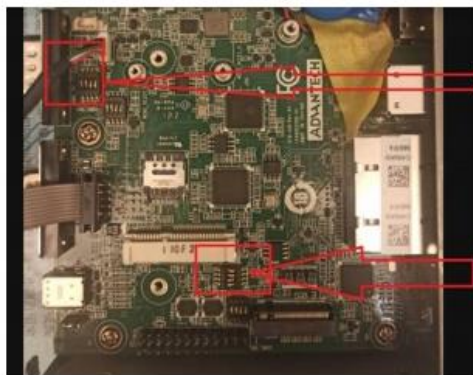




## How to use RS-485

- First, we need change the com port to RS-485 by switch the SW for COM1 and COM2



COM1 的sw1-2-3-4

COM2 的sw1-2-3-4

Table :COM Port / 端 / 埠					
	Mode/Description	Pin1	Pin2	Pin3	Pin4
COM1_SW1 (COM1) COM2_SW1 (COM2) Setting	RS-232	OFF	OFF	OFF	OFF
	RS-422	ON	OFF	ON: ↓ Termination Enable+ OFF: + Termination Disable-	OFF
	RS-485 (Software flow control)	ON	ON	ON: ↓ Termination Enable+ OFF: + Termination Disable-	OFF
	RS-485 (Hardware flow control) Termination Enable	ON	ON	ON: ↓ Termination Enable+ OFF: + Termination Disable-	ON: Receiver+ OFF: Transmitter

## How to use RS-485

- First, we need to enable the RTS Pin by following command:
  - \$ sudo -s
  - # echo 478 > /sys/class/gpio/export
  - # echo 428 > /sys/class/gpio/export

RTS Pin Number	AIR-020X JP4.X	AIR-020T JP4.X	AIR-020N JP4.X	AIR-020X JP 5.1
COM1	478	474	27	482(PX.06)
COM2	428	284	50	447(PR.04)

## How to use RS-485

- Control direction by RTS Pin by following command:
  - # echo **out** > /sys/class/gpio/<COM1 Number>/ direction
  - # echo **out** > /sys/class/gpio/<COM2 Number>/ direction
- Set the COM ports speed:
  - # stty -F /dev/ttyTHS1 speed 115200 -crtcts
  - # stty -F /dev/ttyTHS0 speed 115200 -crtcts
- Note: <COM Number> need to modify to gpio478 or PX.06 for setting COM.

RTS Pin Number	AIR-020X JP4.X	AIR-020T JP4.X	AIR-020N JP4.X	AIR-020X JP 5.1
COM1	478	474	27	482(PX.06)
COM2	428	284	50	447(PR.04)

## How to use RS-485

- COM2 Receive data:
  - echo 0 > /sys/class/gpio/gpio428/value
  - # cat /dev/ttyTHS1
- COM1 Transmit data:
  - # echo 1 > /sys/class/gpio/gpio478/value
  - # echo “hello” > /dev/ttyTHS0

RTS Pin Number	AIR-020X JP4.X	AIR-020T JP4.X	AIR-020N JP4.X	AIR-020X JP 5.1
COM1	478	474	27	482(PX.06)
COM2	428	284	50	447(PR.04)

# How to use RS-485

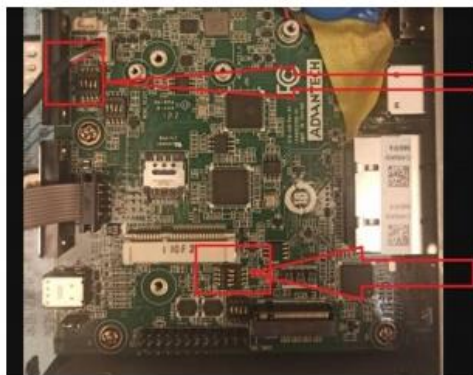
```
Terminal
root@eiotae-desktop: ~
eiotae@eiotae-desktop:~$ sudo -s
[sudo] password for eiotae:
root@eiotae-desktop:~# echo 478 > /sys/class/gpio/export
root@eiotae-desktop:~# echo out > /sys/class/gpio/gpio478/direction
root@eiotae-desktop:~# stty -F /dev/ttyTHS0 speed 115200 -crtcts
115200
root@eiotae-desktop:~# stty -F /dev/ttyTHS0 speed 115200 -crtcts
115200
root@eiotae-desktop:~# echo 1 > /sys/class/gpio/gpio478/value
root@eiotae-desktop:~# echo hello > /dev/ttyTHS0
root@eiotae-desktop:~# echo 0 > /sys/class/gpio/gpio478/value
root@eiotae-desktop:~# █

root@eiotae-desktop: ~
eiotae@eiotae-desktop:~$ sudo -s
[sudo] password for eiotae:
root@eiotae-desktop:~# echo 428 > /sys/class/gpio/export
root@eiotae-desktop:~# echo in > /sys/class/gpio/gpio428/direction
root@eiotae-desktop:~# stty -F /dev/ttyTHS1 speed 115200 -crtcts
9600
root@eiotae-desktop:~# stty -F /dev/ttyTHS1 speed 115200 -crtcts
115200
root@eiotae-desktop:~# cat /dev/ttyTHS1
hello
█
```

RTS Pin Number	AIR-020X JP4.X	AIR-020T JP4.X	AIR-020N JP4.X	AIR-020X JP 5.1
COM1	478	474	27	482(PX.06)
COM2	428	284	50	447(PR.04)

## How to use RS-232/422

- First, we need change the com port to RS-232/422 by switch the SW for COM1 and COM2



COM1 的sw1-2-3-4

COM2 的sw1-2-3-4

COM1_SW1 (COM1) COM2_SW1 (COM2) Setting	Mode/Description	Pin1	Pin2	Pin3	Pin4
	RS-232	OFF	OFF	OFF	OFF
	RS-422	ON	OFF	ON: ↓ Termination Enable+ OFF: + Termination Disable+	OFF
	RS-485 (Software flow control)	ON	ON	ON: + Termination Enable+ OFF: + Termination Disable+	OFF
	RS-485 (Hardware flow control) Termination Enable	ON	ON	ON: ↓ Termination Enable+ OFF: + Termination Disable+	ON: Receiver+ OFF: Transmitter

# How to use RS-232/422

- First, customer need to change the switch to RS-232/422, then use the following command:
  - \$ sudo -s
  - # stty -F /dev/ttyTHS<UARD\_NO> speed 115200
- Receive data:
  - # cat /dev/ttyTHS<UARD\_NO>
- Transmit data:
  - # echo "hello" > /dev/ttyTHS<UARD\_NO>



# Contact Window and File Link

- EIoT AE: Jackhsuan.liao Ext. 9319
- E-mail: [Jackhsuan.liao@advantech.com.tw](mailto:Jackhsuan.liao@advantech.com.tw)

