

L084-SCE2-CM3

demo

- [About](#)
- [Raspberry Pi setup](#)
- [Demo](#)

About

L084 lens with custom IMX477 camera and Raspberry pi computing module demonstration kit is designed for rapid technology evaluation.

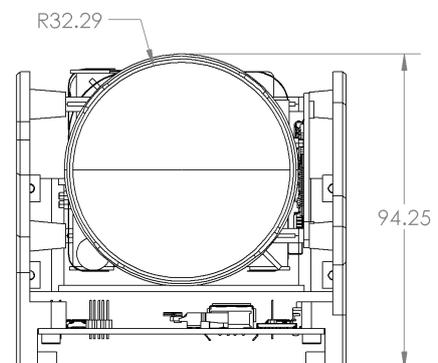
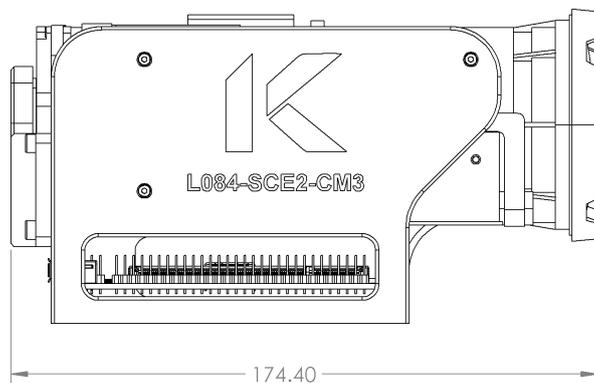
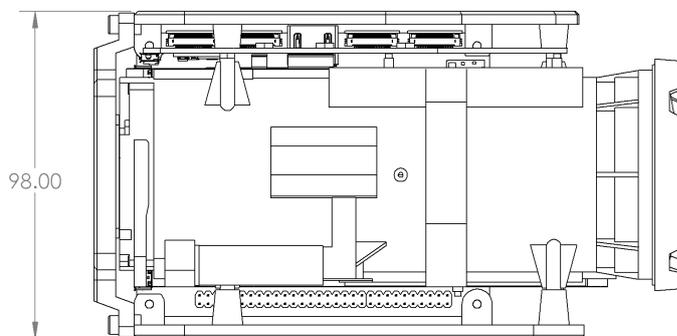
Kit contains:

- L084 lens with controller kit
- IMX477 camera module
- Raspberry Pi CM3 and IO boards
- Mounting brackets to keep all the parts tidy
- HDMI and USB cables

The lens demonstration kit is set for rapid evaluation and additionally requires:

- HDMI monitor for direct video display with minimal latency
- A Windows (Win7 or Win10 x64) computer to run lens control software

Dimensions



Raspberry Pi setup

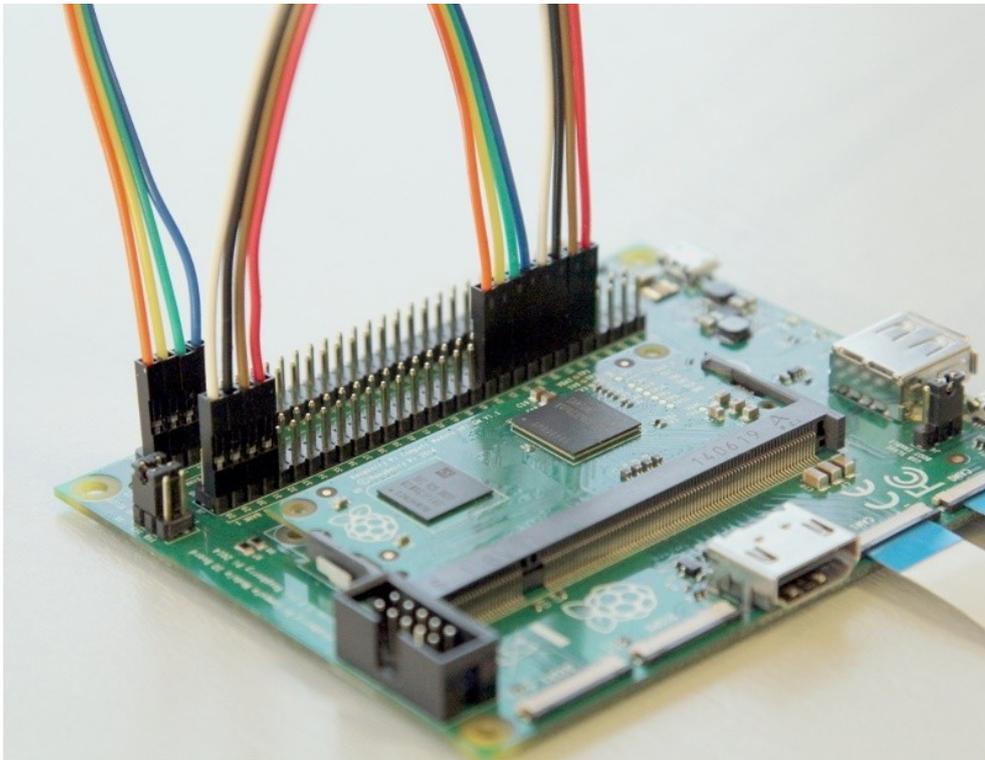
Already done, if you wish to run a demo, skip to the next chapter

