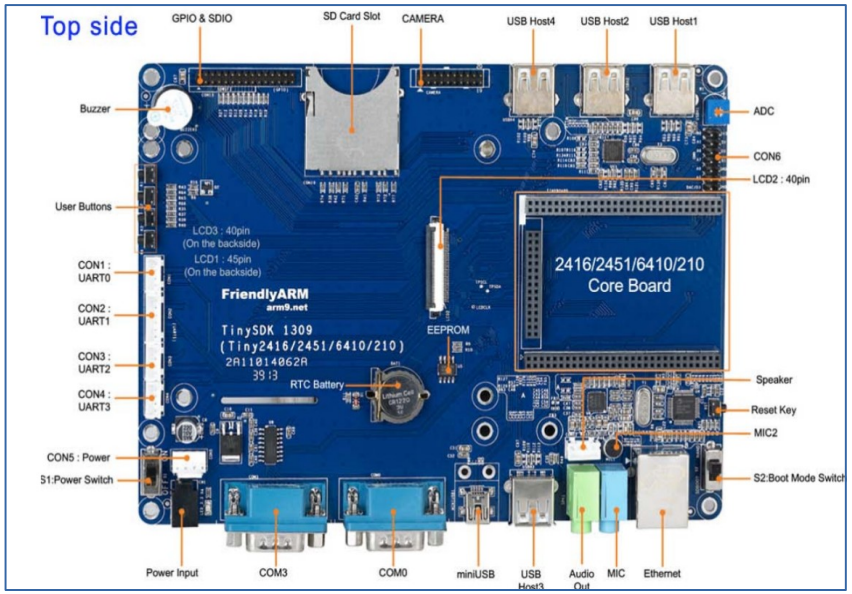
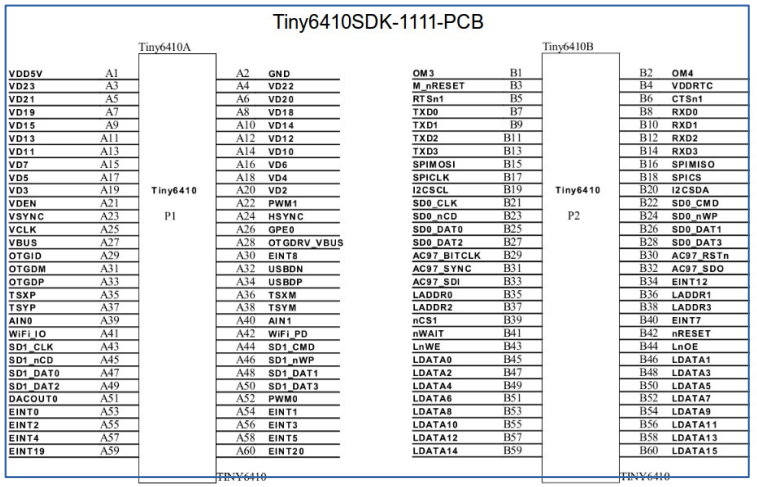
Process for GPIO Testing

Development Kit → Schematic of the development kit →





Connector information

Device driver

User space: user application program, compile and build the executable

Kernel space:
Device driver example code from source distribution

Modify menuconfig script

Compile and build device driver module

Upload the device driver module and user application program to the target platform

