

## ezPyro™ SMD Breakout Boards

Sensor boards for easy evaluation and quick prototype development

ezPyro SMD Breakout Boards provide an easy way to evaluate the high performance and innovative features of ezPyro digital thin film pyroelectric sensors. Because of their small form factor they are also useful to quickly integrate one or more ezPyro SMD sensors into a prototype application.

ezPyro SMD Breakout Boards are small 16 x 13.8mm PCBs with an ezPyro SMD sensor and the passive components required for the power supply of the device. All functionality of the sensors is routed out to an industry standard 10-pin SIL header socket on the back side of the PCB. The build height including the socket is 9mm. The boards come with a standard ribbon cable connecting to this socket.

ezPyro SMD Breakout Boards work with a 1.8-3.6V power supply. They provide up to 1 MHz Fast Mode+ I<sup>2</sup>C communication to configure the sensor and read data from it. The CLK/SYNC pins can be used to feed an external clock signal in to the board or, alternatively, distribute the clock signal of one board to several other boards, thereby creating a synchronized “network” of ezPyro sensors. There is also a chip select/enable pin and an interrupt output available.

ezPyro SMD Breakout Boards are available for every sensor in the ezPyro SMD family.

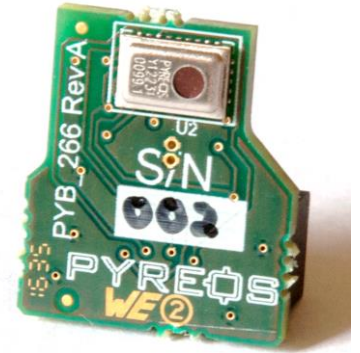


Figure 1 Front side

### Ordering information

Sensor	Pixels	Aperture	Filter $\mu\text{m}$	Filter BW nm	Gas	Flame	Motion	Gesture	Break-out Board
ePY12121	1	L	2.20	Long Pass	2.5-6 $\mu\text{m}$ Broadband				ePY12121-B1
ePY12111	1	L	5.00	Long Pass	6-14 $\mu\text{m}$ Broadband	Human motion rejection			ePY12111-B1
ePY22111	1	L	5.00	Long Pass			Motion		ePY22111-B1
ePY22114	2x2	L	5.00	Long Pass			Motion & Direction	Long Range (optics required)	ePY22114-B1
ePY21114	2x2	S	5.00	Long Pass				Short Range (no optics required)	ePY21114-B1
ePY12211	1	L	3.91	90	Ref	Rejection channel			ePY12211-B1
ePY12221	1	L	3.30	160	CH <sub>4</sub>				ePY12221-B1
ePY12231	1	L	4.26	180	CO <sub>2</sub>				ePY12231-B1
ePY12241	1	L	4.64	180	CO	Flame channel (wide FoV)			ePY12241-B1
ePY12251	1	L	4.48	620		Flame channel (main detector)			ePY12251-B1
ePY12261	1	L	5.30	180	NO				ePY12261-B1

**Pin allocation and cable**

Pin #	Symbol	Type
1	V <sub>supply</sub>	Power supply
2	Unassigned	-
3	SCL (I <sup>2</sup> C)	Digital in/out
4	SDA (I <sup>2</sup> C)	Digital in/out
5	CS	Digital in
6	INT	Digital out
7	SYNC	Digital in/out
8	CLK	Digital in/out
9	Unassigned	-
10	GND	Ground

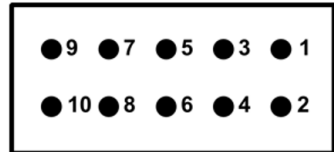
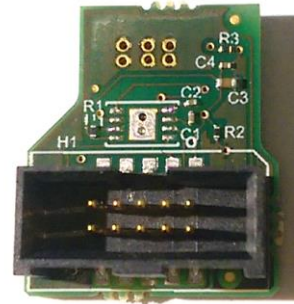


Figure 2 Back side and connector (same orientation)

