



3M Full HD WDR Camera Module

USB2.0 AR0331

Key Properties

AR0331 Image Sensor

USB2.0 H.264/MJPEG/YUV2 Format

Frame Rate: 30fps for 1080p(1920(H)x1080(V))

S-mount M12 Lens Holder

Lenses Type -Standard: FL3.6mm Fixed Focus

-Optional: FL2.1/FL2.8/FL6.0/FL8.0/FL12.0



Application

HD Video Camera / Video Surveillance / WDR Camera

High Dynamic Range Image / Backlighting / Face Recognition

Feature

- ♦ 3M(2048x1536) full HD (High Definition) image sensor AR0331
 - Low illumination and high dynamic range sensor
- ♦ Megapixel M12 lenses optional
 - Standard: FL3.6mm(HxV: 64° x 50°)
 - Optional: FL2.1(90° x 75°)/FL2.8(75° x 60°)/FL6.0(40° x 30°)/FL8.0(30° x 23°)/FL12.0(20° x 16°)
- ♦ H.264/MJPEG compressed format output support
- ♦ UVC support, plug and play for Windows and Linux

Introduction

CM3M30M12Q is a 3MP (2048x1536) USB camera board using 1/3" AR0331 designed for both low light and high dynamic range scene performance. CM3M30M12Q is an ideal solution of WDR(Wide Dynamic Range) camera module for low light and high dynamic range applications like backlighting image and face recognition. It has S-mount (M12) lens holder for enabling the users to choose the lens and any spectral filter as per their requirements. It is a Plug-and-Play camera (UVC compliant) for Windows, Linux.



Specifications

Model	CM3M30M12Q
Sensor	AR0331
Image Size	1/3 inch
Pixel Size	2.2 μm
Image Area	4510 μm x 3380 μm
Image Pixels & Resolution	3M / 2048(H) x 1536(V)
Image Formats	H.264 / MJPEG / YUV2 (YUYV)
Image Transfer Rate	H.264: 640x360@30fps/ 1280x720@30fps/ 1920x1080@30fps MJPEG: 640x480@30fps/ 800x600@30fps/ 1280x720@30fps/ 1280x1024@30fps/ 1920x1080@30fps/ 1600x1200@15fps/ 2048x1536@15fps YUY2: 640x480@30fps/ 800x600@20fps/ 1280x720@10fps/ 1280x1024@5fps/ 1920x1080@5fps/ 1600x1200@5fps/ 2048x1536@ 3fps
Max S/N Ratio	39dB
Dynamic Range	100dB
Sensitivity	1.9V/lux-sec@550nm
Mini illumination	0.05 lux
Shutter Type	Electronic rolling shutter / Frame exposure
Connecting Port	USB2.0 High Speed
OTG Protocol	USB2.0 OTG
Plug & Play	UVC(USB Video Class) Compliant support
Auto Exposure Control (AEC)	Support
Auto White Balance (AWB)	Support
Adjustable Parameters	Brightness, Contrast, Hue, Saturation, Sharpness, Gamma, Gain, White Balance, Backlight Contrast, Exposure
Lens Parameters	Standard: FL3.6mm Optional: FL2.1/FL2.8/6.0/FL8.0/FL12.0mm
Lens Holder	Standard M12 lens holder
Audio Mic	Digital Mic
IR Cut S/W Connector	2P-1.25mm Socket
LED Power Connector	2P-2.0mm Socket
Power Supply	USB BUS POWER 4P-2.0mm Socket
Operating Voltage	DC 5V
Operating Current	200mA ~ 350mA
Operating Temperature	-20 ~ 70°C



Storage Temperature	-20 ~ 85°C
PCBA Dimensions	38x38mm
Weight	~30g
Cable Length	Standard 1m, Optional 2m, 3m, 5m
Operating System Request	Win7/Win8/Win10/Win11 (no SDK) Linux 2.6 or above (SDK support) Android 4.0 or above (SDK support)

Specifications are subject to change without notice.

Sensor Board Drawings