$insmod device-driver.ko
Then run the user application program

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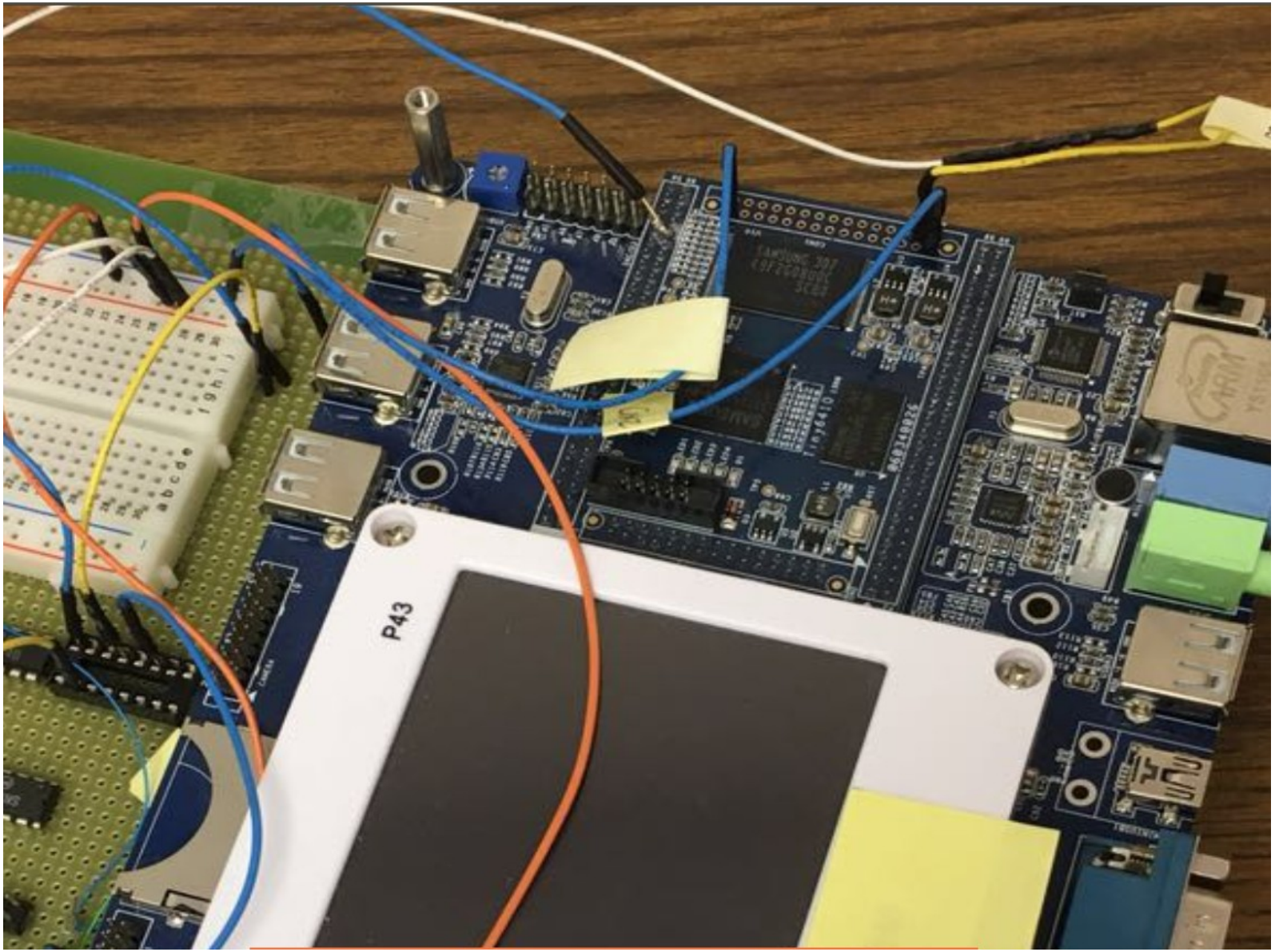