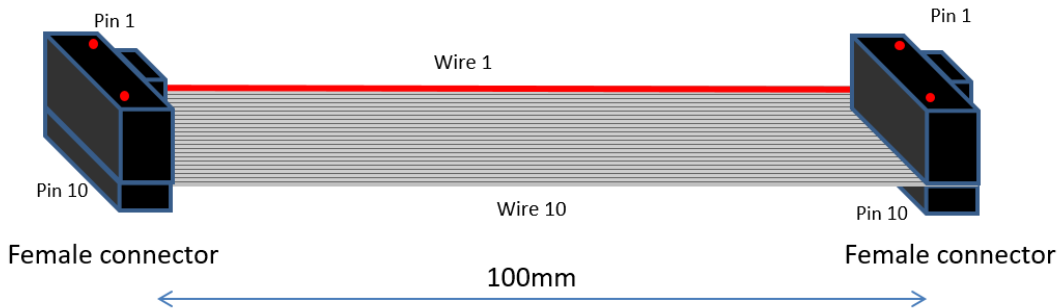


Figure 3 Flat cable drawing B – Breakout Board shipped with a Base Board

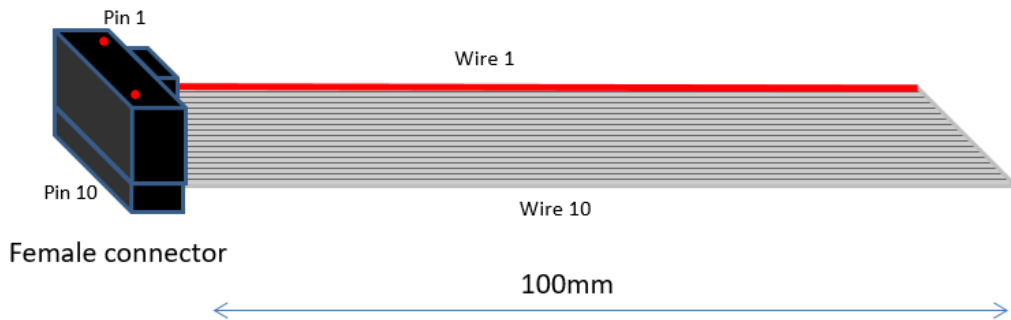


Figure 4 Flat cable drawing C – Breakout Board shipped without a Base Board

## Circuit diagram

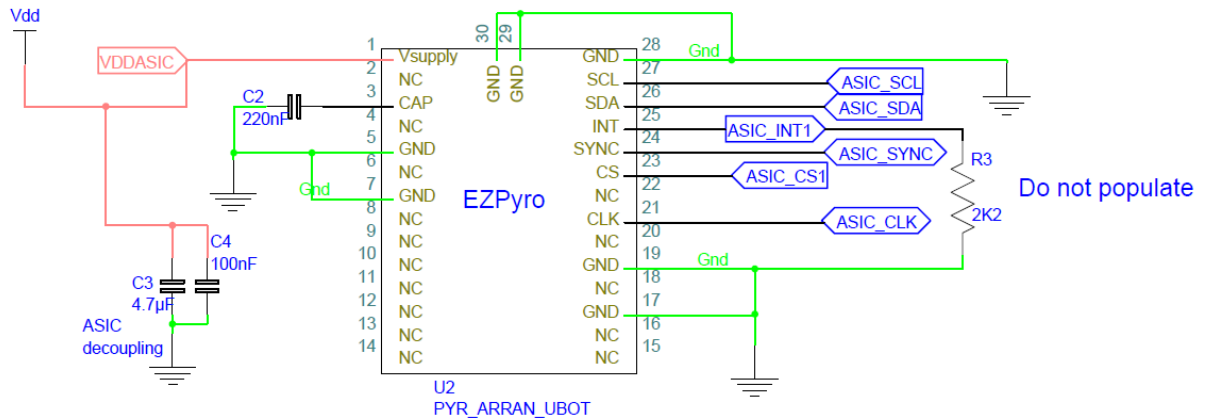


Figure 5 Circuit diagram

## Mechanical drawings

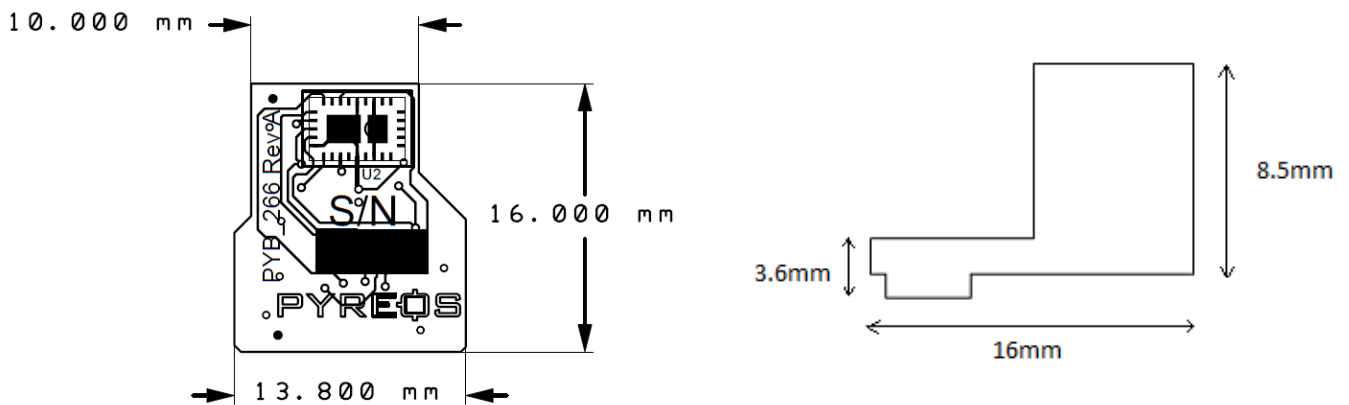


Figure 6 Top view

Figure 7 Side view

## Contents of the Package

- Packed in ESD protective bag with information label
- 1 x ezPyro SMD Breakout Board
- 1 x 100mm flat cable (10 pin connections)
- Additional information included on USB memory drive.

## Ordering Information

For more information see the ezPyro datasheets and the ezPyro SMD Reference Manual or contact: [sales@pyreos.com](mailto:sales@pyreos.com)