The Imaging Source Helpdesk

Linux: Pipeline for older DFK 72 camera models

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The older DFK 72 camera models do not have enough memory for the currend UVC firmware. Therefore the older version dmk72uc02_162_uvc.euvc must be written into the camera. Unfortunately, this idendifies the camera as monochrome camera, so the white balance module is not loaded and the debayerer bayer2rgb wont calculate the RGB colors.

Therefore, the tcamsrc instead of tcambin is used and we have to insert the needed modules for auto exposure, white balance and bayer2rgb manually. Also we have to manipulate the image format description in the GStreamer pipeline, so the images are identified as bayer raw instead of GRAY8. This results in a long pipeline:

```
gst-launch-1.0 tcamsrc  ! tcamautoexposure ! video/x-raw,format=GRAY8,width=640,height=480,framerate=15/1 ! capssetter join=false caps="video/x-bayer,format=grbg,width=640,height=480,framerate=15/1" replace=true ! tcamwhitebalance ! bayer2rgb ! videoconvert ! autovideosink
```

The pipeline starts with the tcamsrc, followed by tcamautoexposure for automatic exposure. Then the video format is set, width and height to 640x480 at 15 fps. Of course 2592x1944 at 6 fps can be used too. After that, the capssetter is used to change the image description from GRAY8 to bayer-raw with the pattern on the sensor, which is grbg for the DFK 72. After doing so, the white balance module tcamwhitebalance is inserted. This module works on the bayer raw data. After whitebalance the bayer2rgb for RGB colors debayers the image. The videoconvert and ximagesink are used for displaying on screen.