

YDS-USB1A-GC1054 V1.0

Generic YDS-USB1A-GC1054 V1.0 1MP USB Camera Module Instruction Manual

Model: YDS-USB1A-GC1054 V1.0

INTRODUCTION

The YDS-USB1A-GC1054 V1.0 is a compact 1-megapixel USB camera module designed for various applications requiring high-speed, 720P resolution imaging. This module features a 1/4" GC1054 image sensor and a fixed-focus M12 lens, making it suitable for integration into small devices. It offers plug-and-play functionality via USB 2.0 and is UVC compliant, ensuring broad compatibility with different operating systems.



Image: Side view of the YDS-USB1A-GC1054 V1.0 USB camera module, showing the lens assembly extending from the PCB.

KEY FEATURES

- **Resolution:** 720P (1280 x 720 pixels) with GC1054 sensor.
- **Connectivity:** High-speed USB 2.0, Plug and Play.
- **Output Format:** MJPG.
- **Power:** Low power consumption.
- **Design:** Compact size.
- **Compatibility:** UVC compliant with Windows, Linux, and macOS.
- **Additional Support:** USB OTG (On-The-Go) support.

PACKAGE CONTENTS

Verify that all items are present in your package:

- YDS-USB1A-GC1054 V1.0 Camera Module
- USB Cable (if included in your specific kit)



Image: Angled view of the YDS-USB1A-GC1054 V1.0 USB camera module, showing the lens and the square PCB with mounting holes.

SETUP INSTRUCTIONS

1. **Connect the USB Cable:** If your module came with a separate USB cable, connect one end to the USB port on the camera module.
2. **Connect to Host Device:** Plug the other end of the USB cable into an available USB 2.0 port on your computer (Windows, Linux, macOS) or compatible device (e.g., Raspberry Pi, Android device with OTG support).
3. **Driver Installation:** The camera module is UVC (USB Video Class) compliant. This means that in most modern operating systems (Windows XP SP2/SP3, Vista, 7, 8, 10, 11, Android, Mac OS, Linux), drivers will be installed automatically upon connection. No manual driver installation is typically required.
4. **Verify Connection:** After connecting, the operating system should recognize the camera. You can verify this in your device manager (Windows) or system information (macOS/Linux).

OPERATING INSTRUCTIONS

Once connected and recognized by your system, the camera module can be used with various camera applications.

1. **Select Camera Input:** Open your preferred camera software (e.g., AMCAP, Webcam Viewer, VLC Player, OBS Studio, or built-in camera applications). In the software settings, select the "YDS-USB1A-GC1054 V1.0" or similar name as your video input device.
2. **Adjust Settings:** Most camera applications allow you to adjust video settings such as resolution, brightness, contrast, saturation, white balance, and exposure. The module supports auto-control for saturation, contrast, acutance, white balance, and exposure.
3. **Fixed Focus:** This module features a fixed-focus lens. Manual focus adjustment is not required or possible. Ensure your subject is within the optimal focal range for clear images.
4. **Optimal Performance:** For best performance, ensure adequate lighting in your environment.



Image: Top view of the YDS-USB1A-GC1054 V1.0 USB camera module, showing the lens and the main components on the PCB.

MAINTENANCE

- **Cleaning:** Use a soft, dry cloth to gently clean the lens and the module's surface. Avoid using liquid cleaners or abrasive materials.
- **Storage:** When not in use, store the camera module in a clean, dry, and dust-free environment.
- **Handling:** Handle the module by its edges to avoid touching the lens or electronic components.
- **Temperature:** Operate and store the module within the specified operating temperature range of -30°C to +80°C.

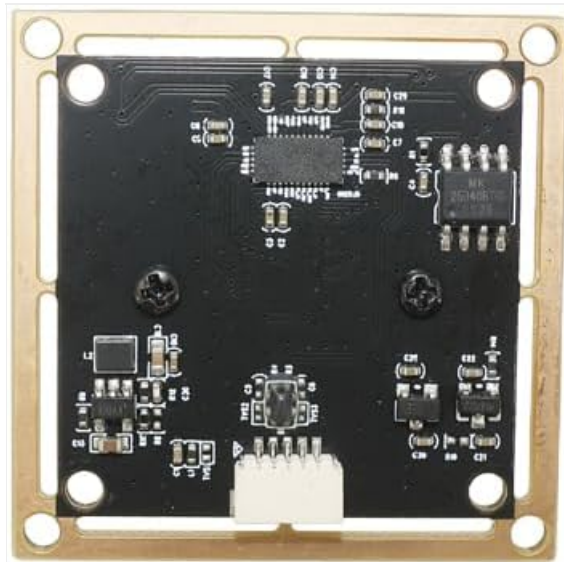


Image: Bottom view of the YDS-USB1A-GC1054 V1.0 USB camera module, displaying the electronic components and connectors on the PCB.

TROUBLESHOOTING

- **Camera Not Detected:**
 - Ensure the USB cable is securely connected to both the module and the host device.
 - Try a different USB port on your computer.
 - Test with a different USB cable if available.
 - Restart your computer or host device.

- Check your device manager (Windows) or system information (macOS/Linux) to see if the device is listed.
- **No Image or Black Screen:**
 - Verify that the correct camera is selected in your camera application settings.
 - Ensure there is sufficient lighting in the environment.
 - Close other applications that might be using the camera.
- **Poor Image Quality:**
 - Clean the lens gently with a soft, dry cloth.
 - Ensure the subject is within the optimal focal range for the fixed-focus lens.
 - Adjust brightness, contrast, and exposure settings in your camera software.
 - Check for adequate lighting.
- **Intermittent Connection:**
 - Ensure the USB connection is stable and not loose.
 - Avoid using excessively long or unshielded USB extension cables.
 - Check for power fluctuations if using a USB hub.

SPECIFICATIONS

Model Number	YDS-USB1A-GC1054 V1.0
Image Sensor	GC1054
Sensor Type	CMOS, 1/4"
Effective Still Resolution	0.9 MP
Video Capture Resolution	1280 x 720 (720P)
Pixel Size	3.0 μm x 3.0 μm
Lens Type	M12 Fixed Focus, 650nm IR Cut
EFL (Effective Focal Length)	3.75 mm
View Angle	79.0° (DFOV), 67.0° (HFOV), 38° (VFOV)
Maximum Aperture	2.15 f
Connectivity	USB 2.0
Output Format	MJPEG
Input Voltage	DC 5V
Working Current	Max 500mA
Operating Temperature	-30°C to +80°C
PCB Size	38.00 x 38.00 mm (1.5" x 1.5")
Lens Dimensions	13.00 x 13.00 x 24.31 mm
System Compatibility	Windows XP (SP2, SP3), Vista, 7, 8, 10, 11, Android, Mac OS, Linux, or OS with UVC Driver (e.g., Raspberry Pi by USB Port)
Software Compatibility	AMCAP, Webcam Viewer, V4L2 Controls, Contacam, VLC Player, MotionEye OS, iSpy, ZoneMinder, Yawcam

WARRANTY AND SUPPORT

This product comes with a **1-year guarantee** as specified by the manufacturer, YDSCAM. For technical support or warranty claims, please contact the seller, YingDeShun Co. Ltd., through the platform where the product was purchased. Ensure you have your purchase details and model number (YDS-USB1A-GC1054 V1.0) available when contacting support.