USING GPIO

- Similar 40-pin header to rPI, 3.3V logic levels
- Adafruit Blinka + SeeedStudio Grove support
- Jetson.GPIO Python library
  - Compatible API with rPI.GPIO
  - Docs & samples in `/opt/nvidia/jetson-gpio/`
- sysfs I/O access from `/sys/class/gpio/`
  - **Map GPIO pin** `echo 38 > /sys/class/gpio/export`
  - **Set direction** `echo out > /sys/class/gpio/gpio38/direction`
  - **Bit-banging** `echo 1 > /sys/class/gpio/gpio38/value`
  - **Unmap GPIO** `echo 38 > /sys/class/gpio/unexport`
  - **Query status** `cat /sys/kernel/debug/gpio`
  - https://www.kernel.org/doc/Documentation/gpio/sysfs.txt
- C/C++ programs (and other languages) can use same sysfs files
- I²C – `libi2c` for C/C++ and Python

J41 Expansion Header

sysfs GPIO	Name	Pin	Pin	Name	sysfs GPIO
	3.3V	1	2	5.0V	
	I2C_2_SDA	3	4	5.0V	
	I2C_2_SCL	5	6	GND	
gpio216	AUDIO_MCLK	7	8	UART_2_TX	
	GND	9	10	UART_2_RX	
gpio50	UART_2_RTS	11	12	I2S_4_SCLK	gpio79
gpio14	SPI_2_SCK	13	14	GND	
gpio194	LCD_TE	15	16	SPI_2_CS1	gpio232
	3.3V	17	18	SPI_2_CS0	gpio15
gpio16	SPI_1_MOSI	19	20	GND	
gpio17	SPI_1_MISO	21	22	SPI_2_MISO	gpio13
gpio18	SPI_1_SCK	23	24	SPI_1_CS0	gpio19
	GND	25	26	SPI_1_CS1	gpio20
	I2C_1_SDA	27	28	I2C_1_SCL	
gpio149	CAM_AF_EN	29	30	GND	
gpio200	GPIO_PZ0	31	32	LCD_BL_PWM	gpio168
gpio38	GPIO_PE6	33	34	GND	
gpio76	I2S_4_LRCK	35	36	UART_2_CTS	gpio51
gpio12	SPI_2_MOSI	37	38	I2S_4_SDIN	gpio77
	GND	39	40	I2S_4_SDOUT	gpio78