

UART

Requirements

- Putty (windows)
- Uart cable



1. Config the /dtoverlay/config.txt by adb commands.

- Pull the config.txt file for edit
 - adb root
 - adb remount
 - adb pull /dtoverlay/config.txt
- Edit the config.txt on PC to the following status

```
intf:fiq_debugger=off
intf:uart0=on
intf:uart4=on
#intf:i2c6=on
#intf:i2c7=on
#intf:i2s0=on
#intf:sndif=on
intf:spi1=off
#intf:spi5=on
#intf:pwm0=on
#intf:pwm1=on
#intf:pwm3a=on
#intf:test_clkout2=on
```
- Push the file to device
 - adb push config.txt /dtoverlay/
- Reboot the system
 - adb reboot

2. Install the MraaDemo app by the following commands and then open it

- Install apk commands
 - adb install -r MraaDemo_TinkerBoard2.apk
- Open MraaDemo_TinkerBoard2 app
 - Select app icon



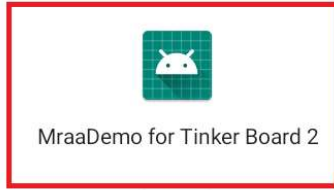
Clock



Contacts



Lightning



MraaDemo for Tinker Board 2



Settings



Sound Recorder

- UART PINS

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MraaDemo for Tinker Board 2

	GPIO number	Function2	Function1	GPIO	Pin#	Pin#	GPIO	Function1	Function2	GPIO number
1	Io Map		VCC3.3V_IO		1	2		VCC5V_SYS		
2	Gpio	73	I2C6_SDA	GPIO2_B1	3	4		VCC5V_SYS		
		74	I2C6_SCL	GPIO2_B2	5	6		GND		
3	I2c	8	TEST_CLKOUT2	GPIO0_B0	7	8	GPIO2_C1	UART0_TXD		81
			GND		9	10	GPIO2_C0	UART0_RXD		80
4	Pwm	83	UART0_RTSN	GPIO2_C3	11	12	GPIO3_D0	I2S0_SCLK		120
		85	SPI5_TX	GPIO2_C5	13	14		GND		
5	Spi	84	SPI5_RX	GPIO2_C4	15	16	GPIO2_C6	SPI5_CLK		86
			VCC3.3V_IO		17	18	GPIO2_C7	SPI5_CSN		87
6	Uart	40	UART4_TXD	SPI1_TXD	GPIO1_B0	19	20		GND	
		39	UART4_RXD	SPI1_RXD	GPIO1_A7	21	22	GPIO3_D4	I2S0_SDO3	124
		41		SPI1_CLK	GPIO1_B1	23	24	GPIO1_B2	SPI1_CSN	42
				GND		25	26	GPIO0_A6	PWM3A_IR	6
		71	I2C7_SDA	GPIO2_A7	27	28	GPIO2_B0	I2C7_SCL		72
		126	I2S0_SDO1	GPIO3_D6	29	30		GND		
		125	I2S0_SDO2	GPIO3_D5	31	32	GPIO4_C2	PWM0		146
		150	PWM1	GPIO4_C6	33	34		GND		
		121	I2S0_FS	GPIO3_D1	35	36	GPIO2_C2	UART0_CTSN		82
		149	SPDIF_TX	GPIO4_C5	37	38	GPIO3_D3	I2S1_SDI0		123
				GND	39	40	GPIO3_D7	I2S1_SDO0		127

- UART Test Screen

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MraaDemo for Tinker Board 2

Please select a serial port: Uart0, 1500000.

Uart0
1500000

The function of serial port is shown here:

Send:

Writing content: eg: Hello

Recv:

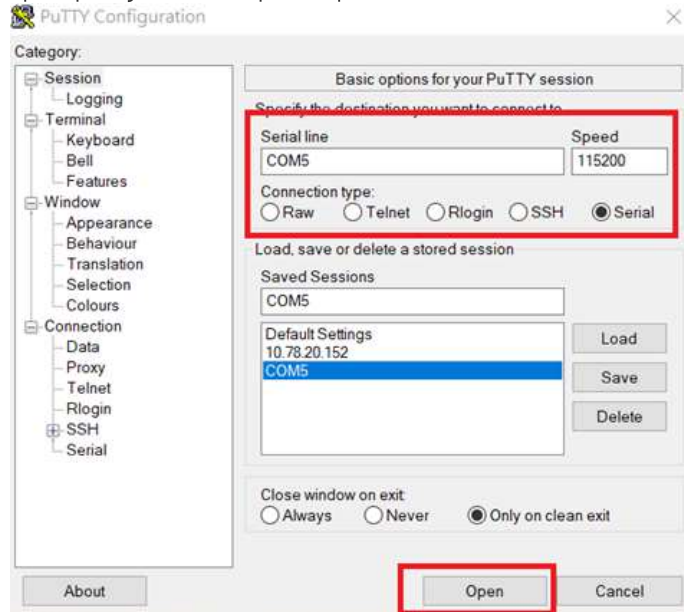
Reading content:

