexus USB adapter	UR4410IM

Wiring Information:

Connector 1

Mating connector: AS612-35SA-HE



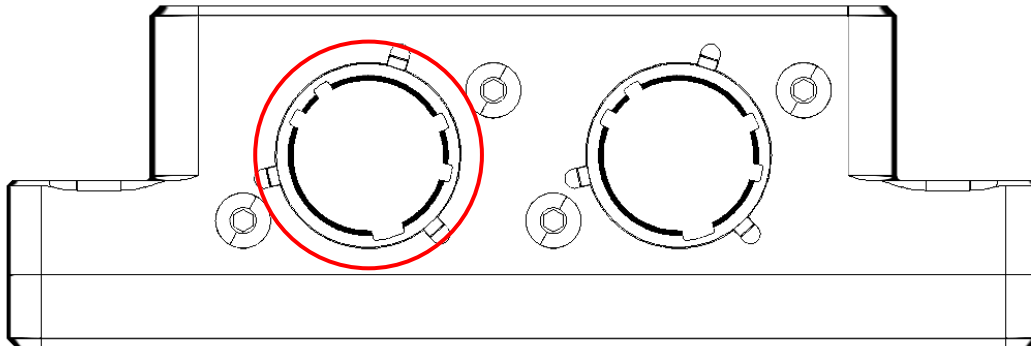
View looking at the front of an MCH highlighting connector 1 in red

Pin	Gauge	Signal Name	Signal Notes
1	22-26 AWG	BATTERY SUPPLY	Positive power supply
2	22-26 AWG	BATTERY SUPPLY	Positive power supply
3	-	DO NOT CONNECT	LR internal use only
4	22-26 AWG	POWER GROUND	Negative power supply
5	22-26 AWG	POWER GROUND	Negative power supply
6	22-26 AWG	SENSOR GROUND	Protected sensor ground
7	22-26 AWG	INPUT #01 (5V/TH)	Analogue input 0-5v, 3K software pullup to 5V
8	22-26 AWG	INPUT #02 (5V/TH)	Analogue input 0-5v, 3K software pullup to 5V
9	22-26 AWG	INPUT #03 (5V/TH)	Analogue input 0-5v, 3K software pullup to 5V
10	22-26 AWG	INPUT #04 (5V/TH)	Analogue input 0-5v, 3K software pullup to 5V
11	22-26 AWG	INPUT #05 (5V)	Analogue input 0-5v
12	22-26 AWG	INPUT #06 (5V)	Analogue input 0-5v
13	22-26 AWG	5V OUT	Regulated 5V sensor supply
14	22-26 AWG	SWITCH INPUT #01	All switch inputs utilise a 10K pullup to 3.3V
15	22-26 AWG	SWITCH INPUT #02	All switch inputs utilise a 10K pullup to 3.3V
16	22-26 AWG	SWITCH INPUT #03	All switch inputs utilise a 10K pullup to 3.3V
17	22-26 AWG	SWITCH INPUT #04	All switch inputs utilise a 10K pullup to 3.3V
18	22-26 AWG	DIGITAL GROUND	Use for Switch Inputs
19	22-26 AWG	RS232 RX	RS232 Receive
20	22-26 AWG	RS232 TX	RS232 Transmit
21	-	DO NOT CONNECT	LR internal use only
22	-	DO NOT CONNECT	LR internal use only

Wiring Information:

