

LAB 3

1 Target(70%):

Using video output and input on the embedded system.

2 Demonstration:

2.1 Show camera stream on the embedded screen.

2.2 Explain your **code in detail** to TAs.

2.3 Upload your source code to New E3.

2.4 Last date to demo: **Nov. 17th, 2022**.

3 Notes:

3.1 There are no instructions in this lab, you should be able to do this by modifying the work you have done.

3.2 We provide a non-completed source code for you to finish the important part only. However, it is not necessary to use the provided code. You could do this all by yourself.

3.3 The video shows on the screen **should be full screen**. Because the screen ratio is 10:6, **it's ok to leave blank** on two sides.

4 Hints:

4.1 If you are going to use OpenCV, **you may need to add an additional flag into the compilation command** in the last lab.

5 Advanced(30%):

5.1 While reading the video input stream, capture and save the video frame to the SD card when pressing “c” (without “enter” ↵). It should capture and save multiple images after pressing multiples times “c”, saved images should not be overwritten. The image format is not restricted(20%).

5.2 After bootup, start to recording the input stream to a video file automatically. The video format is not restricted(10%).