2. Uart Cable setup on Windows 10

a. Connect the cables pin by pin: Reference the following color

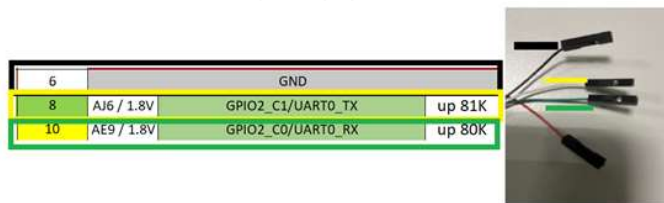


b. Open putty and setup the parameters:

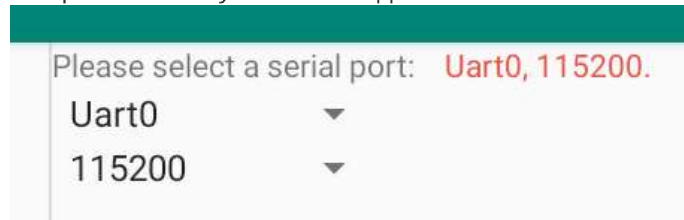


3. Test the Uart0

a. Connect the cables pin by pin: Reference the following color

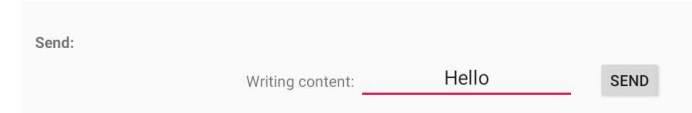


b. Setup the Uart by the test app



c. Test the Uart TX function

- Enter the String and then press the "SEND" button



- Get the String by the putty on Windows PC
Return: The String of putty is same --> **Pass**
The String of putty is different --> **Fail**



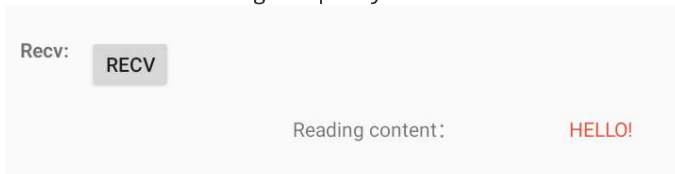
d. Test the Uart RX function

- Enter the "HELLO!" or other word to putty and then input Enter key

- Press the "RECV" button and then get the strings from PC

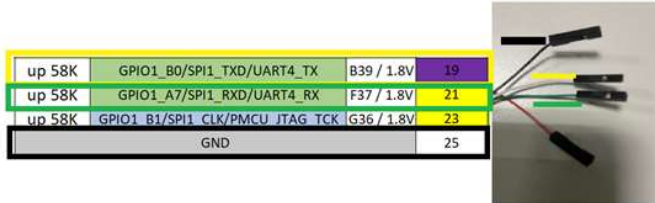
Return: The String of putty is same --> **Pass**

The String of putty is different --> **Fail**

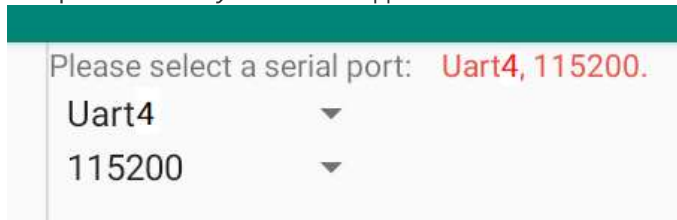


4. Test the Uart4

a. Connect the cables pin by pin: Reference the following color

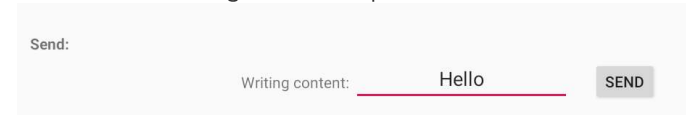


b. Setup the Uart by the test app



c. Test the Uart TX function

- Enter the String and then press the "SEND" button



- Get the String by the putty on Windows PC

Return: The String of putty is same --> **Pass**

The String of putty is different --> **Fail**



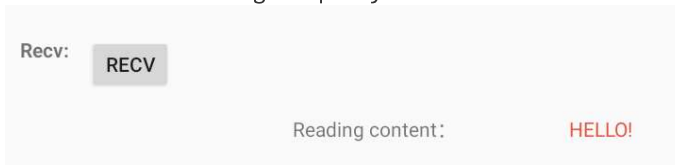
d. Test the Uart RX function

- Enter the "HELLO!" or other word to putty and then input Enter key

- Press the "RECV" button and then get the strings from PC

Return: The String of putty is same --> **Pass**

The String of putty is different --> **Fail**



4. The UART verify completely!