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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



Pyroelectric Infrared Sensor
Evaluation Board:IMX-070, IMX-060

Quick Start Guide



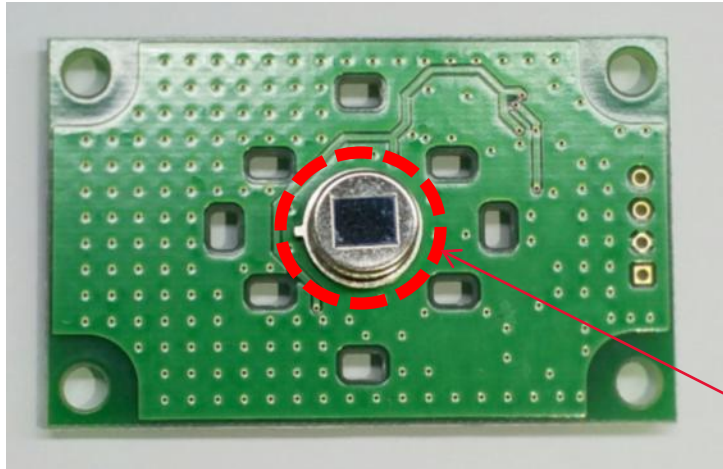
Pyroelectric infrared Sensor Evaluation Board: IMX-070, IMX-060



- It's a Evaluation Board to know how Pyroelectric Infrared Sensor(IRA-S210ST01) working and performance.
 - Specifications
 - Rated Voltage : 3.3V
 - Output signal : analog, comparator
 - Dimension : 48×30mm

Quick Start Guide : Pyroelectric Infrared Sensor *muRata*

INNOVATOR IN ELECTRONICS

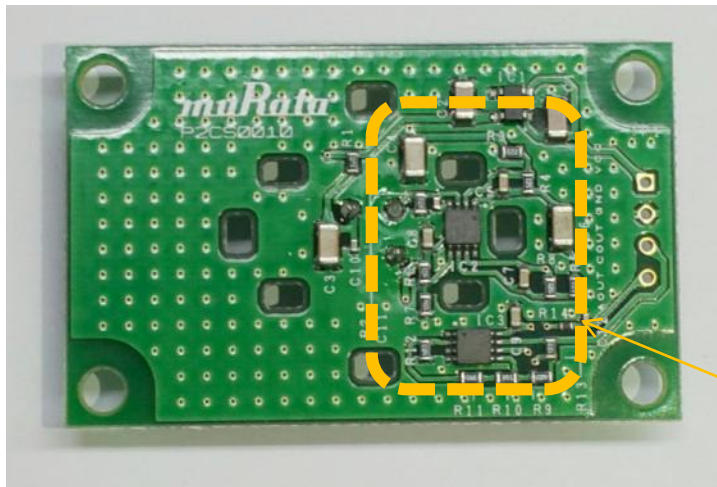


Every objects emit IR(=Infra-Red) ray in respond to its temperature.

Pyroelectric Infrared Sensor detects "change" of IR distribution within its sensing area.

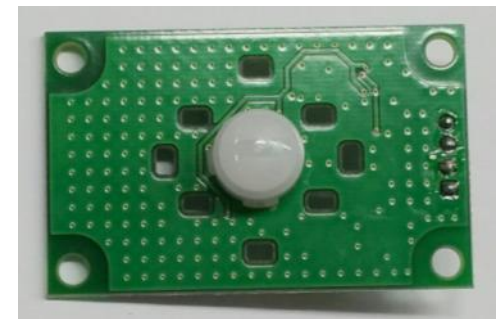
* sensing area is determined by lens design.

Pyroelectric Infrared Sensor



Amplifier and comparator circuits on evaluation board amplifies sensor's output signal and generate digital High/Low signal. (Next page)

**Amplifier &
Comparator
Circuit**

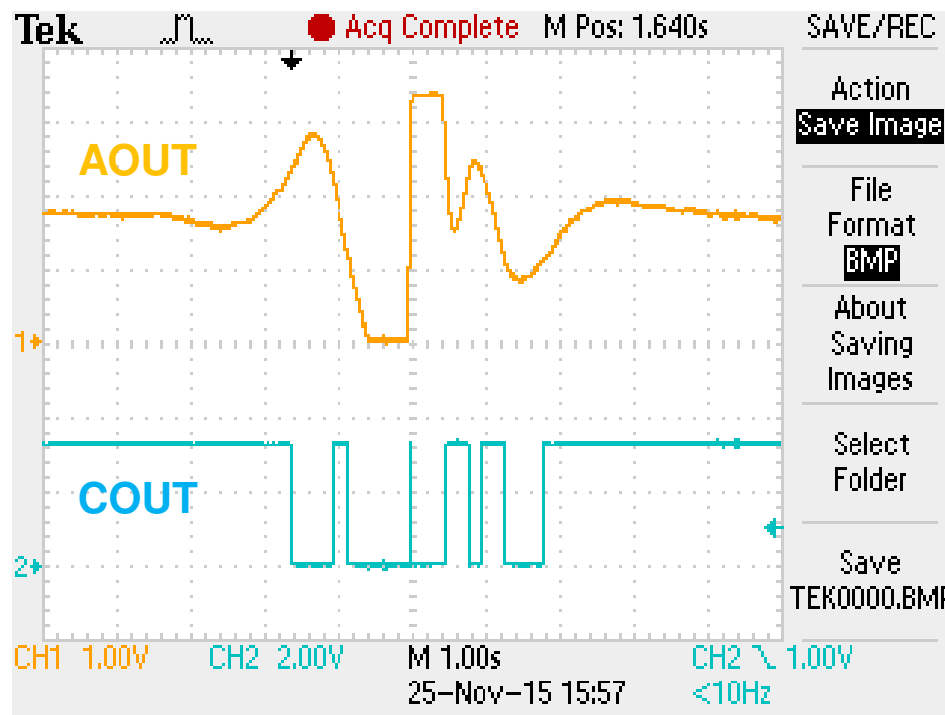


(Please make sure lens is attached on board.)

