

ETH01_EVO AT Command User's Guide

Version Information:

AT version:2.4.2.0

SDK version:v4.3.2

AT command set

https://docs.espressif.com/projects/esp-at/en/release-v2.4.0.0/esp32c3/AT_Command_Set/index.html

AT Command Example

https://docs.espressif.com/projects/esp-at/zh_CN/release-v2.4.0.0/esp32c3/AT_Command_Examples/index.html

Ethernet AT Example: (refer to ESP32)

https://docs.espressif.com/projects/esp-at/zh_CN/latest/esp32/AT_Command_Examples/Ethernet_AT_Examples.html

ETH01_EVO Ethernet AT Command Set

- **AT+CIPETHSTATUS**: Query ETH01_EVO Ethernet connection status
- **AT+PASSCHANNEL**: Enable/Disable ETH01_EVO Ethernet
- **AT+CIPETHDHCP**: Enable/Disable ETH01_EVO Ethernet DHCP
- **AT+CIPETHMAC**: Query/set the MAC address of the ETH01_EVO Ethernet
- **AT+CIPETH**: Query/set the IP address of the ETH01_EVO Ethernet
- **AT+ETH01OTA**: Query/perform OTA upgrade
- **AT+VERSION**: Queries the current software version

Attention:

Please make sure that you are using the development board purchased from the official channel, if you are prompted with "regist eth cmd fail", you cannot use the ETH01_EVO Ethernet AT command.

AT+CIPETHSTATUS: Query ETH01_EVO Ethernet connection

status

Enquiry command

Function:

Query Ethernet connection status

Command:

```
AT+CIPETHSTATUS?
```

Response:

```
+CIPETHSTATUS:<state>
```

```
OK
```

parametric

- <state>: ETH01_EVO Ethernet connection state
 - 0: Ethernet not connected
 - 1: Successful Ethernet connection

AT+PASSCHANNEL: Enable/Disable ETH01_EVO Ethernet

Enquiry command

Function:

Queries whether ETH01_EVO Ethernet is enabled or not.

Command:

```
AT+PASSCHANNEL?
```

Response:

```
+PASSCHANNEL:<state>
```

```
OK
```

Setup Commands

Function:

Switch ETH01_EVO Ethernet

Command:

```
AT+PASSCHANNEL=<state>
```

Response:

```
OK
```

parametric

- <state>: ETH01_EVO Ethernet function state
 - 1: Enable Ethernet function
 - 2: Disable Ethernet function

instructions

- By default ETH01_EVO Ethernet is enabled.
- Configuration changes are saved to the NVS partition.
- Shut down the ETH01_EVO Ethernet:
 - DHCP on (AT+CIPETHDHCP=0) Clear ip after shutting down Ethernet;
 - DHCP off (AT+CIPETHDHCP=1) Shut down Ethernet without clearing ip;

typical example

```
// Enable ETH01_EVO Ethernet
AT+PASSCHANNEL=1
// Disable ETH01_EVO Ethernet
AT+PASSCHANNEL=2
```

AT+CIPETHDHCP: Enable/Disable ETH01_EVO Ethernet

DHCP

Enquiry command

Command.

```
AT+CIPETHDHCP?
```

Response:

```
+CIPETHDHCP:<state>
OK
```

Setup Commands

Function:

Enable/Disable Ethernet DHCP

Command:

```
AT+CIPETHDHCP=<operate>
```

Response:

```
OK
```

parametric

- <operate>:
 - 0: Disable
 - 1: Enable

instructions

- Default Ethernet DHCP enabled (static IP disabled).
- Configuration changes are saved to the NVS partition.
- This setup command interacts with commands that set an Ethernet static IP address, such as AT+CIPETH:
 - If DHCP is enabled, static IP addresses are disabled;

- If static IP is enabled, DHCP is disabled;
- The last configuration overwrites the previous configuration;

AT+CIPETHMAC: Query/set the MAC address of the ETH01_EVO Ethernet

Enquiry command

Function:

Query the MAC address of the ETH01_EVO Ethernet

Command:

```
AT+CIPETHMAC?
```

Response:

```
+CIPETHMAC:<"mac">  
OK
```

Setup Commands

Function:

Setting the MAC address for ETH01_EVO Ethernet

Command:

```
AT+CIPETHMAC=<"mac">
```

Response:

```
OK
```

parametric

- <"mac">: string parameter indicating the MAC address of the Ethernet interface.

