Arducam Sony IMX219 Camera Modules

We use two (2) Arducam Sony IMX219 Camera Modules. The NVIDIA Jetson XAVIER NX supports the IMX219 MIPI (Mobile Industry Processor Interface) - CSI (Camera Serial Interface) out-of-the-box.

Script

Run Arducam Sony IMX219 Camera Module installation script
sw/NVIDIA_Jetson_Xavier_NX/Scripts$ bash **install-3-Arducam_Sony_IMX219.sh**

Dockerfile

Arducam Sony IMX219 Camera Module Dockerfile
sw/NVIDIA_Jetson_Xavier_NX/Docker/**Dockerfile-3-Arducam_Sony_IMX219**

v4l-utils

v4l-utils provides linux utilities and libraries to handle video devices.

List all video devices
$: v4l2-ctl --list-devices
vi-output, imx219 9-0010 (platform:15c10000.vi:0):
/dev/video0
vi-output, imx219 10-0010 (platform:15c10000.vi:2):
/dev/video1
PureThermal (fw:v1.3.0) (usb-3610000.xhci-2.1):
/dev/video5
Intel® RealSense(TM) Depth Ca (usb-3610000.xhci-3.2):
/dev/video2
/dev/video3
/dev/video4

Query a video device's information
$: v4l2-ctl -d0 -D
Driver Info (not using libv4l2):
Driver name : tegra-video
Card type : vi-output, imx219 9-0010
Bus info : platform:15c10000.vi:0
Driver version: 4.9.201
Capabilities : 0x84200001
Video Capture

Streaming
Extended Pix Format
Device Capabilities
Device Caps : 0x04200001
Video Capture
Streaming
Extended Pix Format

gstreamer

The Arducam Sony IMX219 camera module works out-of-the-box with gstreamer.

List video devices
$: ls /dev/video*

View Imagery
$: gst-launch-1.0 nvarguscamerasrc **sensor-id=0** ! 'video/x-raw(memory:NVMM),width=3264, height=2464, framerate=21/1, format=NV12' ! nvvidconv flip-method=0 ! 'video/x-raw, width=816, height=616' ! nvvidconv ! nvegltransform ! nveglglessink -e

$: gst-launch-1.0 nvarguscamerasrc **sensor-id=1** ! 'video/x-raw(memory:NVMM),width=3264, height=2464, framerate=21/1, format=NV12' ! nvvidconv flip-method=0 ! 'video/x-raw, width=816, height=616' ! nvvidconv ! nvegltransform ! nveglglessink -e