# CCDCAM

#### MC-K10H Smoke&Flame Recognition Camera Module



The MC-K10H module is a camera module designed for the timely detection and alarm signaling of smoke and flames, suitable for both indoor and outdoor environments. Its smoke and flame detection algorithms can identify smoke and flame regions within dynamic video streams. After multi-frame fusion calculations, it can output alarm information for smoke and flames.

Additionally, the MC-K10H is an easy-to-develop and integrate module compatible with other digital systems. It supports local area network (LAN) monitoring, configuration, and upgrades. The module comes with a standard SDK for both Linux and Windows platforms.

#### **Key Features**

- 1/3" 4MP CMOS Sensor
- Support H.256+, H.256, H.264 encoding.
- Support soft light sensitivity and full color .
- Support smart analytical, smoke and flames detection.
- Support two way audio, voice broadcast, custom voice messages.
- Support image flipping and support digital WDR.
- Support ONVIF.
- Support IP filter and block list.
- Support auto-focus and PT
- Support TF card/WiFi/4G/ alarm input and out/



## **Technical specifications:**

| Image sensor          |  |  |  |
|-----------------------|--|--|--|
| Model                 | MC-K10H  |  |  |
| SOC                   | SSC37D   |  |  |
| Sensor                | 1/3" 4MP CMOS  |  |  |
| Maximum resolution    | 2560*1440@25fps  |  |  |
| Minimum illumination  |  |  |  |
| Camera                |  |  |  |
| AGC                   | Auto/Manual  |  |  |
| S/N ratio             |  |  |  |
| Shutter speed         |  |  |  |
| Wide dynamic range    | Digital WDR≥73.7dB   |  |  |
| Exposure mode         | Auto/ Manual/shutter mode  |  |  |
| White balance         | Auto/ Manual /ATW/ Indoor/Outdoor/ lamp  |  |  |
| Day & Night           |  |  |  |
| Image resolution      |  |  |  |
| Main stream           | 2560*1440/2304*1296/1920*1080/1280*720/1944*1944/1200*1200@25fps   |  |  |
| Sub stream            | 640*360/VGA/D1   |  |  |
| Audio resolution      |  |  |  |
| Audio Out/In          | Supported/Wired required   |  |  |
| Audio processing      | G.711 codec standard   |  |  |
|                       |  |  |  |
| Protocol              |  |  |  |
| Network protocol      | HTTP/RTSP/DHCP/NTP/P2P/ONVIF and more  |  |  |
| Interface             |  |  |  |
| Network interface     | 10/100Mps Base-T Ethernet, 1*RJ45 interface  |  |  |
| IRCUT interface       | Integrated IRCUT switching circuit with automatic, external, manual, and timed control for day/night mode. |  |  |
| Light board interface | PWM yellow light   |  |  |
| Storage interface     | TF memory card up to 512GB   |  |  |
| Extra interface       | Expandable with either 1 channel of IO output or 1 channel of 458 interface.                               |  |  |
| General               |  |  |  |
| Power supply          | DC 12V protected from lightning  |  |  |
| Additional functions  | OSD supported/Two way audio/Support audio and video synchronously/smoke and flame detection /voice alarm/  |  |  |
| Standard              | International: IEC61000-4-5 China: GB/T17626.5   |  |  |
| Size                  | (L)38mm * (W)38mm  |  |  |
| Operation temperature | -40°C~+65°C  |  |  |
| Working humidity      | ≤90% RH (non-condensing)   |  |  |

### **Additional Note**

Suitable Install environment: Indoor / Outdoor

**Avoid objects:** Please avoid red objects and reflective surfaces after installation, Ex:red lights, car tail lights, sunlight reflection etc.

**Recommended installation height:** Distance from the ground ≥1.5meters

**Ambient Light:** Supports normal indoor and outdoor lighting, backlight, side light, and low light environments (does not support IR).

Target Recognition Range:

Minimum flame: 30x30 @ 1080P, optimal flame: 60x60 and above @ 1080P Minimum smoke: 30x30 @ 1080P, optimal smoke: 60x60 and above @ 1080P

**Target Clarity:** 

Not supported: overexposure, reflection, motion blur, defocus, IR, dim lighting, blur.







| IO | FUNCTION                | PIN | PIN NAME              | DESCRIPTION   |
|----|-------------------------|-----|-----------------------|---|
| D1 | 8-pin                   | 1   | DC12V+                | DC 12V input  |
|    |                         | 2   | GND                   | Ground  |
|    |                         | 3   | RJ45_6                | RX-   |
|    | network &               | 4   | RJ45_3                | RX+   |
|    | power<br>interface      | 5   | RJ45_2                | TX-   |
|    |                         | 6   | RJ45_1                | TX+   |
|    |                         | 7   | RESET                 | Reset   |
|    |                         | 8   | LED+                  | Network status indicator light  |
|    | 2-pin                   | 1   | MIC+                  |   |
| D2 | 2 Primary<br>Microphone | 2   | MIC-                  | Primary microphone  |
| D3 | 2-pin                   | 1   | MIC+                  | Secondary microphone  |
|    | Secondary<br>Microphone | 2   | MIC-                  |   |
| D4 | Audio out               | 1   | AUDIO_OUT             | Audio output  |
|    |                         | 2   | GND                   | Ground  |
| D5 | Speak out               | 1   | SPK+                  | Speak output (8 $\Omega$ 2W)  |
|    |                         | 2   | SPK-                  |   |
| D6 | Light control           | 1   | CDSIN                 | CDS (Since the MC-K10H is a smoke and flame detection module, we recommend not using interface D6.) |
|    |                         | 2   | GND                   | Ground  |
|    |                         | 3   | PWM1                  | IR  |
|    |                         | 4   | PWM0                  | Yellow light /White light   |
| D7 | IR-CUT                  | 1   | IR-CUT Signal control | Output  |
|    | interface               | 2   |                       |   |
| D8 | Extended                | 1   | GND                   | Ground  |
|    | interfaces              | 2   | ТХ                    | Serial interface or RS485 interface   |
|    | IO / RS485              | 3   | RX                    |   |
|    |                         | 4   | IO-OUT                | Spken   |