instructions

- Default Ethernet MAC address 02:00:00:12:34:58.
- The configuration will save the NVS zone after successful setup.
- The MAC address of an Ethernet interface cannot be the same as that of another interface.
- The bit0 of the MAC address cannot be set to 1. For example, it can be set to "1a:..." but not to "15:...".
- FF:FF:FF:FF:FF:FF and 00:00:00:00:00:00 are invalid MAC addresses and cannot be set.

typical example

```
AT+CIPETHMAC="1a:fe:35:98:d4:7b"
```

AT+CIPETH: Query/set the IP address of the ETH01_EVO

Ethernet

Enquiry command

Function:

Query the IP address of ETH01_EVO Ethernet

Command:

```
AT+CIPETH?
```

Response:

```
+CIPETH:ip:<ip>  
+CIPETH:gateway:<gateway>  
+CIPETH:netmask:<netmask>  
OK
```

Setup Commands

Function:

Setting the IP address of the ETH01_EVO Ethernet

Command:

```
AT+CIPETH=<ip>,<gateway>,<netmask>
```

Response:

```
OK
```

parametric

- <ip>: string parameter indicating the IP address of the ESP32 Ethernet network
- <gateway>: gateway
- <netmask>: network mask

instructions

- Ethernet is on by default, if the Ethernet switch is not on (AT+PASSCHANNE=2) the setting fails.
- The configuration will save the NVS zone after successful setup.
- The setup commands for this command interact with DHCP, such as AT+CIPETHDHCP:
 - If static IP is enabled, DHCP is disabled;
 - If DHCP is enabled, static IPs are disabled;
 - The last configuration overwrites the previous configuration;
- Setting an Ethernet static IP address needs to comply with the IP rules of the router used, otherwise you cannot connect to the network and will be kicked off by the router.

typical example

```
AT+CIPETH="192.168.6.100", "192.168.6.1", "255.255.255.0"
```

AT+ETH01OTA: Query/perform OTA upgrade

Enquiry command

Function:

Queries whether ETH01_EVO has an upgraded version

Command:

```
AT+ETH01OTA?
```

Response:

```
+ETH01OTA:"<ota version>"
```

```
+VERSION:"<version>"
```

```
OK
```

```
+ETH01OTA:"<state>"
```

```
+VERSION:"<version>"
```

```
ERROR
```

execute a command

Function:

ETH01_EVO undergoes OTA upgrade

Command:

```
AT+ETH01OTA
```

Response:

```
+ETH01OTA:"<state>"
```

```
+VERSION:"<version>"
```

```
OK
```

```
+ETH01OTA:"<state>"
```

```
+VERSION:"<version>"
```

```
ERROR
```

Parameters:

- <ota version>: OTA-capable version
- <version>: current device version
- <state>: no version network is not connected/server has no version
Currently the latest version Currently the latest version

Description:

- Networking is required and upgrade speed depends on network status.
- If the upgrade fails due to poor network conditions, AT will return an ERROR, please wait for a while and try again.
- It's best to do a check for the OTA version before upgrading.

Example:

```
AT+ETH01OTA?
```

```
+ETH01OTA:no version
```

```
+VERSION: "20230828_02"
```

```
ERROR
```

```
AT+ETH01OTA?
```

```
+ETH01OTA: "20230804_01"
```

```
+VERSION: "20230828_02"
```

```
OK
```

```
AT+ETH01OTA
```

```
+ETH01OTA:no version
```

```
+VERSION: "20230828_02"
```

```
ERROR
```

```
AT+ETH01OTA
```

```
+ETH01OTA:Currently the latest version
```

```
+VERSION: "20230828_02"
```

```
ERROR
```

```
AT+ETH01OTA
```

```
+ETH01OTA: "20230804_01"
```

```
OTA: "20230804_01"->"20230804_01"
```

```
Don't turn off the power
```

```
OK
```

```
Will force to restart!!!
```

AT+VERSION. Queries the current software version

Enquiry command

Function:

Query the current software version of ETH01_EVO

Command:

```
AT+VERSION?
```

Response:

```
+VERSION:"<version>"
```

```
OK
```

Example:

```
AT+VERSION?
```

```
+version:20230828_02
```

```
OK
```

