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ArduCam B0342 Mini Camera Module for NVIDIA Jetson Nano Xavier NX User Guide

**Mini Camera Module for
NVIDIA Jetson Nano /Xavier NX**
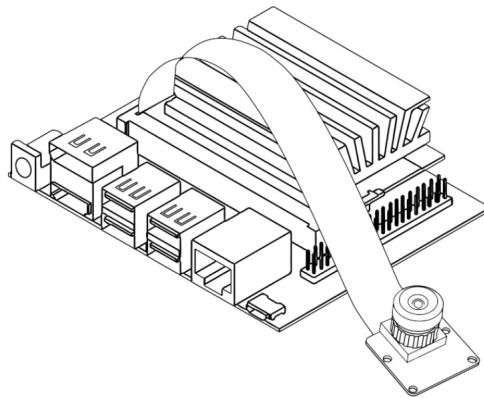
**8MP IMX219 Wide Angle M12 lens
(SKU: B0342)
QUICK START GUIDE**

Contents

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PACKAGE CONTENTS

The following items are included in your package:

- 1pcs Arducam IMX219 camera for NVIDIA Jetson Nano
- 1pcs 1.0mm pitch 15cm 15pin FPC cable
- This Quickstart Guide

SPECS

Image sensor	Sony IMX219
Sensor resolution	3280 H× 2464 V
Still resolution	8 Megapixels
Frame rate	8MP/21fps,1080p/60fps, 720p/120fps
Focus type	Manual focus
Sensor output format	RAW10
Unit cell size	1.12 µm x 1.12 µm
Optical size	1/4″
Focal length	2.05 mm
Interface type	2-Lane MIPI
Horizontal field of view	110 degrees
IR sensitivity	Integral IR filter, visible light only
F.NO	2.0
Board size	25*24mm

MECHANICAL DRAWING

25.00mm
21.00mm
2.00mm
2.00mm
6.98mm
12.50mm
23.86mm
12.50mm
R=4* 1.10mm
15
1
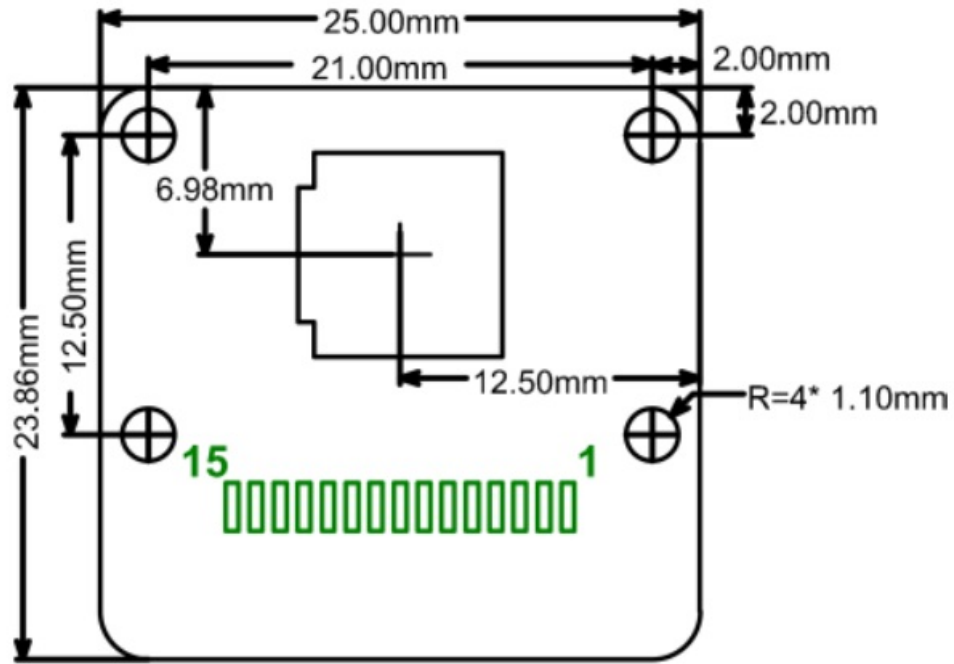
Pin No.	PIN NAME	TYPE	DESCRIPTION
1	DGND	Ground	Power ground
2	MDN0	Output	Pixel Data Lane0 Negative
3	MDP0	Output	Pixel Data Lane0 Positive
4	DGND	Ground	Power ground
5	MDN1	Output	Pixel Data Lane1 Negative
6	MDP1	Output	Pixel Data Lane1Positive
7	DGND	Ground	Power ground
8	MCN	Output	Pix-el Clock Output Form Sensor Negaitive
9	MCP	Output	Pixel Clock Output Form Sensor Positive
10	DGND	Ground	Power ground
11	POWER-EN	Input	Power Enable
12	NC	NC	NC
13	SCL	Input	SCCB serial interface clock input
14	SDA	I/O	SCCB serial interface data I/O
15	VCC	Power	3.3V Power supply

