

# VertexCom Wi-SUN VC7300 AT Command Guide

AT Command Guide



Reported  
FAE Dept.

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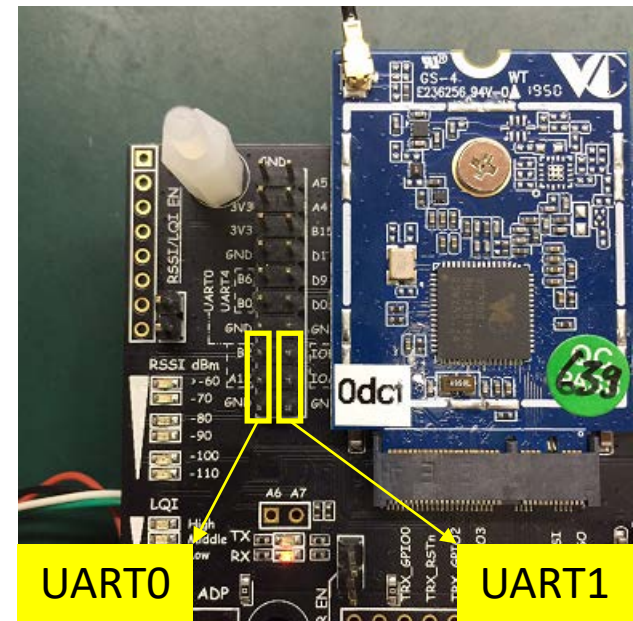
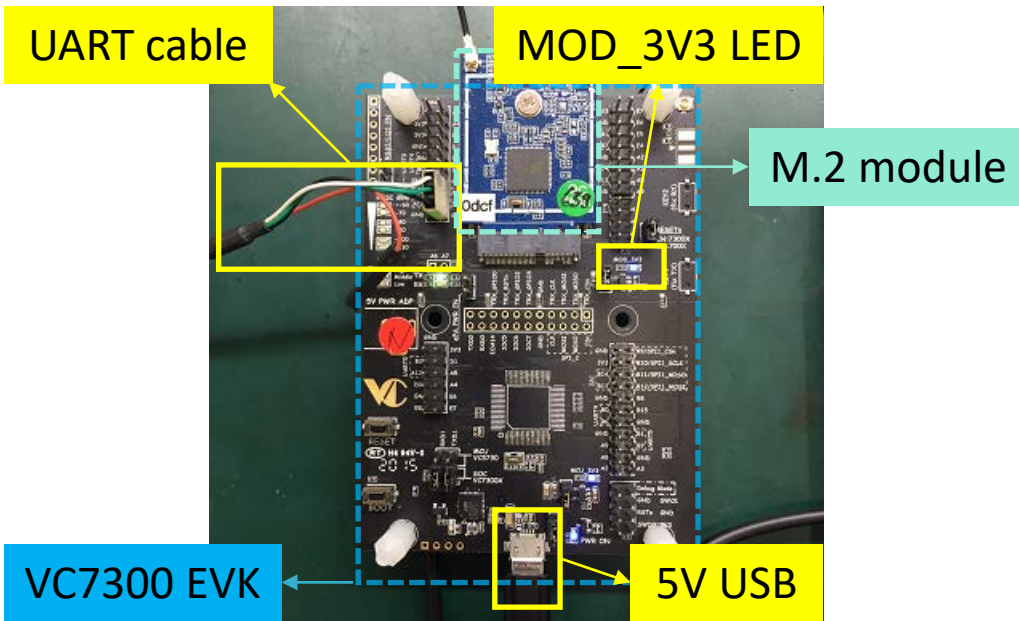




- VC7300 EVK APP UART 設定 P3 ~ P6
- AT Command 傳送字串範例 P7 ~ P9
- 附錄 P10



1. 將VC7300 EVK接上5V USB電源，MOD\_3V3 LED亮起，表示M.2 module已供給3.3V。
2. 將UART cable (USB to UART/TTL)分別接上VC7300 EVK的UART1和PC。





3. 執行Tera Term，輸入uart，確認APP UART選項是否有支援AT Command。
4. 若無支援AT Command，請先在SDK中compile一版Enable AT Command的image，再將image燒錄到VC7300 EVK。  
(詳情請參閱Vertexcom Wi-SUN SDK Installation Guide)

```
COM9:115200baud - Tera Term VT
File Edit Setup Control Window Help
vc# uart
  module name
  DLMS
  TIMER
  v SLIP
```



