A76XX Series MQTT_EX_AT Command Manual

LTE Module

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About Document

Version History

Version	Date	Owner	What is new
1.00	2021.11.08		

Scope

This document presents the AT Command Set for SIMCom A76XX Series, including A1603 Series.

Contents

AT Commands for MQTT EX

1.1 Overview of AT Commands for MQTT EX

Command	Description
AT+CMQTTCFG	Configure the MQTT Context
AT+CMQTTSUB	Subscribe a message to server
AT+CMQTTUNSUB	Unsubscribe a message to server
AT+CMQTTPUB	Publish a message to server
AT+CMQTTDISC	Disconnect from server

1.2 Detailed Description of AT Commands for MQTT EX

1.2.1 AT+CMQTTCFGConfigure the MQTT Context

It must be called before AT+CMQTTCONNECT and after AT+CMQTTACCQ. The setting will be cleared after AT+CMQTTREL

AT+CMQTTCFGConfigure the MQTT Context	
Write Command AT+CMQTTCFG="argtopic",<client_index>,<arg_topic>[,<payload_len_enable>]	Response **OK** or **ERROR**
Parameter Saving Mode	-
Reference	

Defined Values

<client_index>	A numeric parameter that identifies a client. The range of permitted values is 0 to 1
<arg_topic>	A numeric parameter that identifies topic set by parameters of AT Command for SUB,UNSUB and PUB. If set to 1,the received PUB message from brokers will notified as following URC +CMQTTRECV:

	<client_index>,"<topic>"[,<payload_len>],"<payload>" 0- topic input by edit mode 1 - topic input by parameter of AT Command
<payload_len_enable>	A numeric parameter that identifies report payloadlength. 0 - notify PUB message without payload length 1 - notify PUB message with payload length

Example

```
AT+CMQTTCFG="argtopic",0,1
OK
AT+CMQTTCFG="argtopic",0,1,1
OK
```

1.2.2 AT+CMQTTSUBSubscribe a message to server

AT+CMQTTSUBSubscribe a message to server	
Write Command /*arg_topic should set to 1*/ **AT+CMQTTSUB=<client_index>,"<topic>",<qos>**	Response **OK** **+CMQTTSUB: <client_index>,<err>** or **+CMQTTSUB: <client_index>,<err>** **ERROR** or **ERROR**

Defined Values

<client_index>	A numeric parameter that identifies a client. The range of permitted values is 0 to 1
<topic>	String type parameter that identifies the subscribe topic data, max length is 500 bytes.
<qos>	The sub message's qos. The range is from 0 to 2. 0 – at most once 1 – at least once 2 – exactly once

Example

```
AT+CMQTTCFG="argtopic",0,1
```

```
OK
AT+CMQTTSUB=0,"topic",1
OK

+CMQTTSUB: 0,0
```

1.2.3 AT+CMQTTUNSUBUnsubscribe a message to server

AT+CMQTTUNSUBUnsubscribe a message to server	
Write Command /*arg_topic should set to 1*/ **AT+CMQTTUNSUB=<client_index>,"<topic>"[,<dup>]**	Response **OK** **+CMQTTUNSUB: <client_index>,<err>** or **+CMQTTUNSUB: <client_index>,<err>** **ERROR** or **ERROR**

Defined Values

<client_index>	A numeric parameter that identifies a client. The range of permitted values is 0 to 1.
<topic>	String type parameter that identifies the unsubscribe topic data, max length is 500 bytes.
<dup>	The dup flag to the message. The value is 0 or 1. The default value is 0. The flag is set when the client or server attempts to re-deliver a message.

