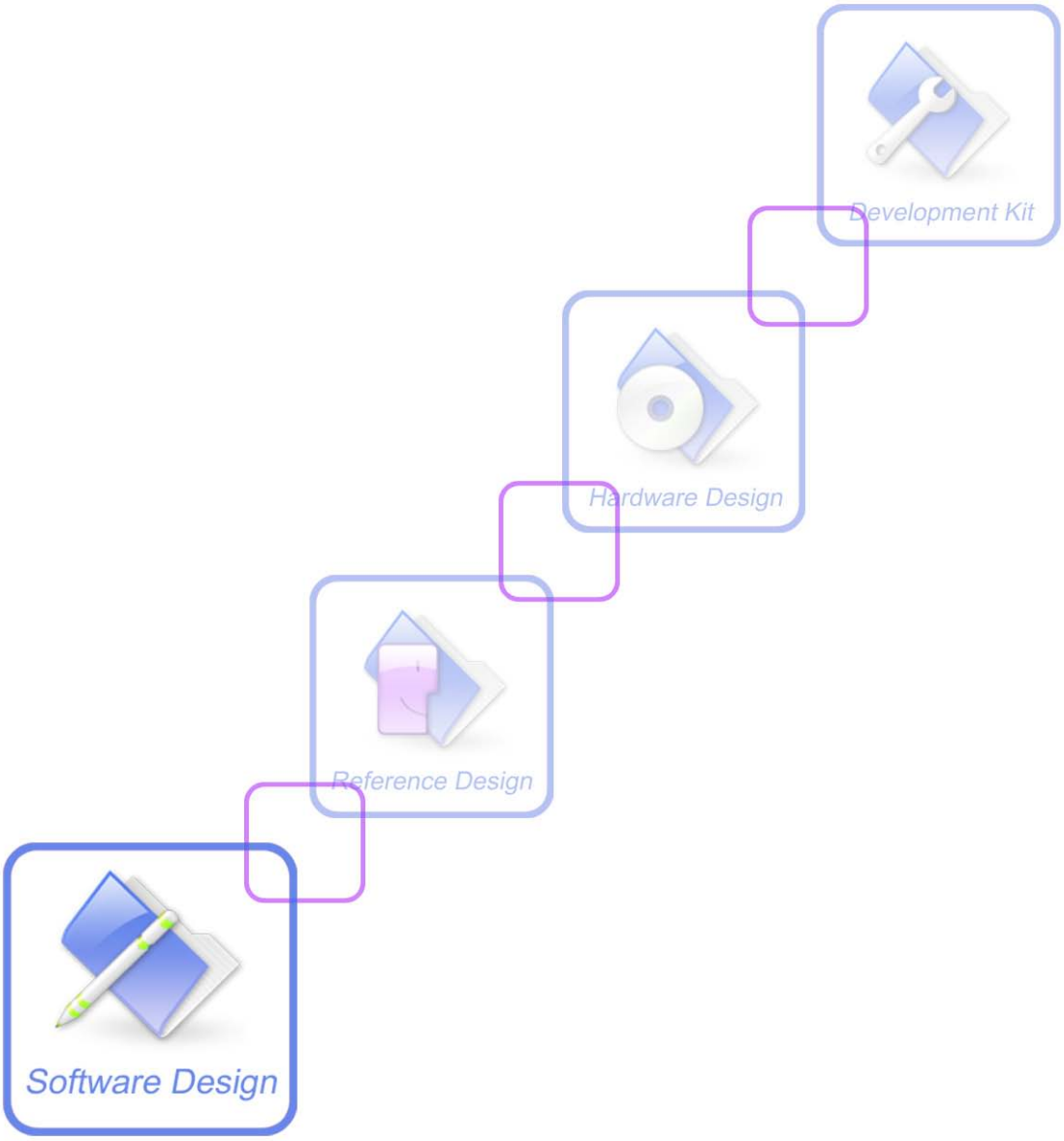
SIM7100 MIFI Application Note



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Version History

Version	Chapter	Comments
V0.01	New Version	

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MIFI Application Note

1. Introduction

1.1 Overview

This document gives the usage of SIM7100 MIFI functions. User can get useful information about the SIM7100 MIFI functions quickly through this document.

The MIFI functions are provided in AT command format, and they are designed for customers to design their MIFI applications easily. User can access these MIFI AT commands through UART/ USB interface which communicates with SIM7100 module.

