TinyCon_CLI

Var：V1.0.1

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CLI

Introduce

CLI is a user terminal interface for TinyCon2005, which provides users a set of the command operation interface, convenient user testing and checking information.

How to enable CLI

Hardware connection

CLI work on TinyCon2005 UART interface, so you need to TinyCon2005 UART interface and through the derivation of additional circuit or device connected to a computer ; If you are using a TinyWiEV - 1000 development board, then TinyWiEV - 1000 development board has UART derivation, using a mini USB cable to connect to the computer.

Enter CLI

Enter CLI，Must make TinyWiEV - 1000 board dial switch to 1 (high level). In this case, the TinyCon2005 is powered on or reset automatically enter CLI mode, the terminal screen displays :

```
Hello！Tinycon2000L
>
```

‘>’ is the CLI command prompt，You can type the command after the prompt. TinyCon2005 after receiving the command began to perform, and returns the result.

CLI Command introduce

?

Displays help information

Grammar

?

Parameter

Void

ipconfig

According to the network connection Settings.

Grammar

ipconfig

Parameter

Void

Examples

The following example shows the ipconfig command output

```
>ipconfig
ip addr: 192.168.2.115
netmask: 225.225.225.0
gateway: 192.168.2.1
dns1: 192.168.2.1
hwaddr: 64e425101106
```

ping

Through to the other host sends the *ICMP Echo Request* to check whether the connection is normal.

Grammar

ping [target_name] [count]

Parameter

target_name：Specify the target name, IP address or host name.

count：Specifies the number of Echo Request message to be sent.The default is 4.

Examples

The following example shows the output of the ping command：

```
> ping 192.168.2.108
PING 192.168.2.108(192.168.2.108): 120(148) data bytes
128 bytes from 192.168.2.108: icmp_seq=1 time=24 ms
128 bytes from 192.168.2.108: icmp_seq=2 time=32 ms
128 bytes from 192.168.2.108: icmp_seq=3 time=26 ms
128 bytes from 192.168.2.108: icmp_seq=4 time=20 ms
--- 192.168.2.108 ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 102 ms
```

To ping the target address for 192.168.2.108 and sent 10 Echo Request message, input：

```
>ping 192.168.2.108 10
```

reset

system reset

Grammar

reset

Parameter

Void

restore

Restore the factory default Settings, and reset the system.

Grammar

restore

Parameter

Void

info

Displays information about the drive module.

Grammar

info

Parameter

Void

Examples

The following example shows the info command output :

```
> info
Model: TinyCon2000L
SN: N/A
MAC addr: 64.E4.25.10.11.06
Firmware: V0.1.0
Hardware: V0.5
```

iw

iw is a set of commands used to dynamic configuration module of WLAN.

iw connect

With the given Parameter to connect an AP.

Grammar

iw connect <SSID, [key], [wep_key id]>

Parameter

- SSID

  Specified SSID to connect AP, if there are Spaces among SSID is needed to use "" SSID included. For example：“test 123”.

- [key]

  Set keys. if the security type for wep, Set keys type 5 or 13 ASCII characters; If the security type for wpa_psk, wpa2_psk input 8 ~ 63 ASCII characters.

- [wep_key id]

  Set the wep key serial number, 0 ~ 3.

Examples

SSID to connect to the test, encryption mode to open AP, input：

```
>iw connect test
```

SSID to connect to the test, for WEP encryption mode, the key is 12345, AP wep_key id 0, input：

```
>iw connect test 12345 0
```

SSID to connect to the test, encryption mode to connected wpa2-psk, key for 12345678 AP, input :

```
>iw connect test 12345678
```

iw disconnect

Disconnect with the AP.

Grammar

iw disconnect

Parameter

Void

Examples

Need to disconnect from the current AP connection, input :

```
>iw disconnect
```

iw ap

create the AP mode

Grammar

iw ap <SSID> <channel> [<WPA2 PSK>]

Parameter

- SSID

  Specified to create AP SSID.

- channel

  Specify to create AP channel.

- [WPA2 PSK]

  Specify to create AP key, this is optional. Don't use that encryption is open, if used, the encryption mode is WPA2, 8 ~ 63 ASCII characters must be entered.

Examples

Need to set the ssid to test, channel 1, encryption mode for the open AP, input :

```
>iw ap test 1
```

Need to set the ssid to test, channel 1, encryption mode is WPA2, the key is 12345678, input :

```
>iw connect test 1 12345678
```

iw scan

Command equipment to perform scan, and return the scan results.

Grammar

iw scan

Parameter

Void

Notes :

This command will trigger device performs a scan;Command will block until the return to the scan results.