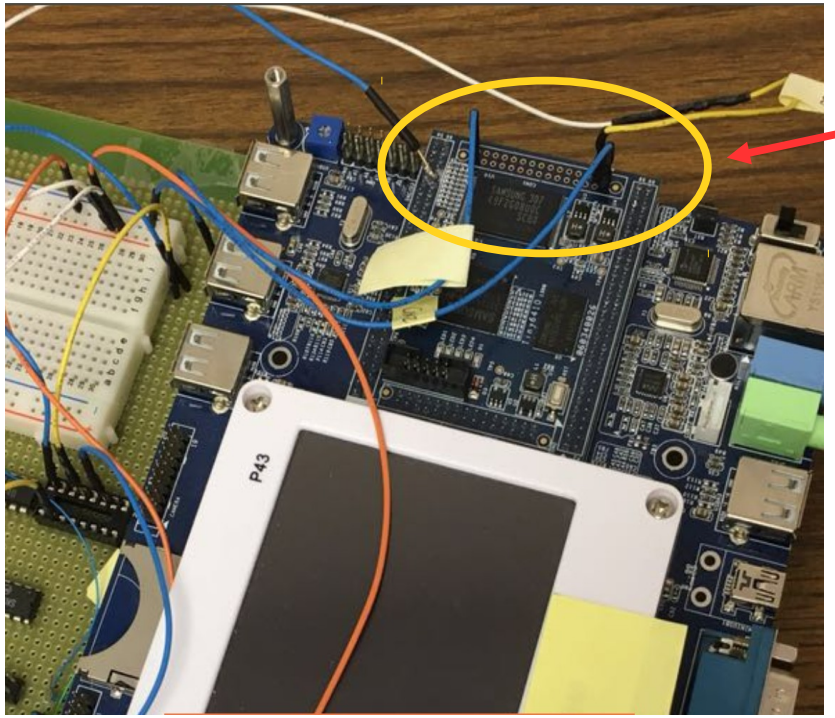
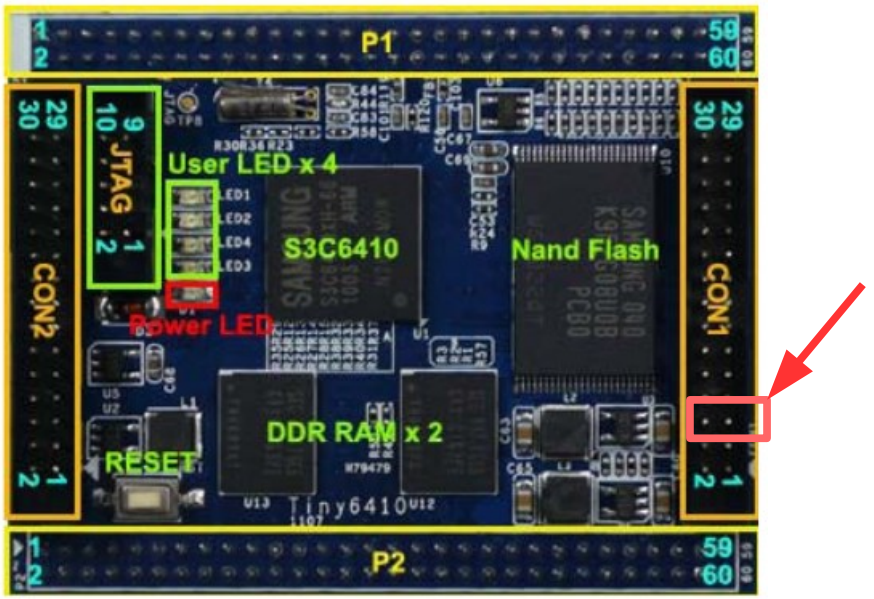
Hardware Pin Connections For HW1



