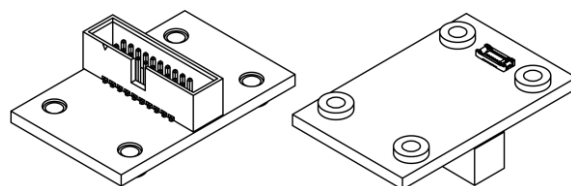


AMS-1.27-EA

PRELIMINARY DATASHEET

Electrical adapter for the AMS detection module series



FEATURES

- Compatible with the [AMS3140-01](#) and [AMS6140-01](#)
- Standard 1.27 mm socket
- Rapid prototyping and proof-of-concept development
- Designed for easy integration with the AMS detection module series

GENERAL DESCRIPTION

The AMS-1.27-EA is an accessory for the AMS module series. It is designed to be an easy tool for rapid prototyping and proof-of-concept work if the full Evaluation Kit is not suitable.

CONNECTIVITY

There are two sockets placed on the board. P1 (see FIGURE 2) is the interface to the AMS module. P2 (see FIGURE 2) can be used to connect an external cable. The part number of P2 is 20021521-00020C4LF from Amphenol with a 1.27 mm pitch. An example mating plug is Amphenol 20021444-00020T4LF. A description of pin functions for the P2 socket is presented in TABLE 1. The AMS-1.27-EA is a passive PCB board and does not change the function of any signal.

TABLE 1. P2 socket pin functions

Pin number	Symbol	Function
3, 6, 8, 14, 16, 18, 20	GND	Signal and amplifier supply ground
10	OUTPUT_P	Positive signal output
9	OUTPUT_N	Negative signal output
5	NC	Not used. Leave floating
15	TEMP_OUT	Analog temperature output
19	TEMP_OK	Temperature comparator output signal
17	TEMP_REF	Temperature reference voltage. Can be used to change the temperature of the chip
7	V _{amp}	Amplifier supply input
4	V _{cc}	Internal supply voltage output
13	OFFSET_P	DC offset for positive signal output. Leave floating if no output offset is required
12	OFFSET_N	DC offset for negative signal output. Leave floating if no output offset is required
2	V _{cooler}	Supply voltage input for the temperature controller
1	PGND	Ground path for temperature controller. Connect to GND with a separate wire for optimal performance

For more information please check the datasheet of the [AMS module series](#)

ELECTRICAL DIAGRAM

The AMS-1.27-EA contains two sockets interconnected according to FIGURE 1.

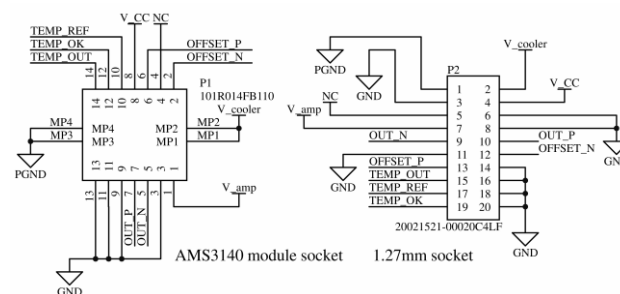


FIGURE 1. Schematic diagram of the AMS-1.27-EA

MECHANICAL REQUIREMENTS

There are four spacers mounted on the PCB to keep the proper distance between the AMS module and AMS-1.27-EA adapter.

Warning! The P1 socket is very sensitive to mechanical stress.

The AMS-1.27-EA has to be fixed to the AMS detection module with screws and nuts. Caution is required when assembling the adapter with the module.

An example assembly of the AMS detection module with the AMS-1.27-EA adapter and the heatsink is presented in FIGURE 3.