NOTE

This camera is mainly designed for the Jetson Nano/Xavier NX. It can also be used on the Raspberry Pi Compute Module (like CM4, CM3+), but is not compatible with standard Raspberry Pi models (like Raspberry Pi 4B/3B/B+).

HARDWARE CONNECTION

You need to connect the camera module to the Jetson Nano's camera port.

1. Locate the camera port near the barrel power connector, and gently pull up on the plas- 1 tic edge.
2. Push in the camera ribbon, and make sure the silver connectors are facing the heatsinks.Do not bend the flex cable, and make sure it's firmly inserted.
3. Push the plastic connector down while holding the flex cable until the connector is back in place.

SOFTWARE SETTING

Power on Jetson Nano and open the Terminal
(Ctrl+ALT+T)
Test camera with the command:

DISPLAY=:0.0 gst-launch-1.0 nvarguscamerasrc !
'video/x-raw(memory:NVMM), width=3280,
height=2464, format=(string)NV12, framerate= (fraction)20/1' ! nvoverlaysink -e
If the image captured feels reddish, you can down- load a new .isp file to override the old one:
wget **https://www.arducam.com/downloads/Jetson/Camera_overrides.tar.gz**
tar zxvf Camera_overrides.tar.gzsudo cp camera_overrides.isp /var/nvidia/nvcam/settings/
sudo chmod 664 /var/nvidia/nvcam/settings/camera_overrides.isp
sudo chown root:root /var/nvidia/nvcam/settings/camera_overrides.isp

TROUBLESHOOTING

No cameras Available
? Error code
The error generated … execute:521 No cameras available
+Test
Run the command
ls /dev/video*
to check if there is a video device. If not, you will get
? Error code
ls: cannot access '/dev/vi … No such file or directory
No image captured, the system no response
If your test command stops at the following lines, with no response and no image captured:
? Error code
GST_ARGUS: Power…requested_clock_Hz=35358400
GST_ARGUS: Setup Complete…captures for 0 seconds
GST_ARGUS: Starting repeat capture requests.
CONSUMER: Producer has connected; continuing.

TROUBLESHOOTING
Possible Reasons

1. The camera is not correctly connected.

2. The camera module is faulty.

Solutions
Unplug and reconnect the camera cable on both ends, check the connector that connects the sensor module to the camera board, and then restart the Jetson Nano. If the problem still exists, please contact Arducam.

FURTHER INFORMATION

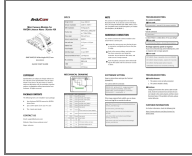For further information, check the following link:
https://www.arducam.com/docs/camera-forjetson-nano/

Documents / Resources

ArduCam B0342 Mini Camera Module for NVIDIA Jetson Nano Xavier NX [pdf] User Guide
B0342, Mini Camera Module for NVIDIA Jetson Nano Xavier NX

References

- **Simplifying embedded vision for all. - Arducam**
- **Jetson Cameras - Arducam**
- **arducam.com/downloads/Jetson/**