



Midas Touch

magic embedded

We are dedicated to developing sensing technology, and providing customers with an innovative and diverse range products.

With the state-of-the-art algorithm technology, there are many brand products with our advanced image technology in the market.

MCY-3080 4K USB
Camera Module Datasheet

Midas Touch, Inc.

Tel:+886-2-7729-4139

Fax:+886-2-7729-4149

Email: contact@midastouchinc.com

<https://www.midastouchinc.com>



Revision History

| Date | Rev. | Contents |
|------------|------|--|
| 2021/05/01 | V1.0 | First release |
| 2021/06/03 | V1.2 | Second release |
| 2021/06/04 | V1.3 | Third release |
| 2021/06/07 | V1.4 | Update the specifications of Max Frame Rates |



Table of Contents

Table of Contents

| | |
|--------------------------------|---|
| 1. Preface | 3 |
| 2. Features | 4 |
| 3. Applications | 4 |
| 4. Key Specification | 5 |
| 5. Pin Description | 6 |
| 6. Outline Specification | 7 |



1. Preface

This documentation describes product specifications to ensure design to meet customer's requirements.

MCY-3080-A01 is an USB Video Class (UVC) compliant camera module with video feature, designed for portable notebook PC image applications. It is made up of the following components, CMOS sensor, lens, holder, backend, PCB, image processing circuit and connector, to come out a digital video device. It shall be a reliable device which is embedded in notebook PC to transfer video data through USB interface to notebook PC.

MCY-3080-A01 not only offers up to UHD resolution (3840x2160) for image applications to take still image, but also offers video stream for end user to preview/record motion image through USB 3.0 interface. And it can support UHD (3840x2160) resolution up to 30 fps at YUY2 and MJPG mode, FHD (1920x1080) resolution up to 30fps at H.264 mode.

MCY-3080-A01 builds in AE, AWB and AGC for automatic image control supported by CMOS sensor. For image quality control, it also offers UVC standardized User Interface (UI) to let end user well tune image by property page.



2. Features

- Compliant to USB3.0 and USB Video Class (UVC)
- Support still image capture and Video Streaming
- Convert Bayer RGB to MJPG color space
- Still Image Resolution: 8.0M pixel(3840x2160)
- Black Clamping-Gamma Correction
- Gain and offset adjustment in RGB space
- Window image statistics collection for AE and AWB
- Gain and offset adjustment in MJPG space

3. Applications

- LCD TV
- LCD PC
- LCD Monitor
- Industrial PC



4. Key Specification

| Module Specification | | |
|-----------------------|---|-----------|
| Size(LWH/mm) | 38.0 x 38.0 x 32.0±0.2 mm (include PCB Thickness) | |
| PCB Thickness | 1.0 mm | |
| Output Interface | USB 3.0 | |
| Image/Video Format | MJPEG & YUY2 & H.264 | |
| | HD | 1280x720 |
| | FHD | 1920x1080 |
| | 2k | 2048x1536 |
| | 2.7k | 2688x1512 |
| | QSXGA | 2592x1944 |
| | UHD | 3840x2160 |
| Frame Rate | 8.29 M – 30FPS | |
| Video Class Compliant | YES | |
| LED Indicate | N/A | |
| Operating Temperature | -10°C to +65°C | |

| Power Consumption | | | |
|-----------------------|-------|------|-------|
| | Min | Type | Max |
| Input Supply Voltage | 4.85V | 5V | 5.25V |
| Un-configured Current | - | - | - |
| Operating Current | - | - | - |
| Suspend Current | - | - | - |



| Max Frame Rates (fps): MJPEG | | | | | |
|------------------------------|-----------|-----------|-----------|-----------|-----------|
| nHD | VGA | SVGA | qHD | HD | SXGA |
| 640×360 | 640×480 | 800×600 | 960×540 | 1280×720 | 1280×960 |
| 30 | 30 | 30 | 30 | 30 | 30 |
| UXGA | Full HD | QXGA | RTSP | QSXGA | UHD |
| 1600×1200 | 1920×1080 | 2048×1536 | 2688×1512 | 2592×1944 | 3840×2160 |
| 30 | 60 | 30 | 30 | 30 | 30 |

| Max Frame Rates (fps): YUY2 | | | | | |
|-----------------------------|-----------|-----------|-----------|-----------|-----------|
| nHD | VGA | SVGA | qHD | HD | SXGA |
| 640×360 | 640×480 | 800×600 | 960×540 | 1280×720 | 1280×960 |
| 30 | 30 | 30 | 30 | 30 | 30 |
| UXGA | Full HD | QXGA | 2.6K | QSXGA | UHD |
| 1600×1200 | 1920×1080 | 2048×1536 | 2688×1512 | 2592×1944 | 3840×2160 |
| 30 | 30 | 30 | 30 | 26 | 15 |

| Max Frame Rates (fps): H.264 | | | | | |
|------------------------------|---------|---------|---------|----------|----------|
| nHD | VGA | SVGA | qHD | HD | SXGA |
| 640×360 | 640×480 | 800×600 | 960×540 | 1280×720 | 1280×960 |
| 30 | 30 | 30 | 30 | 30 | 30 |
| Full HD | | | | | |
| 1920×1080 | | | | | |
| 30 | | | | | |

| Backend IC Specification | |
|--------------------------|---|
| Type | AIT8589D Backend IC with USB3.0 interface |
| Compatibility | USB Video class Compliant, Microsoft WHQL Certified |
| Support Sensor Size | Support Most popular CMOS sensors |
| OS Supported | Win10, Linux, Android |

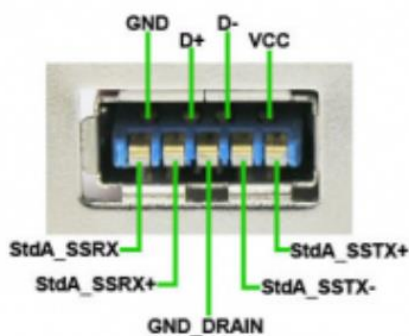
| Sensor Specification | |
|----------------------|----------------------------------|
| Optical format | IMX317 1/2.5-inch 8M CMOS Sensor |
| Active resolution | 3840H×2160V |
| Unit pixel size | 1.62µm x 1.62µm |



| Lens Specification | |
|--------------------|------------------------------|
| F/No. | 2.2 ± 5% |
| Field of View | 120° (Diagonal) 112(H) 75(V) |
| Focus Distance | 60cm |

5. Pin Description

| Pin Number | Name | Pin Type | Function Description |
|------------|------------|-------------------------|--------------------------|
| 1 | VCC | Power | USB Power Supply +5V |
| 2 | D- | Data Pin | USB2.0 Differential Pair |
| 3 | D+ | Data Pin | |
| 4 | GND | GND | System Ground |
| 5 | StdA_SSRX- | Super Speed Receiver | Differential Pair |
| 6 | StdA_SSRX+ | | |
| 7 | GND_DRAIN | GND | Signal Return |
| 8 | StdA_SSTX- | Super Speed Transmitter | Differential Pair |
| 9 | StdA_SSTX+ | | |





6. Outline Specification

