

VC7300 Hopping Channel Guide

VC7300 Hopping Channel Guide



Reported
FAE Dept.

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- 使用者自定義跳頻
 - Node
 - BR
- 範例
- 備註
- 遮蔽頻段跳頻

1. 輸入 `cfg wisun chPlan 1`
2. 輸入更改 `ch0`, `spacing`, `chNum`
3. 範例:
起始 839 MHz, 結束 847 MHz

```
cfg wisun chPlan 1
cfg wisun ch0 839000 (起始頻段839MHz)
cfg wisun spacing 200 (間隔頻率200KHz)
cfg wisun chNum 40 ((847-839)/0.2=40)
```

```
COM20 - Tera Term VT
文件(F) 編輯(E) 設定(S) 控制(O) 視窗(W) 幫助(H)
cfg wisun
wisun_uart = 200
wisun.chPlan = 0
wisun.chPlan = 2
wisun_control = 1
wisun.ch0 = 902200
wisun.spacing = 200
wisun.fixed = 0
wisun.chNum = 129
wisun.routing_method = 0x1
wisun.NetName = [VertexCom]
wisun.eapol_ready = 0
wisun.rd = 1
wisun.oc = 1
wisun.exNum = 2
wisun.exNumStart1 = 0
wisun.exNumEnd1 = 89
wisun.exNumStart2 = 114
wisun.exNumEnd2 = 129
wisun.mask = 0xa 0x1b 0x2c 0x3d 0x0 0x0 0x4e 0x5f 0x0 0x0 0x0 0x0
x0 0x0 0x0 0x0 0x0
```

```
COM20 - Tera Term VT
文件(F) 編輯(E) 設定(S) 控制(O) 視窗(W) 幫助(H)
cfg wisun
wisun_uart = 200
wisun.chPlan = 1
wisun.chPlan = 2
wisun_control = 0
wisun.ch0 = 839000
wisun.spacing = 200
wisun.fixed = 0
wisun.chNum = 40
wisun.routing_method = 0x1
wisun.NetName = [VertexCom]
wisun.eapol_ready = 0
wisun.rd = 1
wisun.oc = 1
wisun.exNum = 2
wisun.exNumStart1 = 10
wisun.exNumEnd1 = 20
wisun.exNumStart2 = 40
wisun.exNumEnd2 = 50
wisun.mask = 0xa 0x1b 0x2c 0x3d 0x0 0x0 0x4e 0x5f 0x0 0x0 0x0 0x0
x0 0x0 0x0 0x0 0x0
```

▲ 使用者自定義跳頻 - BR

1. 輸入 `cfg wisun chPlan 1`
2. 輸入 `cfg broadcast chPlan 1`
3. 輸入更改 `wisun & broadcast` 的 `ch0`, `spacing`, `chNum`

```
cfg wisun chPlan 1
cfg broadcast chPlan 1
cfg wisun ch0 839000
cfg broadcast ch0 839000
cfg wisun spacing 200
cfg broadcast spacing 200
cfg wisun chNum 40
cfg broadcast chNum 40
```

```
COM10 - Tera Term VT
文件(F) 編輯(E) 設定(S) 控制(O) 視窗(W) 幫助(H)

wisun_broadcast.BI = 1000
wisun_broadcast.BDI = 250
wisun_broadcast.BI_Slot = 0
wisun_broadcast.BI_Protocol = 287
wisun_broadcast.chPlan = 0
wisun_broadcast.chPlan = 2
wisun_broadcast.control = 0
wisun_broadcast.ch0 = 902200
wisun_broadcast.spacing = 200
wisun_broadcast.chNum = 129
wisun_broadcast.id = 1
wisun_broadcast.oc = 1
wisun_broadcast.broadSchedId = 0x34
wisun_broadcast.routing_cost = 0x0
wisun_broadcast.exNum = 2
wisun_broadcast.exNumStart1 = 10
wisun_broadcast.exNumEnd1 = 20
wisun_broadcast.exNumStart2 = 50
wisun_broadcast.exNumEnd2 = 60
wisun_broadcast.mask = 0xa 0x1b 0x2c 0x3d 0x0 0x0 0x4e 0x5f 0x0
0 0x0 0x0 0x0 0x0 0x0 0x0 0x0
wisun_broadcast.pan_size = 0
wisun_broadcast.pc_ready = 1
```

```
COM10 - Tera Term VT
文件(F) 編輯(E) 設定(S) 控制(O) 視窗(W) 幫助(H)

cfg broadcast
wisun_broadcast.BI = 1000
wisun_broadcast.BDI = 250
wisun_broadcast.BI_Slot = 0
wisun_broadcast.BI_Protocol = 289
wisun_broadcast.chPlan = 1
wisun_broadcast.chPlan = 2
wisun_broadcast.control = 0
wisun_broadcast.ch0 = 839000
wisun_broadcast.spacing = 200
wisun_broadcast.chNum = 40
wisun_broadcast.id = 1
wisun_broadcast.oc = 1
wisun_broadcast.broadSchedId = 0x34
wisun_broadcast.routing_cost = 0x0
wisun_broadcast.exNum = 2
wisun_broadcast.exNumStart1 = 10
wisun_broadcast.exNumEnd1 = 20
wisun_broadcast.exNumStart2 = 50
wisun_broadcast.exNumEnd2 = 60
wisun_broadcast.mask = 0xa 0x1b 0x2c 0x3d 0x0 0x0 0x4e 0x5f 0x0
0 0x0 0x0 0x0 0x0 0x0 0x0 0x0
wisun_broadcast.pan_size = 1
wisun_broadcast.pc_ready = 1
```



