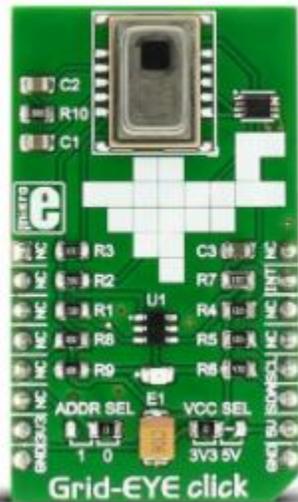


Grid-EYE click

MIKROE-2539

Weight: 30 g



Grid-EYE click is a 8x8 thermal array sensor-detector that carries the [AMG8853](#) infrared array sensor from Panasonic.

64 individual thermal sensors build an image on a display. The detecting distance is 5m.

The click is designed to run on either 3.3V or 5V power supply. It communicates with the target MCU over I2C interface.

Use the Grid-EYE click to detect absolute surface temperature without any contact. Or use it to detect the movement of people and objects.

AMG8853 sensor features

The AMG8853 is made out of **64 individual thermal sensors**. It can build an image according to the heat it detects. You don't need light to form a picture.

The temperature measuring range is from **-20°C to +100°C**.

The detecting distance is **5m**, the viewing angle 60 degrees.

The AMG8853 has a built-in thermistor for suppressing ambient temperature noise.

The I2C levels and address are jumper selectable, while the AMG8853 is supplied with designated voltage.

Infrared sensor

Infrared waves are outside the visible spectrum of the human eye, just like radio waves. Even though people can't see infrared waves, they can certainly feel them, in the form of heat.

Our bodies emit heat or infrared radiation, and the AMG8853 thermal array sensor can detect it.

Specifications

Type	Temperature, Humidity
Applications	Thermal imaging systems, detecting movement of people and objects, etc
MCU	AMG8853 thermal array sensor from Panasonic
Key Features	5 m detecting distance, 60 degrees viewing angle, 64 individual thermal sensors
Key Benefits	Detect absolute surface temperature without any contact
Interface	I2C, GPIO
Input Voltage	3.3V or 5V
Compatibility	mikroBUS
Click board size	M (42.9 x 25.4 mm)

Pinout diagram

This table shows how the pinout on **Grid-EYE click** corresponds to the pinout on the mikroBUS™ socket (the latter shown in the two middle columns).

Notes	Pin					Pin	Notes
	NC	1	AN	PWM	16	NC	
	NC	2	RST	INT	15	INT	INT out to MCU
	NC	3	CS	TX	14	NC	
	NC	4	SCK	RX	13	NC	
	NC	5	MISO	SCL	12	SCL	I2C SCK
	NC	6	MOSI	SDA	11	SDA	I2C data
Power supply	+3.3V	7	3.3V	5V	10	+5V	Power supply
Ground	GND	8	GND	GND	9	GND	Ground

Jumpers and settings

Designator	Name	Default Position	Default Option	Description
JP1	LOGIC SEL	Left	3.3V	Logic Level Voltage Selection, left position 3.3V, right position 5V
JP2	ADDR SEL	Right	0	I2C address selection, right 0 (0b1101 000) Left 1 (0b1101 001)

Buttons and LEDs

Designator	Name	Type	Description
PWR	Power	LED	Power supply LED, lights green when power is on.

Maximum ratings

Description	Min	Typ	Max	Unit
Supply Voltage (with AMG8853 module)	5		5	V
I2C Levels (JP1 select)	0		5	V
INT out (JP1 select)	0		5	V