MECHANICAL LAYOUT

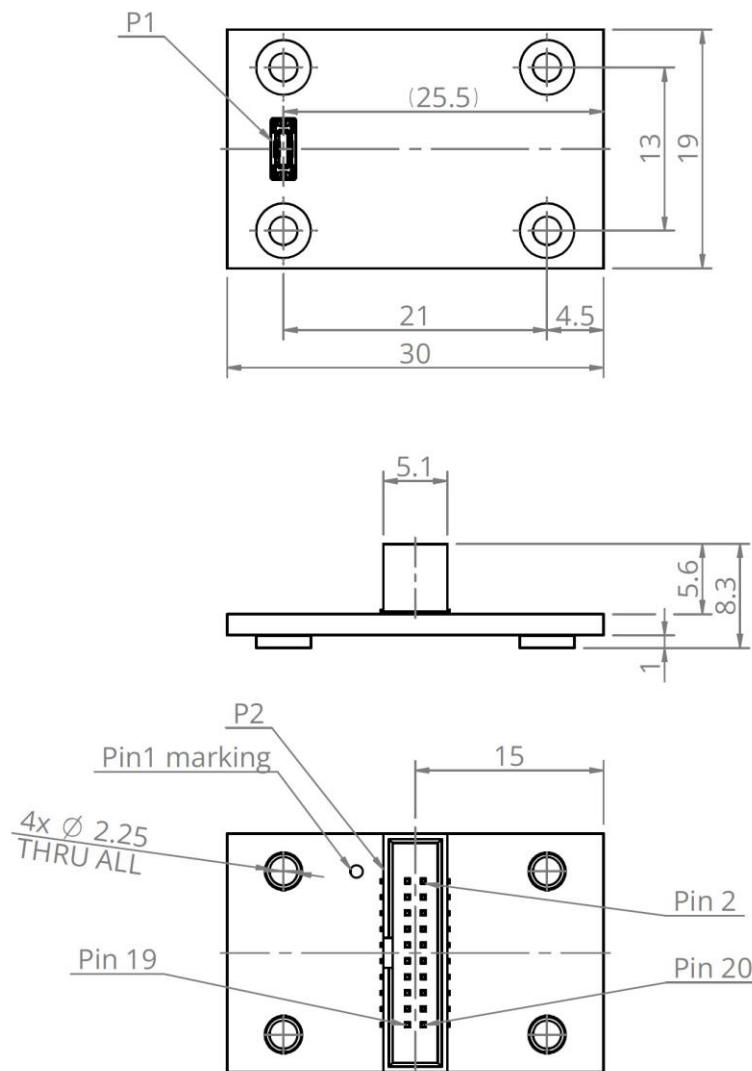


FIGURE 2. Dimensions of the AMS-1.27-EA (given in mm)

EXAMPLE ASSEMBLY

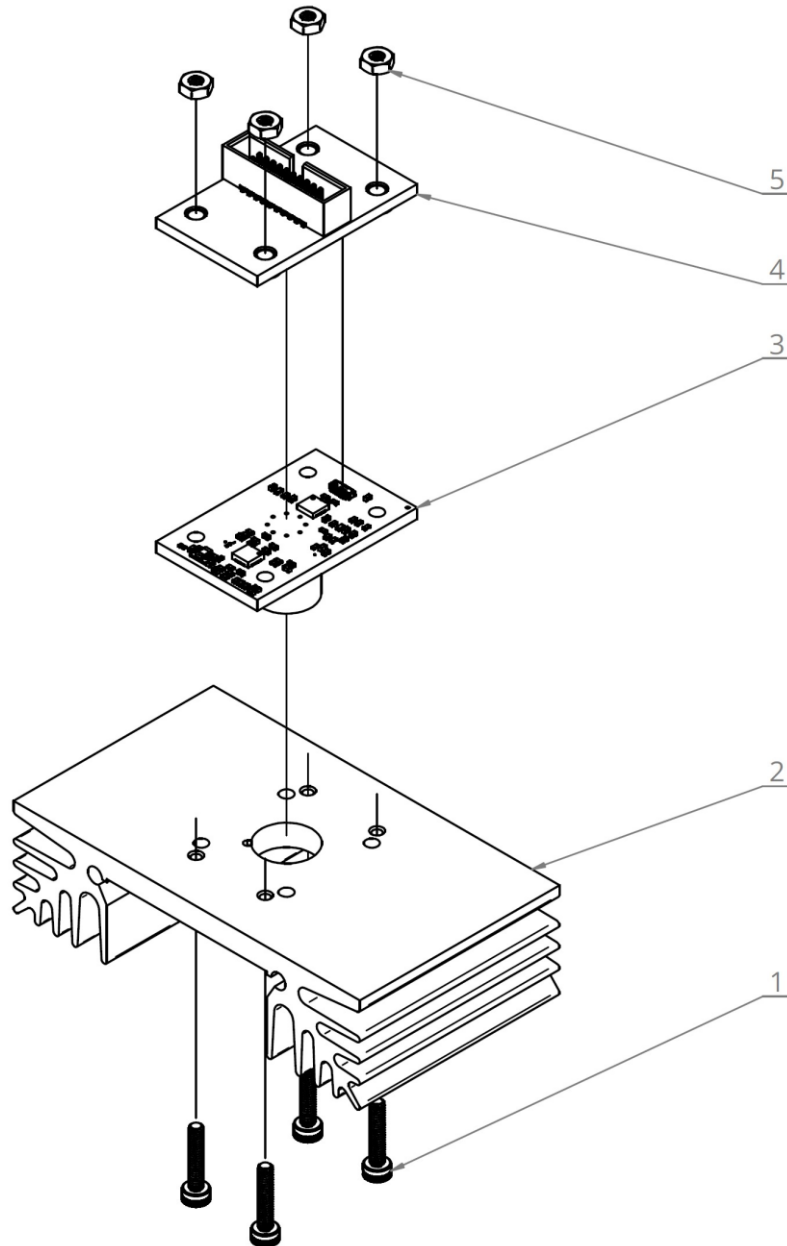


FIGURE 3. Example assembly of the AMS detection module with the AMS-1.27-EA adapter and the heatsink

TABLE 2. Parts description

Part number	Part name	Quantity
1	M2x10 screw (not included)	4
2	Heatsink (not included)	1
3	AMS detection module (available to order)	1
4	AMS-1.27-EA adapter	1
5	M2 nut (not included)	4