Identify GPP Port From CON1 Connector



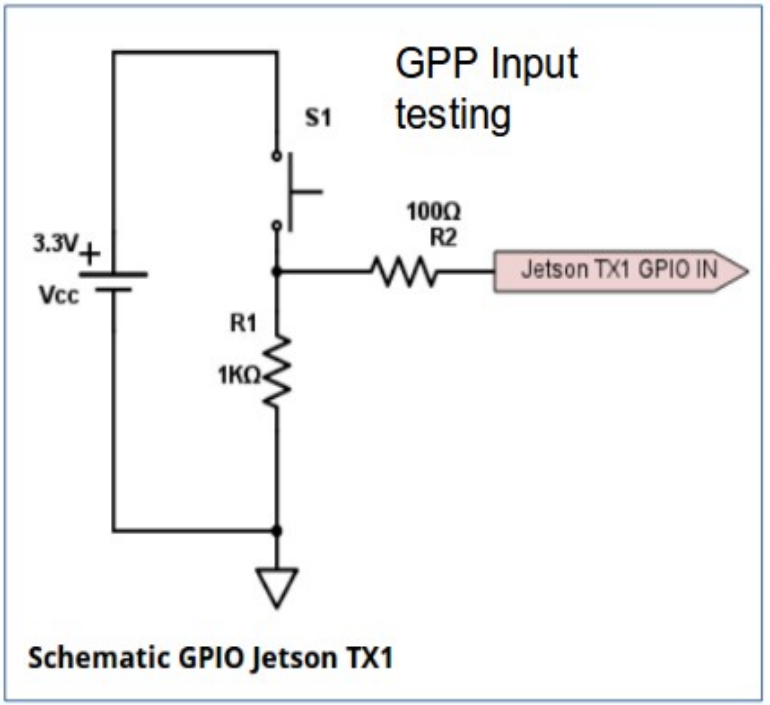
CON1.5	GPE3		CON1.6	GPE4
CON1.7	GPM0		CON1.8	GPM1
CON1.9	GPM2		CON1.10	GPM3
CON1.11	GPM4		CON1.12	GPM5
CON1.13	GPQ1		CON1.14	GPQ2
CON1.15	GPQ3		CON1.16	GPQ4
CON1.17	GPQ5		CON1.18	GPQ6
CON1.19	SPICLK0		CON1.20	SPIMISO0
CON1.21	SPICS0		CON1.22	SPIMOSI0
CON1.23	EINT6		CON1.24	EINT9
CON1.25	EINT11		CON1.26	EINT16
CON1.27	EINT17		CON1.28	AIN2
CON1.29	AIN3		CON1.30	DACOUT1

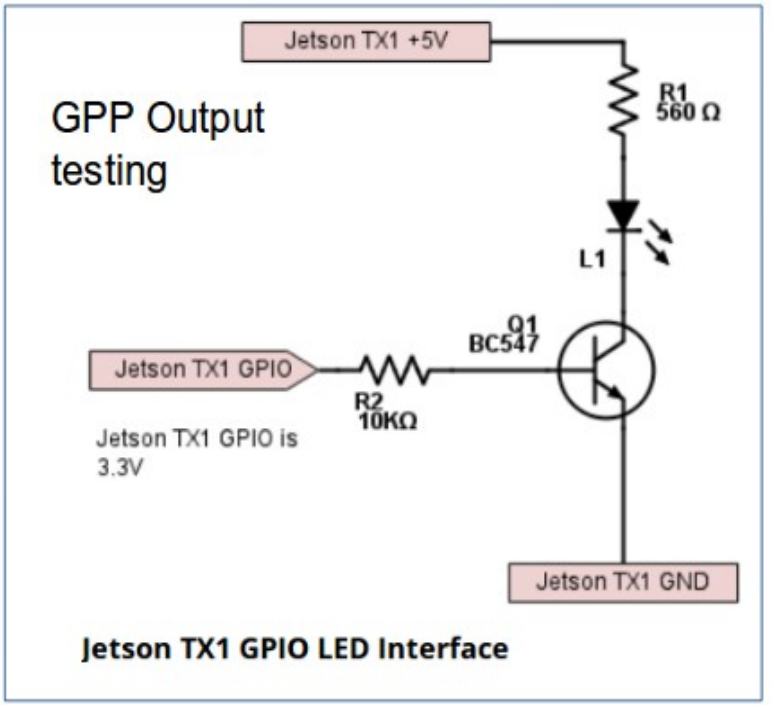


Example:

GPE3/CON1-5	Output
GPE4/CON1-6	Input

GPP Input/Output Testing CKT



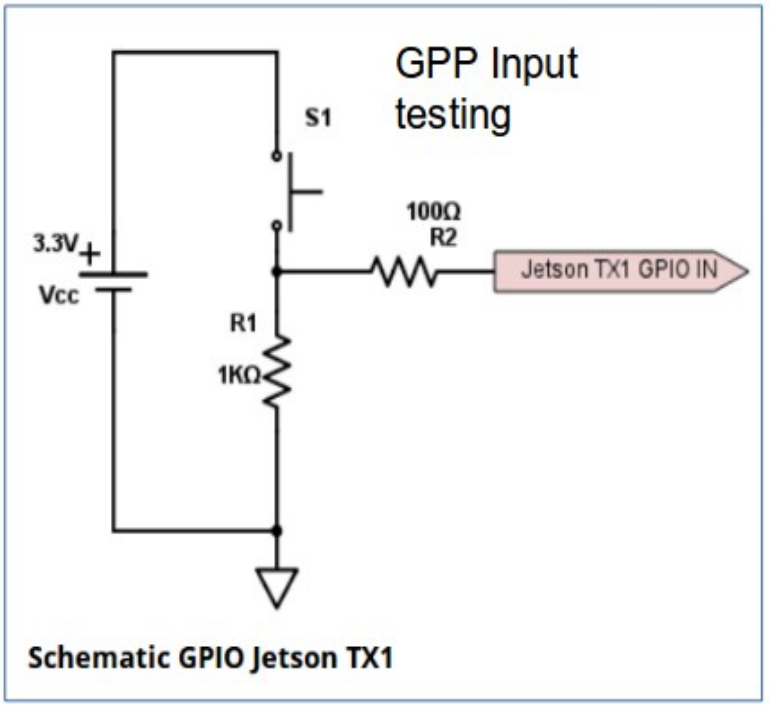


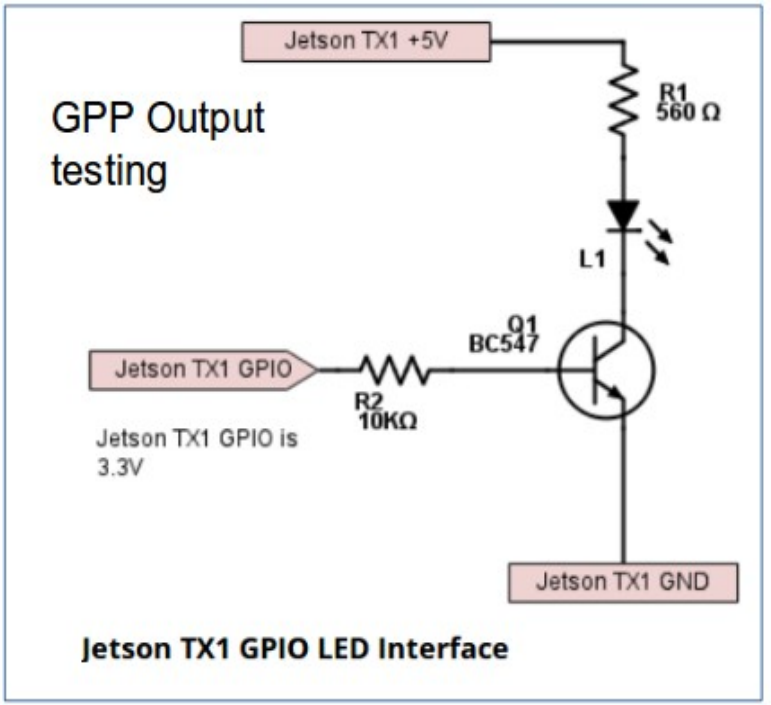
http://www.jetsonhacks.com/2015/12/29/gpio-interfacing-nvidia-jetson-tx1/

Example:

(1) Design the input testing circuit, calculating the resistor R1 and R2;
(2) Modify the output testing circuit by removing transistor, so the circuit only uses LED, then calculate the resistor in serial with the LED.

GPP Input/Output Testing CKT





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