SD card preparation:

- Use [Raspberry Pi Imager](#) to flash the SD card with Raspberry Pi Buster OS (Do not use Bullseye OS)
- Within Raspberry, Pi Imager enable SSH, Wifi
- Raspberry pi user/pass: pi/test

OS preparation:

- Optional: use a USB hub to connect the wireless dongle, keyboard, and mouse to Raspberry Pi
- Connect display over an HDMI cable
- Make sure Raspberry pi is connected to the network
- Open terminal (SSH or on Desktop) and update OS: `|sudo apt update| |sudo apt full-upgrade|`
- And reboot `|sudo reboot|`
- Power off Raspberry Pi
- Wire control signals on the IO board like in the diagram below:



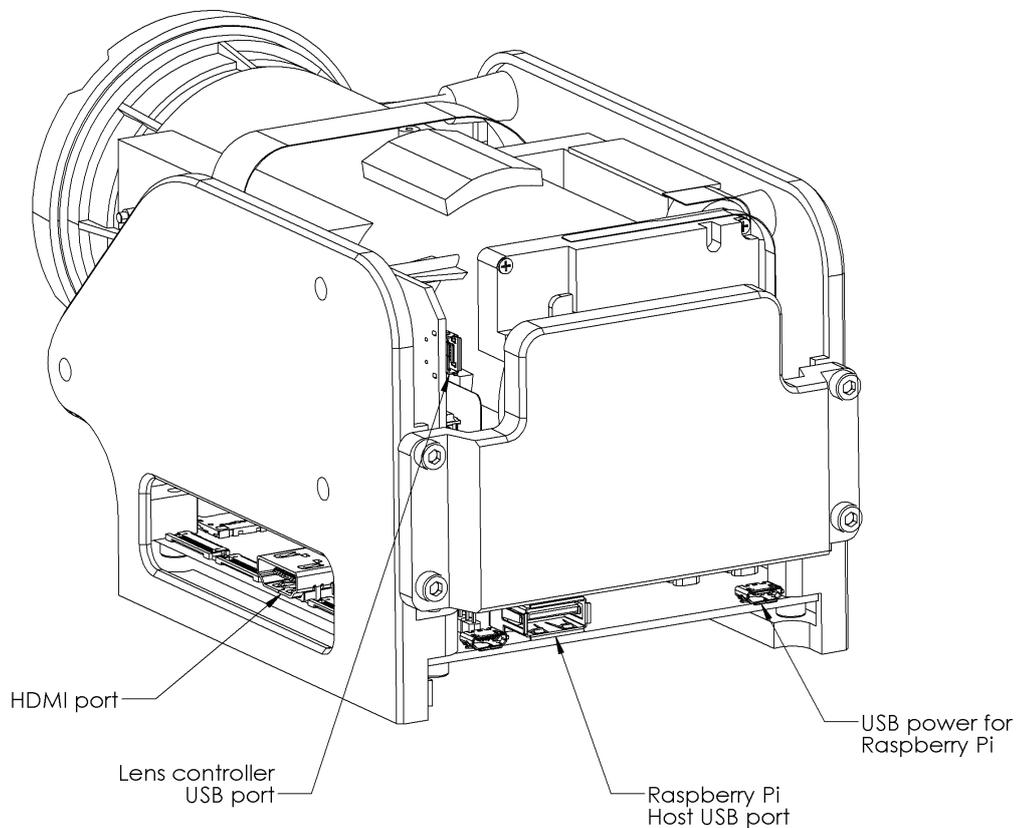
- Connect to the Raspberry Pi terminal
- Run command `sudo raspi-config`
- Select menu Interface options / Camera and select ENABLE
- Do not restart when asked, exit configuration program
- Update blob configuration `sudo wget https://datasheets.raspberrypi.com/cmio/dt-blob-dualcam.bin -O /boot/dt-blob.bin`
- Now reboot with a command `sudo reboot`
- After Raspberry has rebooted, connect to the console and check if the camera is detected `vccencmd get_camera`
- In order to test the video, run command `raspivid -f -k -awb greyworld -mm average -t 0`
- For more convenient behavior, add this command to `/etc/rc.local` - camera will start video on HDMI port right after reboot