範例：920 MHz – 925 MHz

AENEAS

Node

cfg wisun chPlan 1

//使用者自定義模式

cfg wisun ch0 *920000*

//起始頻段 920000 KHz

cfg wisun spacing *200*

//間隔頻率 200 KHz

cfg wisun chNum *25*

// $(925-920)/0.2=25$

(結束-開始)/間隔=頻道數量

BR

cfg wisun chPlan 1

cfg broadcast chPlan 1

cfg wisun ch0 *920000*

cfg broadcast ch0 *920000*

cfg wisun spacing *200*

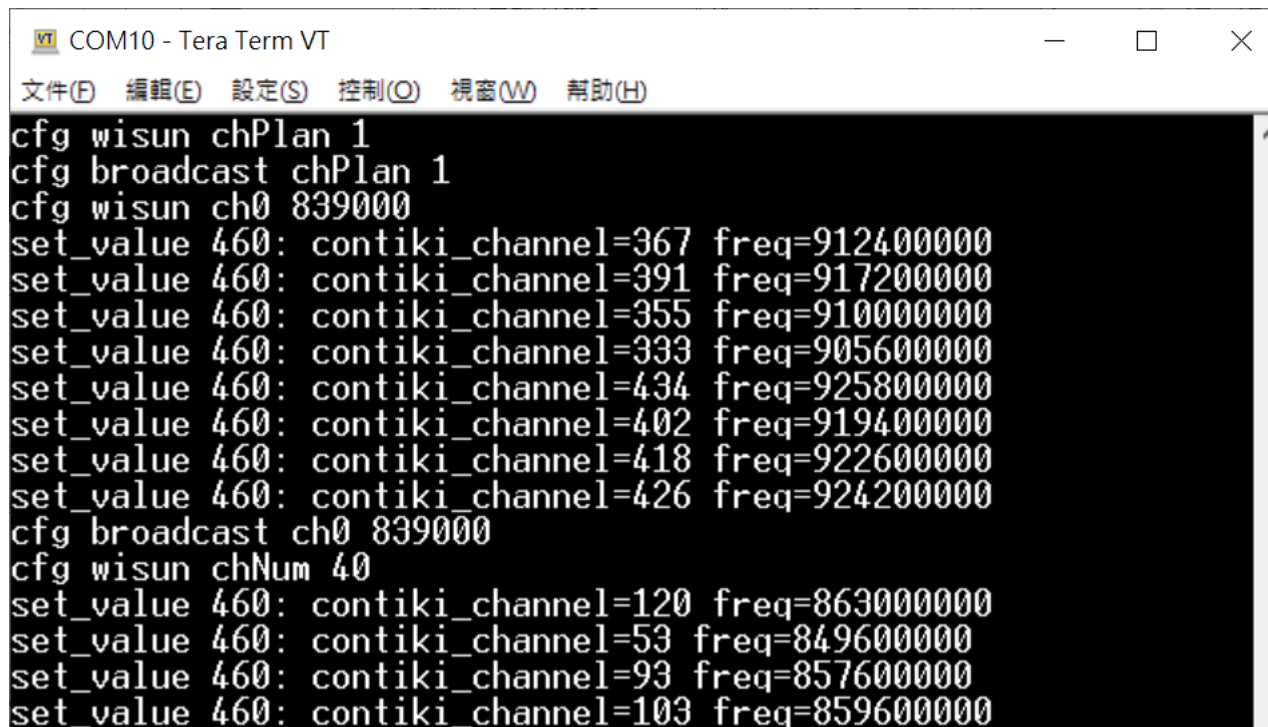
cfg broadcast spacing *200*

cfg wisun chNum *25*

cfg broadcast chNum *25*

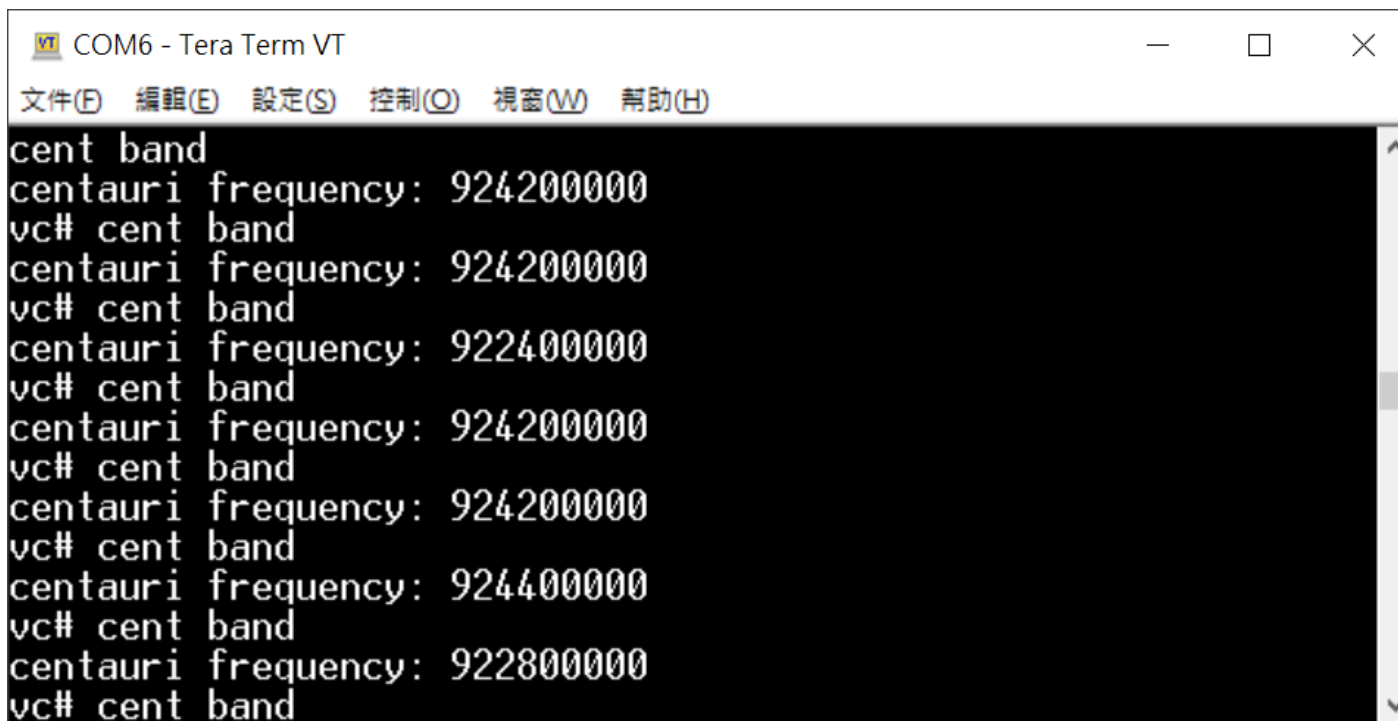
* *藍色粗斜體* 為可自定義變數

- 在使用者自定義跳頻 (BR) 中尚未輸入完全部指令之前，中間出現許多set value, contiki channel, freq是正常的，指令輸入完成後就不會出現。



```
COM10 - Tera Term VT
文件(F) 編輯(E) 設定(S) 控制(O) 視窗(W) 幫助(H)
cfg wisun chPlan 1
cfg broadcast chPlan 1
cfg wisun ch0 839000
set_value 460: contiki_channel=367 freq=912400000
set_value 460: contiki_channel=391 freq=917200000
set_value 460: contiki_channel=355 freq=910000000
set_value 460: contiki_channel=333 freq=905600000
set_value 460: contiki_channel=434 freq=925800000
set_value 460: contiki_channel=402 freq=919400000