1.2 Terms and Abbreviations

For the purposes of the present document, the following abbreviations apply:

- AT ATtention; the two-character abbreviation is used to start a command line to be sent from TE/DTE to TA/DCE
- SSID Service Set Identifier
- Broadcast

2.MIFI Related AT Commands

Below is the MIFI associated with AT commands. Related.

Command	Description
AT+CWSSID	SSID setting
AT+CWBCAST	Broadcast setting
AT+CWAUTH	Authentication type, encrypt mode and password setting
AT+CWMOCH	80211 mode and channel setting
AT+CWISO	Isolation setting
AT+CWDHCP	DHCP setting
AT+CWPROIDX	Mifi profile index setting
AT+CWCLICNT	Get wifi client number
AT+CWRSTD	Restore to default setting

2.1 AT+CWSSID SSID setting

AT+CWSSID SSID setting	
Read Command **AT+CWSSID?**	Response **+CWSSID: <ssid>** **OK**
	No parameter
Write Command **AT+CWSSID=<ssid>**	Response **OK**
	Parameter: <ssid> new ssid string
Reference	Note

Examples

```
AT+CWSSID?
+CWSSID: 7100MIFI
OK
AT+CWSSID=7100MIFI_1
OK
```

2.2 AT+CWBCAST Broadcast setting

AT+CWBCAST Broadcast setting	
Test Command **AT+CWBCAST=?**	Response **+CWBCAST: (0-1)** **OK**
	No parameter
Test Command **AT+CWBCAST?**	Response **+CWBCAST: <broadcast>** **OK**
	No parameter

Read Command **AT+CWBCAST=<broadcast>**	Response **OK**
	Parameter: <broadcast> 0 disabled 1 enabled
Reference	Note

Examples

```
AT+CWBCAST?
+CWBCAST: 1
OK
AT+CWBCAST=0
OK
```

2.3 AT+CWAUTH Authentication setting

AT+CWAUTH Authentication type, encrypt mode and password setting	
Read Command **AT+CWAUTH?**	Response **+CWAUTH:<auth>,<encrypt>[,<passwordindex>][,<password1>][,<password2>,<password3>,<password4>]** **OK**
	No parameter
Write Command **AT+CWAUTH=<auth>,<encrypt>[,<passwordindex>][,<password1>][,<password2>,<password3>,<password4>]**	Response **OK**
	Parameter **<auth>** 0 open/share 1 open 2 share 3 wpa 4 wpa2 5 wpa/wpa2 <**encrypt**> 0 null 1 WEP 2 TKIP

	3 AES
	4 TKIP-AES
	
	< **password**> password string
	
	The parameter need to meet the following conditions:
	1. If (auth == 0 or auth == 1) then (encrypt == 0 or encrypt == 1)
	2. If (auth ==2) then (encrypt == 1)
	3. If (auth >=3) then (encrypt >=2)
	4. If(encrypt == 0) then (passwodindx,password1~password4 are null)
	5. If(encrypt == 1) then
	{
	1) passwordindex >= 1 && passwordindex <=4
	2) password#passwordindex can't be set null
	e.g. if(passwordindex == 1) then passwod1 must be meet the password format. Password2~password4 can be set ""
	3) password format: (5 ASCII character) or (10 sixteen hexadecimal number) or(13 ASCII character) or(26 sixteen hexadecimal number)
	}
	6. if(encrypt >= 2) then
	{
	1) passwordindex can't be set
	2) Password2~password4 can't be set
	3) Password1 need and the format: (8~63 ASCII character or 64 hexadecimal number)
	}

	Note

Examples

AT+CWAUTH?

+CWAUTH: 0,1,1,"11111","22222","33333","44444"

OK

AT+CWAUTH?