Demo

Connectivity

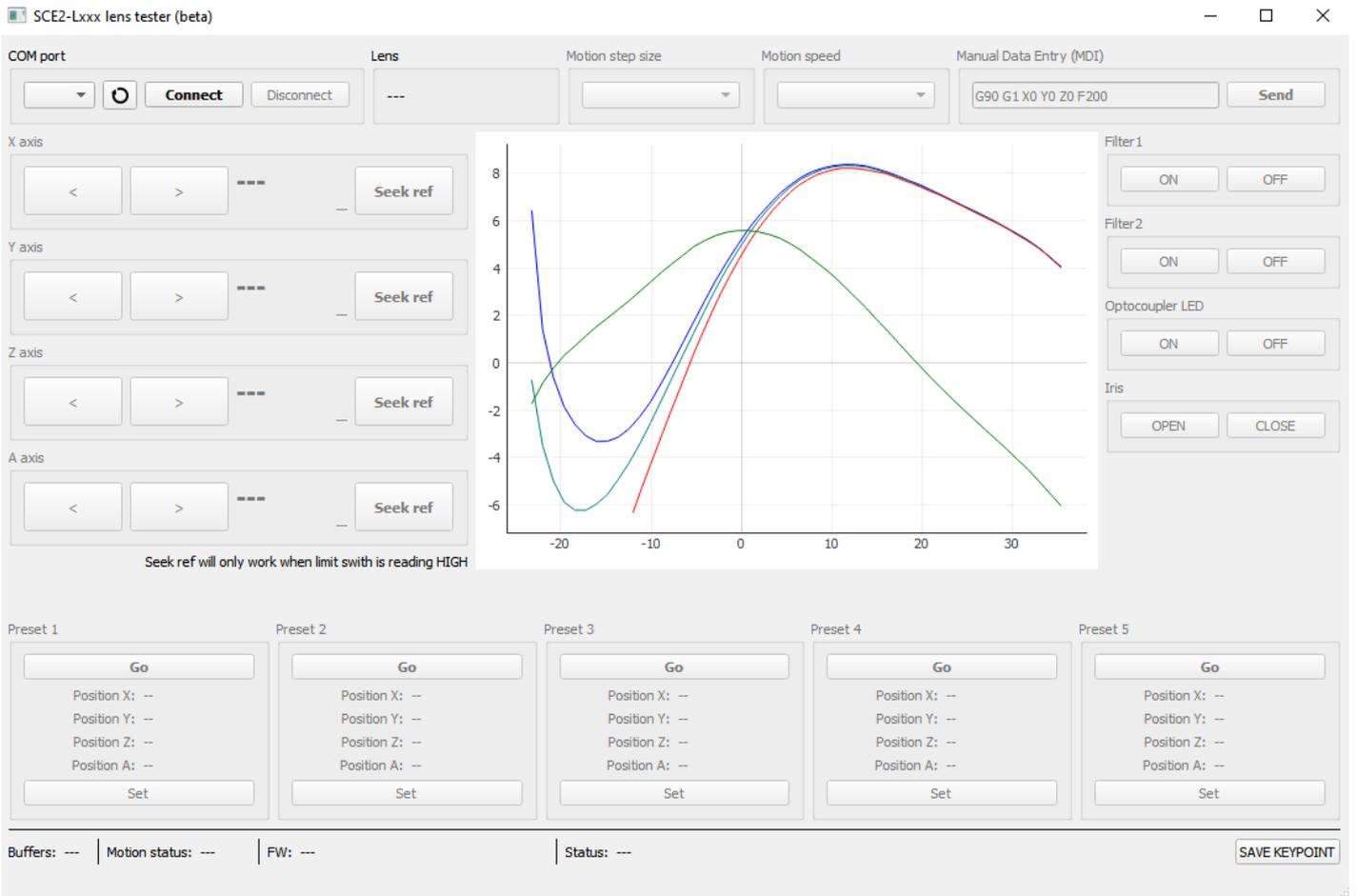
Connect cables between the lens kit and a computer:

- **USB-micro cable #1** - Raspberry Pi power (optionally can be connected to the included wall charger)
- **USB-micro cable #2** - lens controller
- **HDMI** - live camera view



Software

Software is maintained on GitHub. Check the releases section <https://github.com/Kurokesu/SCE2-SDK/releases> for latest the compiled version.



Workflow

1. Connect all the cables (HDMI and both USB) to a computer.
2. After Raspberry Pi boots, it will start displaying a live picture from the camera
3. Download, unzip and start demo software `L084_SCE2_tester.exe`
4. Select com port and press connect, the lens should be identified, and controls enabled
5. Click `Seek ref` for each axis (if the button is not enabled, try moving the axis manually, this is a temporary issue that will be fixed in future releases)
6. Click each preset `Go` button to move the lens to the a different zoom/focus position.
7. Move each axis manually `<` and `>` buttons to change focus and zoom.