- 更新完image後，執行Tera Term，輸入uart，APP UART會多一個ATCMD的選項，表示此image支援AT Command。
- 確認VC7300 EVK Root端和Node端已自動組網成功，在Tera Term輸入rpl，確認IPV6位址。

```
COM9:115200baud - Tera Term VT
File Edit Setup Control Window Help

vc# uart
  module name
  ATCMD
  DLMS
  TIMER
  V SLIP
```

```
COM9:115200baud - Tera Term VT
File Edit Setup Control Window Help

rpl
--- Network status ---
-- MAC addresses:
-- ff:ff:ff:ff:f4:5a:0d:cf
-- Unicast IPv6 addresses:
-- 2001:db8::3
-- fe80::fdff:ffff:f45a:dce
-- Multicast IPv6 addresses:
-- ff02::1:ff00:3
-- ff02::1a
-- ff03::fc
-- ff03::2
-- ff02::2
-- ff03::1
-- ff02::1
-- ff02::1:ff5a:dce
-- IPv6 prefix:
-- fe80::/64
-- Default route:
-- fe80::fdff:ffff:f45a:dce (lifetime: 0 seconds)
[VC+RPN: 0 in total Routing link]
-----
```

Node

```
COM12:115200baud - Tera Term VT
File Edit Setup Control Window Help

rpl
--- Network status ---
-- MAC addresses:
-- ff:ff:ff:ff:f4:5a:0d:ce
-- Unicast IPv6 addresses:
-- 2001:db8::1
-- fe80::fdff:ffff:f45a:dce
-- Multicast IPv6 addresses:
-- ff02::1:ff00:1
-- ff02::1a
-- ff03::fc
-- ff03::2
-- ff02::2
-- ff03::1
-- ff02::1
-- ff02::1:ff5a:dce
-- IPv6 prefix:
-- fe80::/64
-- Default route:
-- None
[VC+RPN: 2 in total Routing link]
[VC+RPL:[0001] => DODAG root (lifetime: 4294967295 seconds)]
[VC+RPL:[0003] => [0001] (lifetime: 14355 seconds)]
-----
```

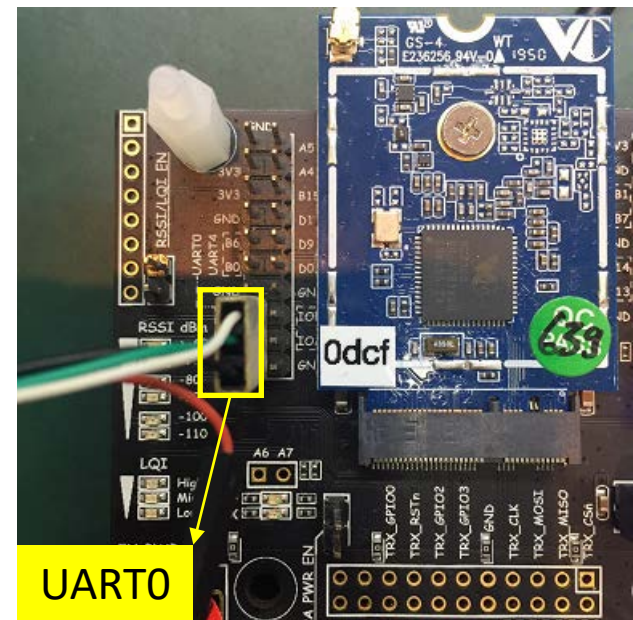
Root

7. 輸入 `uart ATCMD`，將模式切換為 AT Command mode，再輸入 `uart`，確認 ATCMD 已被勾選，表示成功切換。
8. 將 VC7300 EVK 端的 UART cable 由 UART1 移除，改成接到 UART0 (APP UART)。

```
COM9:115200baud - Tera Term VT
File Edit Setup Control Window Help

vc# uart
  module name
  ATCMD
  DLMS
  TIMER
  V SLIP

vc# uart ATCMD
uart
  module name
  V ATCMD
  DLMS
  TIMER
  SLIP
```





1. 將Root定義為Listen device，Node定義為Remote device。
2. 在Listen和Remote端輸入**AT+USOCK=REG**指令，並得到個別的socket fd值。

(在ATCMD mode中，看不見輸入的指令)

The image shows two side-by-side terminal windows from Tera Term VT. The left window is titled 'COM9:115200baud - Tera Term VT' and is labeled 'Remote device (Node)'. The right window is titled 'COM12:115200baud - Tera Term VT' and is labeled 'Listen device (Root)'. Both windows show a menu of AT commands: 'uart', 'module name', 'V ATCMD', 'DLMS', 'TIMER', and 'SLIP'. In both windows, the command '+USOCK:0' has been entered and is highlighted with a yellow box. Below the command, the response 'OK' is visible. A yellow arrow points from the '+USOCK:0' command in the left window to the text 'socket fd', and another yellow arrow points from the '+USOCK:0' command in the right window to the text 'socket fd'.