Connector 2

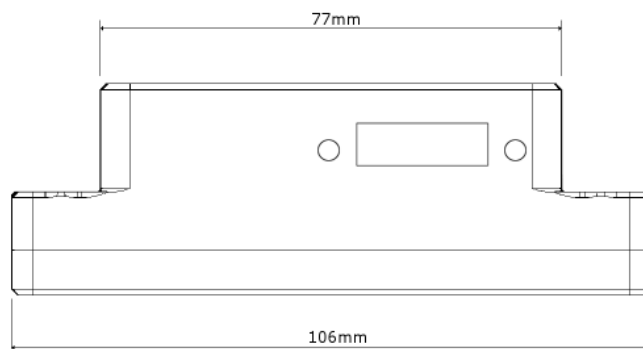
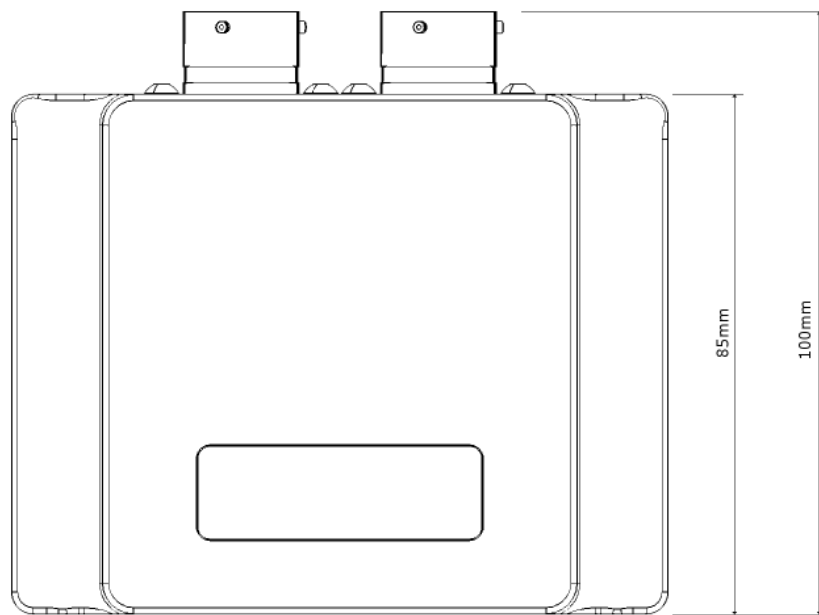
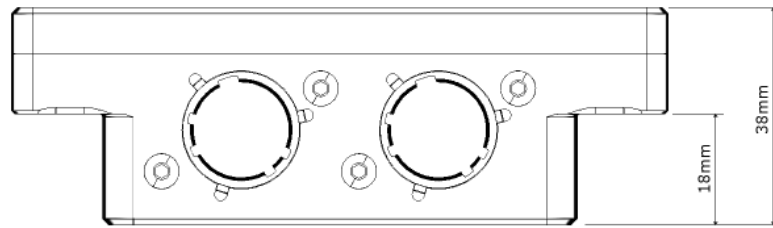
Mating connector: AS612-35SN-HE



View looking at the front of an MCH highlighting connector 2 in red

Pin	Gauge	Signal Name	Signal Notes
1	22-26 AWG	COMMS 1 TX+ (BI DA+)	Ethernet Communication Port
2	22-26 AWG	COMMS 1 TX- (BI DA-)	Ethernet Communication Port
3	22-26 AWG	COMMS 1 RX+ (BI DB+)	Ethernet Communication Port
4	22-26 AWG	COMMS 1 RX- (BI DB-)	Ethernet Communication Port
5	22-26 AWG	COMMS 1 (BI DC+)	Ethernet Communication Port
6	-	DO NOT CONNECT	LR internal use only
7	22-26 AWG	COMMS 2 TX+ (BI DA+)	Ethernet Communication Port
8	22-26 AWG	COMMS 2 TX- (BI DA-)	Ethernet Communication Port
9	22-26 AWG	COMMS 2 RX+ (BI DB+)	Ethernet Communication Port
10	22-26 AWG	COMMS 2 RX- (BI DB-)	Ethernet Communication Port
11	22-26 AWG	COMMS 2 (BI DC+)	Ethernet Communication Port
12	22-26 AWG	CAN HI #01	CAN communication port. Termination dependant on age
13	22-26 AWG	CAN LO #01	CAN communication port. Termination dependant on age
14	22-26 AWG	CAN HI #02	CAN communication port. Termination dependant on age
15	22-26 AWG	COMMS 1 (BI DC-)	Ethernet Communication Port
16	22-26 AWG	COMMS 1 (BI DD+)	Ethernet Communication Port
17	22-26 AWG	COMMS 1 (BI DD-)	Ethernet Communication Port
18	22-26 AWG	COMMS 2 (BI DC-)	Ethernet Communication Port
19	22-26 AWG	COMMS 2 (BI DD-)	Ethernet Communication Port
20	22-26 AWG	COMMS 2 (BI DD-)	Ethernet Communication Port
21	22-26 AWG	CAN LO #02	CAN communication port. Termination dependant on age
22	-	DO NOT CONNECT	LR internal use only

Dimensions:



Warranty and Servicing:

- This equipment comes with a 1 year warranty against manufacturing defects and failures however misuse or damage will not be covered under warranty.