Scan the format of the returned results

BSSID RSSI SECURITY WPS-ID SSID

Examples

The following example shows the scan command output :

```
> iw scan
BSSID                 RSSI SECURITY WPS-ID SSID
00:22:c3:81:98:3a -94   WPA/WPA2 -1       New AP
d4:ca:6d:87:28:ba -94   WPA/WPA2 -1       aibo
00:22:c3:81:96:24 -94   WPA/WPA2 -1       woxu wireless
[3 : 3]
```

iw rssi

Show the current rssi.

Grammar

iw rssi

Parameter

Void

Examples

The following example shows the rssi output of commands :

```
>iw rssi
RSSI=-60
```

iw info

Show the current configuration module of WLAN.

Grammar

iw info

Parameter

Void

Examples

The following example shows the info command output :

```
> iw info
RSSI: -60
state: running
op mode: station
security: wpa2-psk
SSID: aibo
channel: 6
```

iw sc

Using simple_config to connect to the Internet

Grammar

iw sc

Examples

control module quick access networks with android APP , the result of the example below shows that this command :

```
> iw sc
SC Start
[1]Perform channel-round scan *ch1*ch2*ch3*ch4*ch5*ch6*ch7*ch8*ch9*ch10*ch11
Start scan to learn AP's security mode: * 3
[AP Profile]
ssid: New AP
security: WPA2
password: 1234567899
Try to connect target AP +++++++
connected to New AP
DHCP: Started
netif_set_ipaddr: netif address being changed
netif: IP address of interface st set to 192.168.2.111
netif: netmask of interface st set to 255.255.255.0
netif: GW address of interface st set to 192.168.2.1
SC End(0)
```

cfg

cfg is a set of commands, used in DUT mode set and get the module parameters.

cfg s wifi ssid

Set the needs to connect a AP.

Grammar

cfg s wifi ssid <SSID>

Parameter

- SSID

  Specified SSID to connect AP, if there are Spaces among SSID is needed to use "" SSID included. For example：“test 123”.

Examples

To connect to the AP, SSID is aibo, input：

```
> cfg s wifi ssid aibo
```

cfg s wifi key

Set the needs to connect the AP's key

Grammar

cfg s wifi key [key]

Parameter

- [key]

  Set keys. if the security type for wep, Set keys type 5 or 13 ASCII characters; If

the security type for wpa_psk, wpa2_psk input 8 ~ 63 ASCII characters..

Examples

Need to connect the AP's key is *aiboaibo*, input :

```
> cfg s wifi key aiboaibo
```

cfg s wifi sec

Set the needs to connect AP encryption mode.

Grammar

cfg s wifi sec <sec>

Parameter

- <sec>

  Set the encryption mode.

  ✧ 0

  No encryption，open

  ✧ 1

  For WEP encryption mode，The default wep_key id is 0

  ✧ 2

  encryption mode is wpa/wpa2

Examples

Need to connect the AP encryption mode to open (0), input :

```
> cfg s wifi sec 0
```

cfg s wifi join

Set the module to AP connection mode.

Grammar

cfg s wifi join <join_type>

Parameter

- join_type

  The connection between the module and the AP

  - 0

    Do not connect the AP.

  - 1

    Automatically connected AP.

  - 7

    Module used in AP mode.

Examples

Automatically connected AP, so join_type is set to 1, input :

```
> cfg s wifi join 1
```

cfg s wifi ch

Module used in AP mode, set up AP radio channel.

Grammar

cfg s wifi ch <channel>

Parameter

- Channel

Assigned module in AP mode selection radio channel, 2.4G of effective channel for 1 ~ 13, the corresponding value is 0 ~ 12.

Examples

Configuration of the AP radio channel for 5, input :

```
> cfg s wifi ch 4
```

cfg s uart baud

Set baud rate of the module UART interface

Grammar

cfg s uart baud <baudrate>

Parameter

- baudrate

  Set module UART baud rate, the default baud rate is 115200.

Examples

Set the baud rate to 9600, input :

```
> cfg s uart baud 9600
```

cfg s uart data

Set data bits of the module UART interface

Grammar

cfg s uart data <databits>

Parameter

- databits

set module UART interface data bits

- 0

  Data bits are 8

- 1

  Data bits are 9

Examples

Set the data bits is 8 bit, input :

```
> cfg s uart data 0
```

cfg s uart stop

Set stop bit of the module UART interface

Grammar

cfg s uart stop <stopbits>

Parameter

- Stopbits

  set module UART interface stop bit

  - 0

    stop bit are 1

  - 1

    stop bits are 2

Examples

Set the stop bit is 1，input :

```
> cfg s uart stop 0
```

cfg s uart parity

Set Parity bit of the module UART interface.

Grammar

cfg s uart parity <paritybits>

Parameter

- paritybits

  The parity bit of the module UART interface

  - 0

    No

  - 1

    Odd

  - 2

    Even

Examples

Set up for the no parity,input :

```
> cfg s uart parity 0
```

cfg s ip dhcp

Set the module enable or disable DHCP.

