



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



IR Sense click

PID: MIKROE-2677

Weight: 22 g



IR Sense click carries the AK9750 quantum-type IR sensor. The click is designed to run on a 3.3V power supply. It communicates with the target microcontroller over I2C interface, with additional functionality provided by the INT pin on the mikroBUS™ line.

IR Sense click detects the temperature of objects and people in motion. It can also detect a human body that remains still. So, it distinguishes heat regardless of the fact whether or not an object is moving.

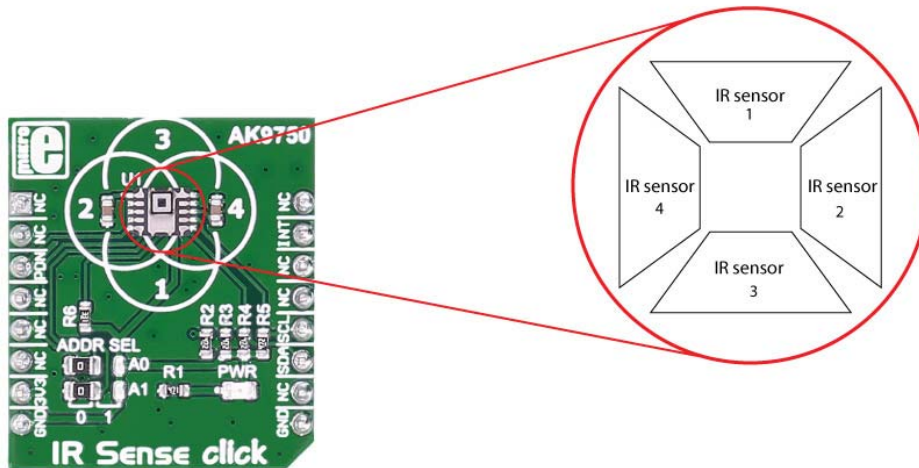
AK9750 features

The AK9750 is an ultra-low power and compact infrared-ray (IR) sensor module. It is composed of four quantum IR sensors and an integrated circuit (IC) for characteristic compensation.

An integral analog-to-digital converter provides 16-bits data outputs. Additional integrated features include a field of view limiter and an optical filter.

How it works

The IR sensors are arranged as shown. Each sensor detects the diagonal area, as indicated in the image below:




The observable area of the four sensors is as you see it on the silk of the IR Sense click board™.

Specifications

Type	Temperature, Humidity
Applications	Detecting heat with the four IR sensors
On-board modules	AK9750 IR sensor
Key Features	Low current consumption: Max. 1µA in Power down Mode; Integrated temperature sensor, 16-bits Digital Outputs to I2C bus
Interface	I2C
Input Voltage	3.3V
Click board size	S (28.6 x 25.4 mm)

Pinout diagram

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

Notes	Pin				Pin	Notes
	ALR	1	AN	PWM	16	NC
	NC	2	RST	INT	15	INT Interrupt
Power down pin	PDN	3	CS	TX	14	NC
	NC	4	SCK	RX	13	NC
	NC	5	MISO	SCL	12	SCL SCL I2C line
	NC	6	MOSI	SDA	11	SDA SDA I2C line
Power supply	+3.3V	7	3.3V	5V	10	NC
Ground	GND	8	GND	GND	9	GND Ground

Jumpers and settings

Designator	Name	Default Position	Default Option	Description
A0	A0	Left	0	Selection of I2C address bit 0
A1	A1	Left	1	Selection of I2C address bit 1

Programming

Code examples for IR Sense click, written for MikroElektronika hardware and compilers are available on Libstock.

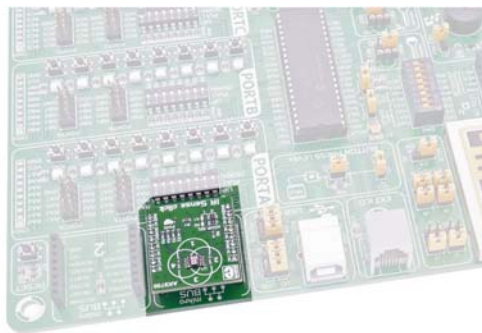
Code snippet

The following code snippet shows the main loop of the IR Sense click example, which reads data every few second and then displays it via UART.

```

01 while( 1 )
02     {
03         Delay_ms (5000);
04
05
06         IRGRID2_readAll (readData);
07
08         //Upper area sensor value
09         UART2_Write_Text ("rn      ");
10         tempValue = readData [5] + ( readData [6] << 8 );
11         IntToStr (tempValue, uartText);
12         UART2_Write_Text (uartText);
13
14         //Left area sensor value
15         UART2_Write_Text ("rn");
16         tempValue = readData [3] + ( readData [4] << 8 );
17         IntToStr (tempValue, uartText);
18         UART2_Write_Text (uartText);
19         //Right area sensor value
20         UART2_Write_Text ("      ");
21         tempValue = readData [7] + ( readData [8] << 8 );
22         IntToStr (tempValue, uartText);
23         UART2_Write_Text (uartText);
24
25         //Lower area sensor value
26         UART2_Write_Text ("rn      ");
27         tempValue = readData [1] + ( readData [2] << 8 );
28         IntToStr (tempValue, uartText);
29         UART2_Write_Text (uartText);
30         UART2_Write_Text ("rn-----");
31     }

```



<https://shop.mikroe.com/ir-sense-click-8-2-17>