3. 在Listen端輸入`AT+USOCK=BIND,0,5678`，定義Listen端的listen port為5678，成功則回傳OK。
4. 在Remote端輸入`AT+USOCK=CONNECT,0,5678,2001:db8::1`，定義Listen端的listen port為5678，以及listen device的IPV6 address，成功則回傳OK。

```
COM12:115200baud - Tera Term VT
File Edit Setup Control Window Help
Listen device (Root)
module name
V ATCMD
DLMS
TIMER
SLIP
uart
module name
V ATCMD
DLMS
TIMER
SLIP
uart
module name
V ATCMD
DLMS
TIMER
SLIP
+USOCK:0
OK
```

```
COM9:115200baud - Tera Term VT
File Edit Setup Control Window Help
Remote device (Node)
module name
V ATCMD
DLMS
TIMER
SLIP
uart
module name
V ATCMD
DLMS
TIMER
SLIP
uart
module name
V ATCMD
DLMS
TIMER
SLIP
+USOCK:1
OK
```





5. 在Remote端輸入 `AT+USOCK=SEND,0,,,4,ABCD`，傳一個長度為4的“BASE64格式的内文”給step4建立的Listen端，成功則回傳OK。(長度可為4, 8, 12)
6. Listen device可得到 `+USOCK:RECV,0,1028,2001:0db8::0003,4,ABCD`。

```
COM9:115200baud - Tera Term VT
File Edit Setup Control Window Help
Remote device (Node)
TIMER
SLIP
uart
module name
V ATCMD
DLMS
TIMER
SLIP
uart
module name
V ATCMD
DLMS
TIMER
SLIP
+USOCK:0
OK
OK
+USOCK:3
OK
```

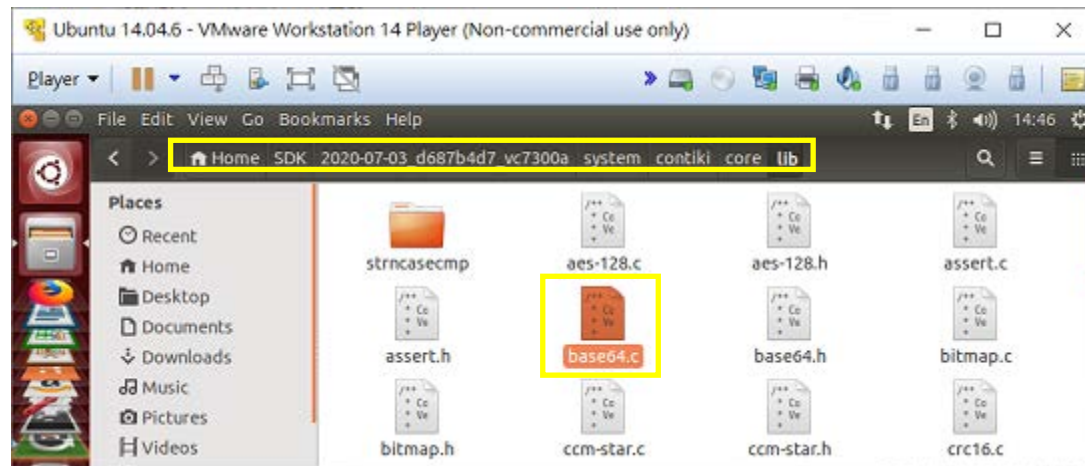
```
COM12:115200baud - Tera Term VT
File Edit Setup Control Window Help
Listen device (Root)
DLMS
TIMER
SLIP
uart
module name
V ATCMD
DLMS
TIMER
SLIP
uart
module name
V ATCMD
DLMS
TIMER
SLIP
+USOCK:0
OK
OK
+USOCK:RECV,0,1028,2001:0db8::0003,4,ABCD
```

- ◆ 關於BASE64的編碼格式請參考

`system/contiki/core/lib/base64.c`<sup>1</sup>

- ◆ 完整版AT Command請參考

`Vertexcom AT Command_20200916_V02.pdf`<sup>2</sup>



<sup>1</sup> base64.c位於Ubuntu SDK中

<sup>2</sup> 用戶可於鼎通e-Portal下載



*Thank You!*