Grammar

cfg s ip dhcp <ip_dhcp>

Parameter

- ip_dhcp

  the module enable or disable DHCP.

  - 0

    Disable

  - 1

    enable

Examples

Set the DHCP enable,input：

```
> cfg s ip dhcp 1
```

cfg s ip ipadd

Set the module IP address

Grammar

cfg s ip ipadd <ipaddr>

Parameter

- ipaddr

  The specified module IP address

Examples

The IP address to set up the module for 192.168.1.165, input：

```
> cfg s ip ipadd 192.168.1.165
```

cfg s ip mask

Set the module subnet mask

Grammar

cfg s ip mask <mask>

Parameter

- mask

  The specified module subnet mask

Examples

Set up the module of the subnet mask as 255.255.255.0, input :

```
> cfg s ip mask 255.255.255.0
```

cfg s ip gw

Set the module gateway address

Grammar

cfg s ip gw <gwaddr>

Parameter

- gwaddr

  The specified module gateway address

Examples

set up the gateway address as 192.168.1.1, input :

```
> cfg s ip gw 192.168.1.1
```

cfg s ip dns

Set the module DNS address

Grammar

cfg s ip dns <dnsaddr>

Parameter

- dnsaddr

  The specified module DNS address

Examples

Set DNS address as 192.168.1.1，input：

```
> cfg s ip dns 192.168.1.1
```

cfg s sbr host

Set the host IP address to connect.

Grammar

cfg s sbr host <hostip>

Parameter

- hostip

  Specify the host IP address.

Examples

Set the host IP address as 192.168.1.164，input：

```
> cfg s sbr host 192.168.1.164
```

cfg s sbr remote

set the remote port，The port to port for the target host is consistent, otherwise unable to communicate.

Grammar

cfg s sbr remote <port>

Parameter

- port

  Specify the remote port

Examples

set up the remote port as 8080,input :

```
> cfg s sbr remote 8080
```

cfg s sbr proto

Select module to establish a network connection to use protocol, TCP or UDP.

Grammar

cfg s sbr proto <protocol>

Parameter

- protocol

  The specified module uses the network protocol

  - 0

    UDP

  - 1

    TCP

Examples

Set up the module using the network protocol is TCP, input :

```
> cfg s sbr proto 1
```

cfg s sbr mode

Set the module to establish a network connection service mode, server or client.

Grammar

cfg s sbr mode <netmode>

Parameter

- netmode

  Specify the module to establish network connection service mode

  - 0

    client

  - 1

    server

Examples

Set up the module using the model for client, input :

```
> cfg s sbr mode 0
```

cfg g wifi ssid

Get the AP SSID stored in the module.

Grammar

cfg g wifi ssid

Parameter

Void

Examples

The following example shows for the result of get the ssid :

```
> cfg g wifi ssid
aibo
```

cfg g wifi key

Get wifi password stored in the module

Grammar

cfg g wifi key

Parameter

Void

Examples

The following example shows for get the key results :

```
> cfg g wifi key
aiboaibo
```

cfg g wifi sec

Get Wifi network encryption mode stored in the module

Grammar

cfg g wifi sec

Parameter

Void

Examples

The following example shows the result of get the sec :

```
> cfg g wifi sec
2
```

cfg g wifi join

Get connection module with AP.

Grammar

cfg g wifi join

Parameter

Void

Examples

The following example shows the connecting way of obtaining module and AP :

```
> cfg g wifi join
1
```

cfg g wifi ch

Get the radio channel when module in AP mode is enabled

Grammar

cfg g wifi ch

Parameter

Void

Examples

The following example shows to get the results of the channel :

```
> cfg g wifi ch
13
```

cfg g uart baud

Get module UART interface baud rate

Grammar

cfg g uart baud

Parameter

Void

Examples

The following example shows get the results of the baud :

```
> cfg g uart baud
115200
```

cfg g uart data

Get module UART interface data bits

Grammar

cfg g uart data

Parameter

Void

Examples

The following example shows the result of get data bits :

```
> cfg g uart data
0
```

cfg g uart stop

Get module UART interface stop bits

Grammar

cfg g uart stop

Parameter

Void

Examples

The following example shows the result of get stop bits :

```
> cfg g uart stop
0
```

cfg g uart parity

Get module UART interface parity bits

Grammar

cfg g uart parity

Parameter

Void

Examples

The following example shows the result of get parity bits :

```
> cfg g uart parity
0
```

cfg g uart flow

Get module UART interface flow type.

Grammar

cfg g uart flow

Parameter

Void

cfg g ip dhcp

Get module DHCP status.

