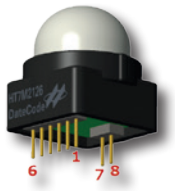
PIR-DETECTOR MODULE HT7M21X6 – PIR SENSOR AND ELECTRONICS



FEATURES

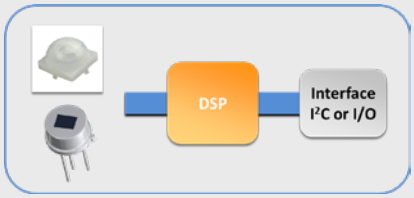
- Operating voltage: 2.7V ~ 5.5V
- Low power consumption:
  operating mode (Moving objects) < 1.5 mA,
  standby with detecting mode < 40 µA (3.3V)
- Intelligent signal recognition algorithm
- Interfaces: I²C for Network Mode / I/O for Stand-alone Mode
- Adjustable sensing sensitivity, Network Mode
- 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/
  4.0 V 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 HT7M21x6 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 I²C 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

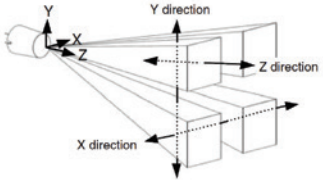
- Can reliably detect passive infrared radiation
- Reliable and inexpensive motion sensing solution
- Excellent and reliable solution for detection of human, animal or other object presence and motion
- Used in range of security products such as lighting and alarms
- Complete range of Holtek devices 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



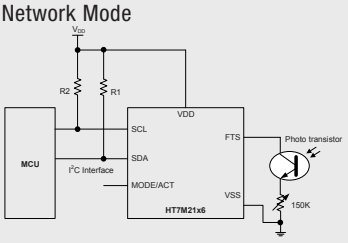
PART NUMBER	X, Y DIRECTION	Z DIRECTION
HT7M2126	121°, 77°	3.5 m ... 6 m
HT7M2136	91°, 10°	5.5 m ... 8 m
HT7M2156	10°, 20°	8 m ... 12 m
HT7M2176	86°, 75°	5 m ... 7.5 m

PIR-MCU

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

APPLICATION CIRCUITS

Network Mode

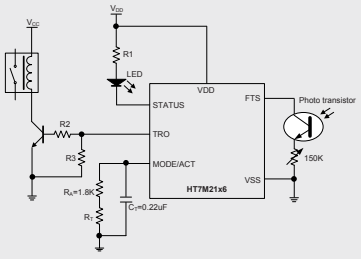


Interface & Pin Assignment – Network Mode

Pin #	Function	Description
1	VSS	Negative power supply, GND
2	VDD	Positive power supply
3	SDA	Serial Data Input/Output for I²C interface
4	SCL	Serial Clock Input for I²C interface
5	FTS	Photo transistor signal
6	VSS	Negative power supply, GND
7	MODE/ACT	Mode Selection/Motion Detection Output
8	TP1	No connection (Test pin)

Note: When the HT7M21x6 selects Network mode and the internal enable bit ACTEN is high, the MODE/ACT pin will output a high pulse signal with a width of 30 seconds.

Stand-alone Mode



Interface & Pin Assignment – Stand-alone Mode

Pin #	Function	Description
1	VSS	Negative power supply, GND
2	VDD	Positive power supply
3	STATUS	Warm-up/Detecting/Low voltage status
4	TRO	PIR trigger output
5	FTS	Photo transistor signal
6	VSS	Negative power supply, GND
7	MODE/DT	Mode & Duration time Selection
8	TP1	No connection (Test pin)

Contact for information: Mr.Kinn· Tel. +49(0)7452-6007- 21 · e-mail: d.kinn@endrich.com