Example

```
AT+CMQTTCFG="argtopic",0,1
OK
AT+CMQTTUNSUB=0,"topic"
OK

+CMQTTUNSUB: 0,0
```

1.2.4 AT+CMQTTPUBPublish a message to server

AT+CMQTTPUBPublish a message to server	
Write Command /*arg_topic should set to 1*/	Response **OK** **+CMQTTPUB: <client_index>,<err>**

AT+CMQTTPUB=<client_index>,"<topic>",<qos>,<req_length>[,<ratained>]	or **+CMQTTPUB: <client_index>,<err>** **ERROR** or **ERROR**

Defined Values

<client_index>	A numeric parameter that identifies a client. The range of permitted values is 0 to 1.
<topic>	String type parameter that identifies the publish topic data, max length is 500 bytes.
<qos>	The publish message's qos. The range is from 0 to 2. 0 – at most once 1 – at least once 2 – exactly once
<req_length>	The length of input message data. The publish message should be UTF-encoded string, max length is 10240.
<ratained>	The retain flag of the publish message. The value is 0 or 1. The default value is 0. When a client sends a PUBLISH to a server, if the retain flag is set to 1, the server should hold on to the message after it has been delivered to the current subscribers

Example

```
AT+CMQTTCFG="argtopic",0,1,1
OK
AT+CMQTTSUB=0,"topic",1
OK

+CMQTTSUB: 0,0
AT+CMQTTPUB=0,"topic",2,10
>sssssssss
OK

+CMQTTPUB: 0,0
+CMQTTRECV: 0,"topic",10,"sssssssss"
```

1.2.5 AT+CMQTTDISC Disconnect from server

AT+CMQTTDISC Disconnect from server	
Test Command **AT+CMQTTDISC=?**	Response: **+CMQTTDISC: (0-1),(0, 60-180)**

	OK
Read Command **AT+CMQTTDISC?**	Response: **+CMQTTDISC: 0,<disc_state>** **+CMQTTDISC: 1,<disc_state>** **OK**
Write Command **AT+CMQTTDISC=<client_index>,<timeout>**	Response 1)If disconnect successfully: **+CMQTTDISC: <client_index>,0** **OK** 2)If disconnect successfully: **OK** **+CMQTTDISC: <client_index>,0** 3)If failed: **OK** **+CMQTTDISC: <client_index>,<err>** 4)If failed: **ERROR** 5)If failed: **+CMQTTDISC: <client_index>,<err>** **ERROR**
Parameter Saving Mode	-
Max Response Time	-
Reference	

Defined Values

<client_index>	A numeric parameter that identifies a client. The range of permitted values is 0 to 1.
<timeout>	The timeout value for disconnection. The unit is second. The range is 60s to 180s. The default value is 0s (not set the timeout value).
<disc_state>	1 disconnection 0 connection

NOTE

The topic will be clean after execute AT+CMQTTPUB.

When execute AT+CMQTTCFG="argtopic",<client_index>,<arg_topic>[,<payload_len_enable>] that

<arg_topic> set to 1, if you want to stop MQTT, just to execute AT+CMQTTSTOP after execute AT+CMQTTDISC and not need to execute AT+CMQTTREL.

1.3 Summary of result codes for MQTT EX

Unsolicited codes	Description
+CMQTTRECV: <client_index>,"<topic>"[,<payload_len>],"<payload>"	when arg_topicset to 1,the publish message received from brokers will be notified by CMQTTRECV. <client_index>: A numeric parameter that identifies a client. The range of permitted values is 0 to 1 <topic>: topic data of this receivedpublish message <payload_len>: payload length of this received publish message,will report if <payload_len_enable> set to 1.

1.4 Example how to use MQTT EX

```
AT+CMQTTSTART
OK

+CMQTTSTART:0
AT+CMQTTACCQ=0,"a1accq",0
OK
AT+CMQTTCFG="argtopic",0,1,1                    //using one command to subscribe, unsubscribe and publish a message after using this command.
OK
AT+CMQTTCONNECT=0,"tcp://120.27.2.154:1883",20,1
OK

+CMQTTCONNECT: 0,0
AT+CMQTTSUB=0,"znn11",2,1                       //using one command to subscribe a message
OK

+CMQTTSUB: 0,0
+CMQTTRECV:0,"znn11",16,"one message come"       // receive a message
```

```
AT+CMQTTPUB=0,"znn11",1,10          // using one command to publish a message
>
                                    //input message
OK

+CMQTTPUB: 0,0
AT+CMQTTUNSUB=0,"znn11",1           //using one command to unsubscribe a message
OK

+CMQTTUNSUB: 0,0
AT+CMQTTDISC=0,120                  //disconnect from server
OK

+CMQTTDISC: 0,0
AT+CMQTTSTOP
OK

+CMQTTSTOP: 0
```