Grammar

cfg g ip dhcp

Parameter

Void

Examples

The following example shows the result of get DHCP status：

```
> cfg g ip dhcp
1
```

cfg g ip ipadd

Get module IP address

Grammar

cfg g ip ipadd

Parameter

Void

Examples

The following example shows the result of get IP address：

```
> cfg g ip ipadd
192.168.1.165
```

cfg g ip mask

Get module subnet mask

Grammar

cfg g ip mask

Parameter

Void

Examples

The following example shows the result of get module subnet mask :

```
> cfg g ip mask
255.255.255.0
```

cfg g ip gw

Get module gateway address

Grammar

cfg g ip gw

Parameter

Void

Examples

The following example shows the result of get module gateway address :

```
> cfg g ip gw
192.168.1.1
```

cfg g ip dns

get module DNS address

Grammar

cfg g ip dns

Parameter

Void

Examples

The following example shows the result of get module DNS address :

```
> cfg g ip dns
192.168.1.1
```

cfg g sbr host

Get stored in the module of the target host ip address.

Grammar

cfg g sbr host

Parameter

Void

Examples

The following example shows get target host IP address :

```
> cfg g sbr host
192.168.1.168
```

cfg g sbr remote

Get target remote port.

Grammar

cfg g sbr remote

Parameter

Void

Examples

The following example shows the result of get target remote port :

```
> cfg g sbr remote
8080
```

cfg g sbr proto

Get the protocol used for module based network connection

Grammar

cfg g sbr proto

Parameter

Void

Examples

The following example shows the result of get the protocol :

```
> cfg g sbr proto
1
```

cfg g sbr mode

Get the module service mode

Grammar

cfg g sbr mode

Parameter

Void

Examples

The following example shows get the target service mode :

```
> cfg g sbr mode
1
```

cfg w

Save the configuration information, the command to save configuration information to the module of the flash, if you don't use this command, the configuration information knowledge exist in memory, once the module restart or electricity, configuration information will be lost.

Grammar

cfg w

Parameter

Void

Pin		Type	IO Level	Function
1	PB10	I/O	FT	I2C2_SCL / USART3_TX/TM2_CH3
2	PB11	I/O	FT	I2C2_SDA / USART3_RX/TM2_CH4
3	PB1	I/O	FT	ADC12_IN9/TM3_CH4
4	PB0	I/O	FT	ADC12_IN8/TM3_CH3
5	PA8	I/O	FT	USART1_CK
6	PA9	I/O	FT	USART1_TX
7	PA10	I/O	FT	USART1_RX
8	PA11	I/O	FT	USART1_CTS
9	PA12	I/O	FT	USART1_RTS
10	PA13	I/O	FT	JTMS-SWDIO
11	PA14	I/O	FT	JTCK-SWCLK
12	PA6	I/O	FT	ADC12_IN6
13	PA5	I/O	FT	DAC_OUT2
14	PA4	I/O	FT	DAC_OUT1
15	3.3V	S		
16	GND			
17	GND			
18	3.3V	S		
19	NRST	*I*	FT	
20	PA0_W	I/O	FT	WKUP/ ADC123_IN0/TM5_CH1
21	PC0	I/O	FT	ADC123_IN10
22	PC1	I/O	FT	ADC123_IN11
23	PC2	I/O	FT	ADC123_IN12
24	PC3	I/O	FT	ADC123_IN13
25	PA2	I/O	FT	USART2_TX/ ADC123_IN2 /TM2_CH3
26	PA3	I/O	FT	USART2_RX/ ADC123_IN3/TM2_CH4
27	PC4	I/O	FT	ADC12_IN14
28	PB12	I/O	FT	SPI2_NSS / I2S2_WS /I2C2_SMBA / USART3_CK
29	PB13	I/O	FT	SPI2_SCK / I2S2_CK /USART3_CTS
30	PB14	I/O	FT	SPI2_MISO /USART3_RTS
31	PB15	I/O	FT	SPI2_MOSI / I2S2_SD
32	PC5	I/O	FT	ADC12_IN15

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following

measures:

-- Reorient or relocate the receiving antenna.

-- Increase the separation between the equipment and receiver.

-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-- Consult the dealer or an experienced radio/TV technician for help.

FCC Radiation Exposure Statement

The modular can be installed or integrated in mobile or fix devices only. This modular cannot be installed in any portable device, for example, USB dongle like transmitters is forbidden.

This modular complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This modular must be installed and operated with a minimum distance of 20 cm between the radiator and user body.

If the FCC identification number is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. This exterior label can use wording such as the following: "Contains Transmitter Module FCC ID: 2ADGHTINYCON or Contains FCC ID: 2ADGHTINYCON "

when the module is installed inside another device, the user manual of this device must contain below warning statements;

1. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference.

(2) This device must accept any interference received, including interference that may cause undesired operation.

2. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

The devices must be installed and used in strict accordance with the manufacturer's instructions as described in the user documentation that comes with the product.