The Imaging Source Helpdesk

How to set any ROI in Linux on USB 3 camera

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The v4l2 driver can use only the video format and frame rate combinations, which are stored in the USB descriptor of the camera. Therefore, there is a very limited set of resolutions only.

However, if tiscamera's cmake is called wit -DTCAM_ARAVIS_USB_VISION=ON, then the camera can be accessed by USB3Vision instead of v4l2. In order to let tiscamera know, that USB3Vision should be used, you add "-aravis" to the serial number passed to the tcambin. Then smaller ROIs, such as 256x128. Minimum size is 256x4 can be used. The width and height stepping is four or 8, I must admit I do not know currently. So you will have

tcambin serial=12345678-aravis ! video/x-raw, format=GREY8, width=256, heigth=4,framerate=4200/1 ! appsink

or

tcambin serial=12345678-aravis ! video/x-raw, format=GREY8, width=1024, heigth=768,framerate=230/1 ! appsink

The ROI is centered on the sensor by default. The maximum frame rates depend on the sensor and camera.

(I am not sure, whether it is GREY or GRAY. you can test with tcam-ctrl -c 12345678-aravis)

https://www.theimagingsource.com/documentation/tiscamera/building.html?highlight=usb3vision