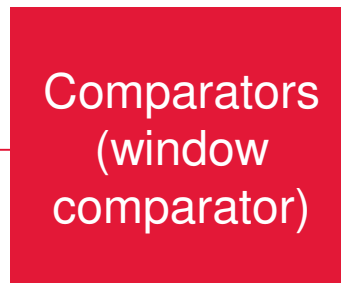
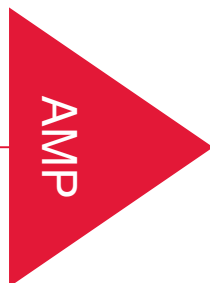
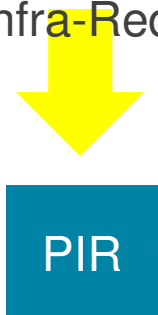
Hardware Operation

While there's no IR distribution change, AOUT is 1.65V and COUT is HIGH(=3.3V). When it detects that, AOUT varies and once AOUT crosses threshold, COUT falls to LOW(=0V).

In the sample code, we detect this COUT change with GPIO external interruption and IRQ handler sets a flag which is periodically monitored in main loop.(Next page)



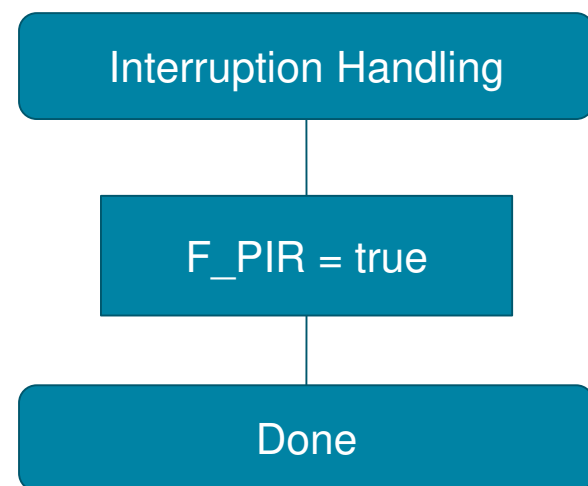
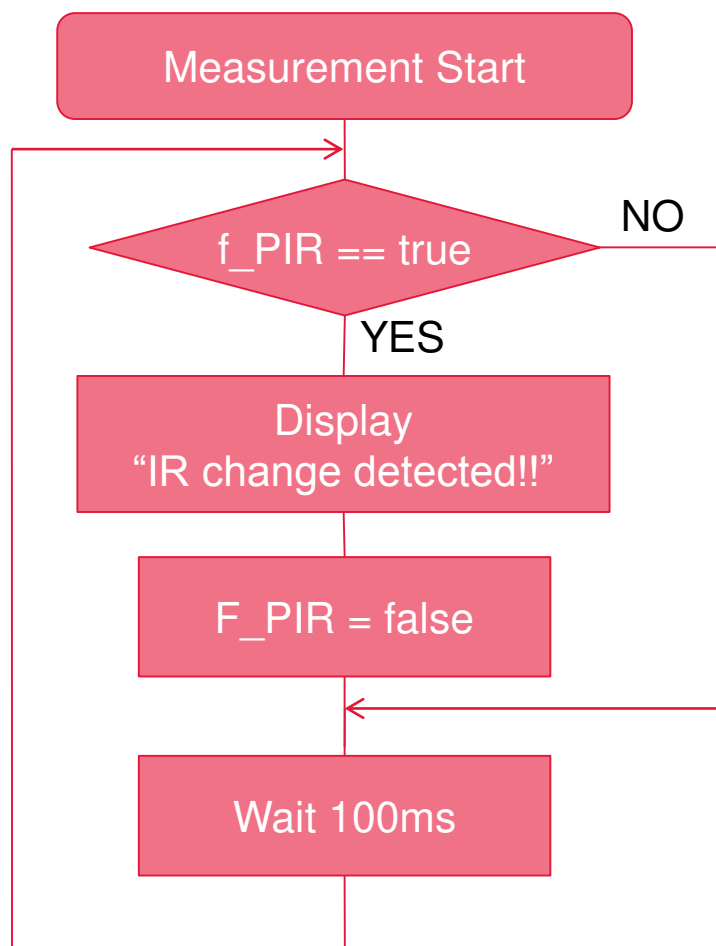
Infra-Red



● AOUT

● COUT (H/L)

Software Operation : Sample Code Flow Chart



Pin Connection

Pin connection to each CPU board is also instructed in sample code.

Evaluation board	↔	Arduino UNO
VCC		3.3V
GND		GND
COUT		D2
AOUT		A0