set_value 460: contiki_channel=418 freq=922600000
set_value 460: contiki_channel=426 freq=924200000
cfg broadcast ch0 839000
cfg wisun chNum 40
set_value 460: contiki_channel=120 freq=863000000
set_value 460: contiki_channel=53 freq=849600000
set_value 460: contiki_channel=93 freq=857600000
set_value 460: contiki_channel=103 freq=859600000
```

- 調整完畢後可使用 `cent band` 指令測試頻段。
- 若輸入 `cfg wisun chPlan 0` 指令回到預設值，要再自定義頻段(chPlan 1)需要重新從頭輸入一次指令。



```
COM6 - Tera Term VT
文件(F) 編輯(E) 設定(S) 控制(O) 視窗(W) 幫助(H)
cent band
centauri frequency: 924200000
vc# cent band
centauri frequency: 924200000
vc# cent band
centauri frequency: 922400000
vc# cent band
centauri frequency: 924200000
vc# cent band
centauri frequency: 924200000
vc# cent band
centauri frequency: 924400000
vc# cent band
centauri frequency: 922800000
vc# cent band
```

- 設定某些頻段不使用 (VC7300 產品可以提供設定兩個區段不使用，以遮蔽兩個區段做停止跳頻)
- 根據Wi-SUN PHY SPEC 規範：
 - 北美區域 頻率範圍 902 ~928 MHz，頻道間隔 200 KHz，總共跳頻 129頻道，channel 0 為 902.2 MHz
 - 中國區域 頻率範圍 470~510 MHz，頻道間隔 200 KHz，總共跳頻 199 頻道，channel 0 為 470.2 MHz
- 基本跳頻遮蔽部分頻段範例：
