

# ESPRESSIF

# ESP8266EX:

# AT COMMAND EXAMPLES

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<b>STATUS</b>	Released
<b>CURRENT VERSION</b>	V0.1
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## Version Info

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Date	Version	Author	Changes	Comments
2014.7.16	0.1	Yu Fei	Draft	

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## 1. Foreword

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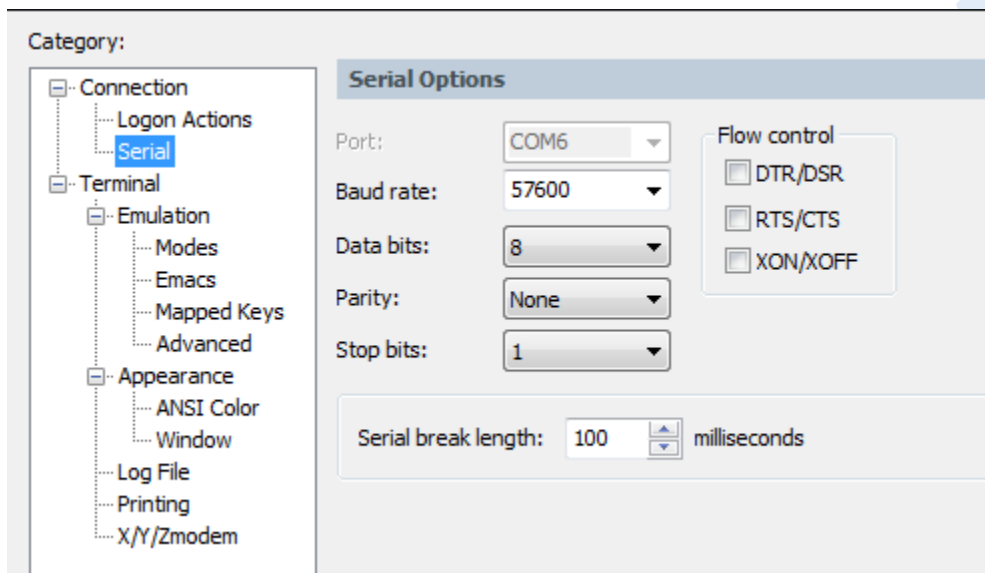
Herein contains examples for the usage of Espressif AT Commands. For the complete instruction set, please refer to Espressif AT Instruction Set documentation.

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## 2. User Guide

### 2.1. How to Start

- (1) First flash in blank.bin (contains default Wi-Fi parameter settings) into the ESP8266EX device, then flash in the BIN program (from SDK) that supports AT commands.
- (2) Power on device and set serial baud rate to 57600. Enter AT commands.



### 2.2. Single Connection to Client

- (1) Set Wi-Fi mode:

```
AT+CWMODE=3 // softAP+station mode
Response: OK
```

- (2) Reboot to take effect:

```
AT+RST
Response: OK
```

(3) Connect to router:

```
AT+CWJAP="ssid","password" // enter the ssid and password of router  
Response: OK
```

(4) Query router's IP

```
AT+CIFSR  
Response: 192.168.3.106 // return router's IP address
```

(5) Using a network tool on the computer to create a server:



(6) Connect to server from device:

```
AT+CIPSTART="TCP","192.168.3.116",8080  
// enter protocol, server IP, port no.  
Response: OK
```



(7) Transmit data:

```
AT+CIPSEND=4           // send 4 bytes
>DGFY                 // enter 4 bytes of data, no CR
Response: SEND OK
```

Note: If the number of bytes sent is bigger than the size defined (n), will reply busy, and after sending n number of bytes, reply SEND OK.

(8) Receive data:

```
+IPD,n:xxxxxxxxxx     // received n bytes, data=xxxxxxxxxx
```

### 2.3. Single Connection to Server

(1) Set Wi-Fi mode:

```
AT+CWMODE=3           // softAP+station mode
Response: OK
```

(2) Reboot to take effect:

```
AT+RST
Response: OK
```

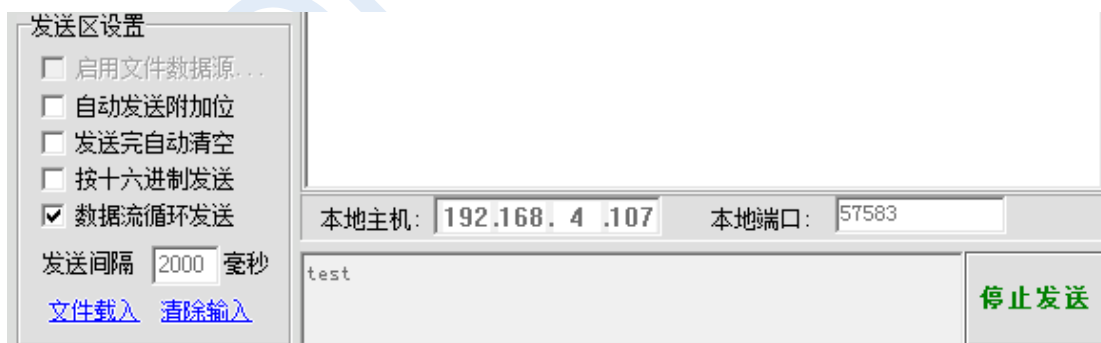
(3) Setup server:

```
AT+CIPSERVER=1       // default port = 333
Response: OK
```

(4) Computer connects to device's softAP, and acts as client.



Note: ESP8266EX acting as server has a timeout mechanism. When connection is established and no data is transmitted within a period of time, it will disconnect the client. Please setup a recurring packet transmission every 2s on the computer to ensure connection is maintained.



(5) Transmit data:

```
AT+CIPSEND=4           // send 4 bytes
>idos                 // enter 4 bytes of data, no CR
Response: SEND OK
```

Note: If the number of bytes sent is bigger than the size defined (n), will reply busy, and after sending n number of bytes, reply SEND OK.

(6) Receive data:

```
+IPD,n:xxxxxxxxx      // received n bytes, data=xxxxxxxxx
```

Note: The examples given are only for single connection. For multiple connections please refer to Espressif AT Instruction set for details.