

MTPA16X16



Infrared thermopile array sensor

The infrared thermopile array sensor is manufactured using CMOS-MEMS technology and contains 256 thermopile elements in a 16x16 grid layout. It also integrates an ASIC signal processing circuit and can detect the absolute temperature of the object surface without touching the object being measured. It is available in both TO and SMD packages.

Compared with traditional single-point thermopile infrared sensors and pyroelectric sensors, this new product can not only detect moving human bodies and objects, but also detect the presence and position of immobile human bodies and objects, movement direction and precise surface temperature, and even detect the movement of human hands. It can be widely used in air conditioning, lighting, home and building HVAC control, traffic statistics, gesture recognition, etc.

16x16 thermopile array



20~60Hz data refresh rate



Miniature



Integrated EEPROM




Different FOV optical lenses



TO&SMD packaging optional



Applications

| | | | |
|--|---|--|--|
|  <p>Air conditioner</p> <ul style="list-style-type: none"> • Detect indoor temperature • Detect personnel location |  <p>Body temperature measurement</p> <ul style="list-style-type: none"> • Detect human body • Animal skin temperature |  <p>People counting system</p> <ul style="list-style-type: none"> • Statistics of people flow • Comprehend action trends |  <p>Smart home</p> <ul style="list-style-type: none"> • Gesture Recognition |
|  <p>Care</p> <ul style="list-style-type: none"> • Detect actions/gestures • Detect body surface temperature |  <p>Kitchen</p> <ul style="list-style-type: none"> • Detect if there is any people • Detect food temperature |  <p>Animal husbandry</p> <ul style="list-style-type: none"> • Detect animal skin temperature |  <p>Agriculture</p> <ul style="list-style-type: none"> • Temperature management of crops/environment |
|  <p>Security</p> <ul style="list-style-type: none"> • Real-time monitoring of illegal intrusions |  <p>Lighting</p> <ul style="list-style-type: none"> • Real-time monitoring of personnel position and lights on/off |  <p>Drone</p> <ul style="list-style-type: none"> • Detect personnel • Detect temperature |  <p>Factory security/ electronic fence</p> <ul style="list-style-type: none"> • Fall monitoring • Personnel monitoring |
|  <p>Fire alarm</p> <ul style="list-style-type: none"> • Fire warning • Personnel monitoring |  <p>Animal hazard detection</p> <ul style="list-style-type: none"> • Detect various animal hazards |  <p>Inside carriage</p> <ul style="list-style-type: none"> • Life detection • Driver status |  <p>Equipment monitoring</p> <ul style="list-style-type: none"> • Detect equipment temperature |

Parameters

| | |
|------------------------------|-------------|
| Thermopile pixel | 16x16 |
| Operating Voltage | 3.3V |
| Built-in clock | 13MHz |
| Working ambient temperature | -20~85°C |
| Target temperature | -20~500°C |
| Range of working temperature | -20°C ~85°C |
| Storage temperature range | -40°C ~85°C |
| Frame rate | 5~20Hz |

深圳市美思先端电子有限公司

Shenzhen MemsFrontier Electronics Co.,Ltd.

Web: www.memsf.com

Email: info@memsf.com

Add: Building B2, Guangming Technology Park, Investment Promotion Bureau, Fenghuang Subdistrict, Guangming District, Shenzhen