 - 使用範例如 P9~P10 頁，以北美地區，有129通道，假設要訂 2~100 和 102~128 不使用，總共只跳頻 0, 1, 101, 128 四個頻道。

Root 端

- cfg wisun chFun 2 (0 : 使用定頻模式運作, 2 : 使用跳頻模式運作)
- cfg wisun control 1 (0 : 未使用頻段遮蔽, 1 : 使用頻段遮蔽)
- cfg wisun exNumStart1 2 (代表從 2 開始遮蔽)
- cfg wisun exNumEnd1 100 (代表遮蔽到 100 結束)
- cfg wisun exNumStart2 102 (代表從 102 開始遮蔽)
- cfg wisun exNumEnd2 127 (代表遮蔽到 127 結束)

Root 端

- cfg broadcast control 1 (0 : 未使用頻段遮蔽, 1 : 使用頻段遮蔽)
- cfg broadcast exNumStart1 2 (代表從 2 開始遮蔽)
- cfg broadcast exNumEnd1 100 (代表遮蔽到 100 結束)
- cfg broadcast exNumStart2 102 (代表從 102 開始遮蔽)
- cfg broadcast exNumEnd2 127 (代表遮蔽到 102 結束)

Node 端

- | | |
|---------------------------|-----------------------------|
| cfg wisun chFun 2 | (0 : 使用定頻模式運作, 2: 使用跳頻模式運作) |
| cfg wisun control 1 | (0 : 未使用頻段遮蔽, 1 : 使用頻段遮蔽) |
| cfg wisun exNumStart1 2 | (代表從 2 開始遮蔽) |
| cfg wisun exNumEnd1 100 | (代表遮蔽到 100 結束) |
| cfg wisun exNumStart2 102 | (代表從 102 開始遮蔽) |
| cfg wisun exNumEnd2 127 | (代表遮蔽到 127 結束) |

 Please contact...

AENEAS

F AE team

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Thank You!

