

# PIR-DETECTOR MODULE HT7M2XX6 – PIR SENSOR AND ELECTRONICS



## FEATURES

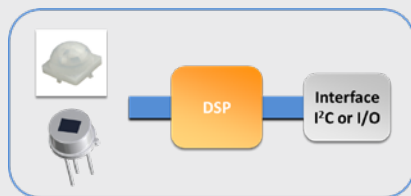
- » Operating voltage: 2.7V ~ 5.5V
- » Low power consumption:  
operating mode (Moving objects) < 1.5 mA,  
standby with detecting mode < 40 µA (3.3V)
- » Intelligent signal recognition algorithm
- » Interfaces: I<sup>2</sup>C for Network Mode / I/O for Stand-alone Mode
- » Adjustable sensing sensitivity, Network Mode
- » Custom trigger modes: Single/Continuous, Network Mode
- » Adjustable trigger output time: 16-bit×100 ms, Network Mode
- » Low voltage detection: 2.0/2.2/2.4/2.7/3.0/3.3/3.6/4.0V options, Network Mode
- » Supports external optical sensors, e. g. photo transistors
- » Integrated temperature sensor with temp. compensation

**HOLTEK's human body infrared detector** modules, the HT7M2xx6 series, come fully integrated with optical lenses, a passive infrared (PIR) sensor and DSP algorithms. These modules include a wide range of features such as low power consumption, an I<sup>2</sup>C communication interface and DSP algorithms which improve the reliability of the PIR detector. Their application range includes home security and surveillance systems as well as basic industrial safety detection.

## WHY USE PIR SOLUTIONS

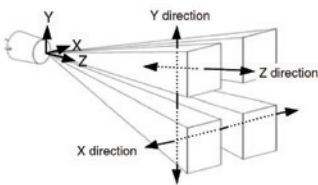
- » Can reliably detect passive infra red radiation
- » Reliable and inexpensive motion sensing solution
- » Excellent and reliable solution for detection of human, animal or other object presence and motion
- » Used in range of security products such as lighting and alarms
- » Complete range of Holtek devices for a wide range of PIR applications including MCU based solutions
- » Quick stabilisation: ready for stable operation within 12 seconds after power on

## BLOCK DIAGRAM



## PRODUCTS

### PIR-MODULES



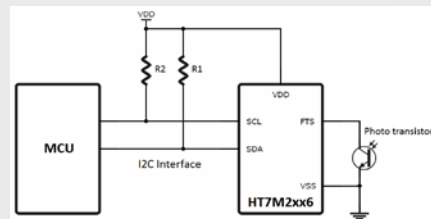
PART NUMBER	X, Y DIRECTION	Z DIRECTION
HT7M2126	121°, 77°	4 m ... 7 m
HT7M2136	91°, 10°	5 m ... 7 m
HT7M2156	10°, 20°	8 m ... 11 m
HT7M2176	86°, 75°	7 m ... 8 m

### PIR-MCU

HT45F0027 – OPAs 2K-word Flash Memory, Low Power & High Performance

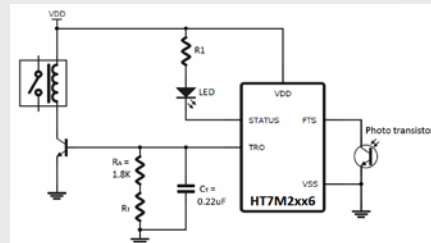
## APPLICATION CIRCUITS

### Network Mode



Pin #	Function	Description
1	VSS	Negative power supply, GND
2	VDD	Positive power supply
3	SDA	I <sup>2</sup> C interface Serial Data Input/Output
4	SCL	I <sup>2</sup> C interface Serial Clock Input
5	FTS	Photo transistor signal
6	VSS	Negative power supply, GND
7	ACT	Motion Detection Output
8	NC	Not connected

### Stand-alone Mode



Operating voltage: 2.7V ~ 5.5V  
 Intelligent signal recognition algorithm  
 Communication interfaces: I<sup>2</sup>C for Network Mode or I/O for Stand-alone Mode  
 Adjustable sensing sensitivity, Network Mode  
 Adjustable trigger modes: Single/Continuous, Network Mode  
 Adjustable trigger output time: 16-bit×100ms, Network Mode  
 Low voltage detection: 2.0/2.2/2.4/2.7/3.0/3.3/3.6/4.0V options, Network Mode  
 Supports external optical sensors, e.g. photo transistors  
 Integrated temperature sensor with temperature compensation  
 Quick stabilisation: ready for stable operation within 12 seconds after power on