+CWAUTH: 5,4, "12345678"

OK

Auth : open/share encrypt :null

AT+CWAUTH=0,0

OK

Auth : open/share encrypt :WEP

AT+CWAUTH=0,1,1,"11111","22222","",""

OK
Auth : share encrypt :WEP
AT+CWAUTH=2,1,2,"11111","22222","",""
OK
Auth : WPA/WPA2 encrypt :TIKP-AES
AT+CWAUTH=5,4,2,"abcd1234"
OK

2.4 AT+CWMOCH 80211 mode and channel setting

AT+CWMOCH 80211 mode and channel setting	
Test Command **AT+CWMOCH?**	Response **+CWMOCH: <mode>,<channel>** **OK**
	No parameter
Read Command **AT+CWMOCH=<mode>,<channel>**	Response **OK**
	Parameter: < **mode** > 1 a/n 5G mode 2 b 2.4G mode 3 b/g 2.4G mode 4 b/g/n 2.4G mode < **channel**> 0 auto select 1~13 2.4Gmode channel number 149/153/157/161/165 5G mode channel number If <mode> is 1 (a/n), <channel> can be set 0 or 149/153/157/161/165 If <mode> is 2/3/4, <channel> range is 0~13 If <mode> is 1, the client must be support 5G mode
Reference	Note

Examples

AT+CWMOCH?
+ CWMOCH: 4,0
OK
AT+ CWMOCH =3, 1
OK

2.4 AT+CWISO Isolation setting

AT+CWISO Isolation setting	
Test Command **AT+CWISO=?**	Response **+CWISO: (0-1)** **OK**
	No parameter
Test Command **AT+CWISO?**	Response **+CWISO: <isolation>** **OK**
	No parameter
Read Command **AT+CWISO=<isolation>**	Response **OK**
	Parameter: < **isolation** > 0 disabled 1 enabled
Reference	Note

Examples

```
AT+CWISO?
+CWBCAST: 0
OK
AT+CWISO=1
OK
```

2.5 AT+CWDHCP DHCP setting

AT+CWDHCP DHCP setting	
Test Command **AT+CWDHCP?**	Response **+CWDHCP:<host_ip>,<range_start_ip>,<range_end_ip>,<leasetime>** **OK**

	No parameter
Read Command **AT+CWDHCP=<host_ip>,<range_start_ip>,<range_end_ip>,<leasetime >**	Response **OK**
	Parameter: < **host_ip** > the ap ip 192.169.X.Y **<range_start_ip>** 192.168.SX.SY <**range_end_ip**> 192.168.EX.EY The X, Y, SX, SY, EX, EY need to meet the following conditions: 1: 0 =< X = SX = EX <= 255 2: 1 <= SY <= EY < Y<=245 or Y+9 < SY <=EY<=254 **<Leasetime>** 1h~48h 1hours ~ 48hours
	Note

Examples

```
AT+CWDHCP?
+CWDHCP: "192.168.0.1","192.168.0.100","192.168.0.140",12h
OK
AT+CWDHCP="192.168.0.1","192.168.0.40","192.168.0.50",6h
OK
```

2.6 AT+CWPROIDX Mifi profile index setting

AT+ CWPROIDX Mifi profile index setting	
Test Command **AT+CWPROIDX?**	Response **+CWPROIDX: <index>** **OK**
	No parameter
Read Command **AT+CWPROIDX=<index>**	Response **OK**
	Parameter:

	< **index** > 1~16 To get or set the profile details use AT+CGDCONT
Reference	Note

Examples

```
AT+CWPROIDX?
+CWPROIDX: 1
OK
AT+CWPROIDX=2
OK
```

2.7 AT+CWNAT NAT type setting

AT+ CWNAT NAT type setting	
Test Command **AT+CWNAT=?**	Response **+CWNAT: (0-1)** **OK**
	No parameter
Test Command **AT+CWNAT?**	Response **+CWNAT: <nat_type>** **OK**
	No parameter
Read Command **AT+CWNAT=<nat_type>**	Response **OK**
	Parameter: <**nat_type**> 0 Symmetric 1 Cone
Reference	Note

Examples

```
AT+CWNAT?
+CWNAT: 0
```

```
OK
AT+CWNAT=1
OK
```

2.8 AT+CWCLICNT Get wifi client number

AT+ CWCLICNT	Get wifi client number
Test Command **AT+CWCLICNT?**	Response **+CWCLICNT: <count>** **OK**
	No parameter
Reference	Note

Examples

```
AT+CWCLICNT?
+CWCLICNT: 1
OK
```

2.9 AT+CWRSTD Restore to default setting

AT+ CWRSTD	Restore all MIFI setting to default
Test Command **AT+CWRSTD**	Response **OK**
	No parameter The module will reboot after restore
Reference	Note

Examples

```
AT+CWRSTD
OK
```