



Midas Touch

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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



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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
640x360	640x480	800x600	960x540	1280x720	1280x960
30	30	30	30	30	30
UXGA	Full HD	QXGA	RTSP	QSXGA	UHD
1600x1200	1920x1080	2048x1536	2688x1512	2592x1944	3840x2160
30	60	30	30	30	30

Max Frame Rates (fps): YUY2					
nHD	VGA	SVGA	qHD	HD	SXGA
640x360	640x480	800x600	960x540	1280x720	1280x960
30	30	30	30	30	30
UXGA	Full HD	QXGA	2.6K	QSXGA	UHD
1600x1200	1920x1080	2048x1536	2688x1512	2592x1944	3840x2160
30	30	30	30	26	15

Max Frame Rates (fps): H.264					
nHD	VGA	SVGA	qHD	HD	SXGA
640x360	640x480	800x600	960x540	1280x720	1280x960
30	30	30	30	30	30
Full HD					
1920x1080					
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

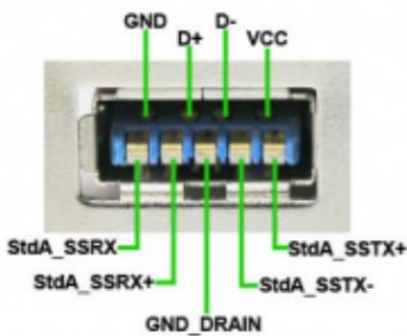
Sensor Specification	
Optical format	IMX317 1/2.5-inch 8M CMOS Sensor
Active resolution	3840Hx2160V
Unit pixel size	1.62µm x 1.62µm



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

