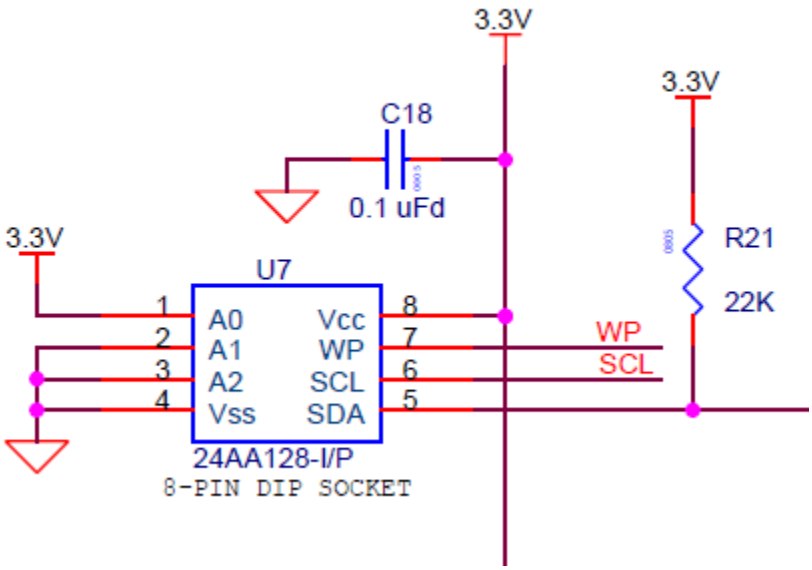
Programming 3D ToF Camera EEPROM for the first time

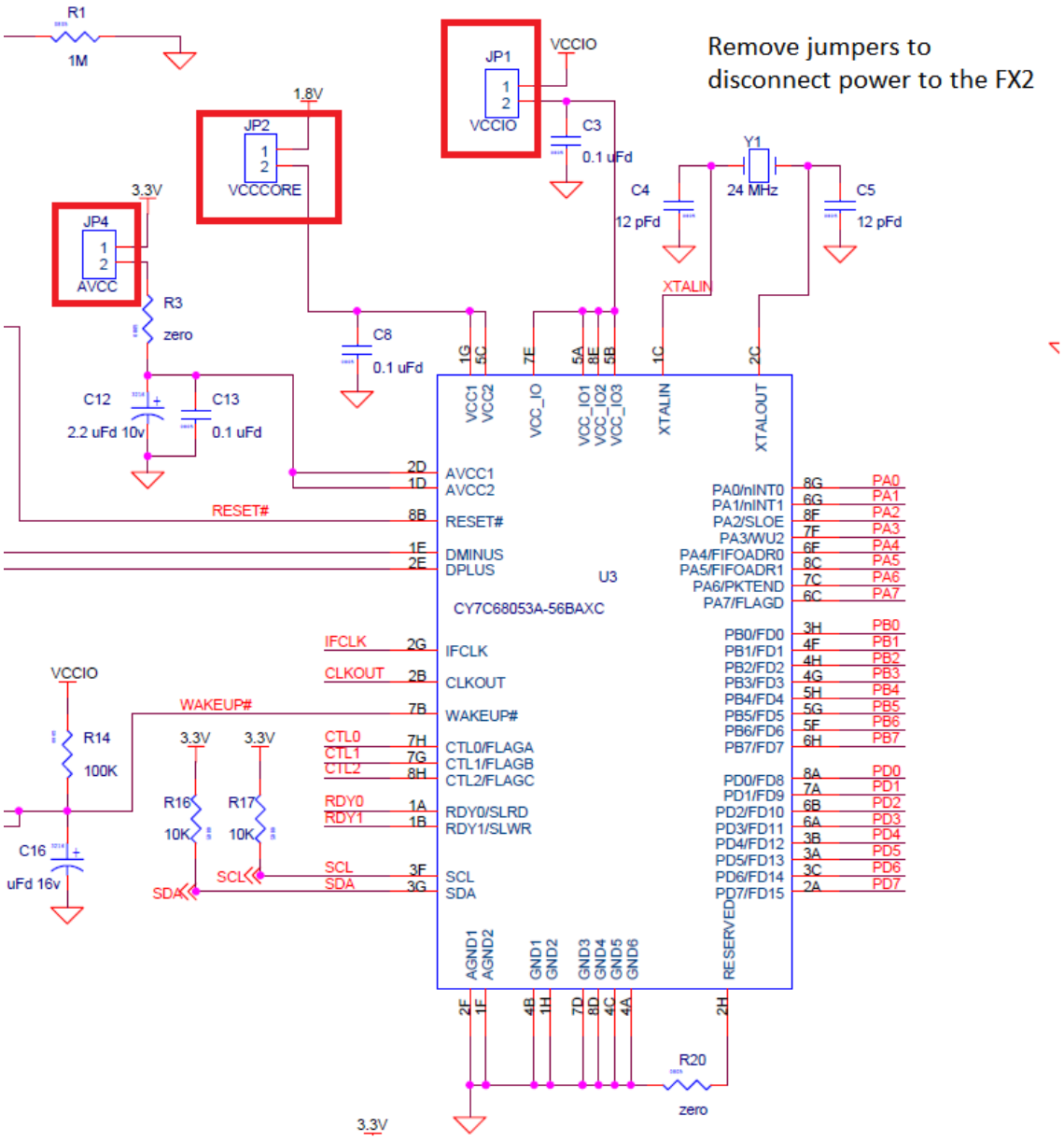
A Cypress Device is needed for programming 3D ToF camera EEPROM for the first time, if it's initially empty. The idea is to load the FX2 (of the camera) with the firmware loaded in a different EEPROM. Once the FX2 is up, it can be used to program the empty EEPROM.

The steps include the following:

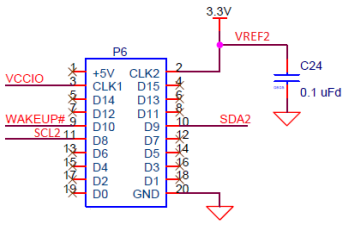
- Take any Cypress board - like the Cypress CY3687 MoBL-USB FX2LP18 development kit (http://www.cypress.com/documentation/development-kitsboards/cy3687-mobl-usb-fx2lp18-development-kit).
  This guide explains EEPROM programming with respect to the Cypress kit.
- Place an empty EEPROM in the large EEPROM slot (U7) and program it with the required firmware (follow instructions from the development kit).



- Once the EEPROM is programmed, disconnect the Cypress FX2 from it. To do so, remove jumpers JP1, JP2 and JP4 from the kit.

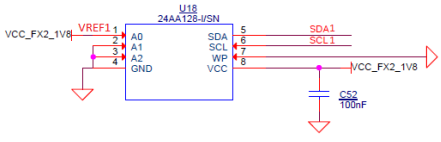


- Connect the clock and data lines from the 3D ToF camera to the clock and data lines to the P6 header in the development kit. If the reference voltage of the 3D ToF camera is different from CY3687 voltage (3.3 V), a level translator will be required:



P6 (CY3687)

I2C Level Translator (PCA9306)



3D ToF Camera EEPROM

This will connect the two EEPROMs in parallel.

- Power up the camera. It will load the FX2 firmware from the U7 EEPROM.
- Once FX2 powers up, remove connections from P6 header
- Program the EEPROM present in the camera with the FX2.