SIM7028 Series_LwM2M _Application Note

LPWA Module

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About Document

Version History

Revision	Date	Chapter	Description
V1.00	2022.5.12	All	New version
V1.01	2022.05.31	All	Update file
V1.02	2022.07.08	All	Update some description

Scope

This document could be applied to following products:

Name	Type	Size(mm)	Comments
SIM7028	NB2	17.6*15.7	Band 1/2/3/4/5/8/12/13/14/17/18/19/20/25/26/28/66/70/85

Contents

1 Introduction

1.1 Purpose of the document

Based on module AT command manual, this document will introduce LwM2M application process on SIM7028 series of module,developers could understand and develop application quickly and efficiently based on this document.

1.2 Related documents

[1] SIM7028 Series_AT Command Manual

1.3 Conventions and abbreviations

In this document, the GSM engines are referred to as following term:
● ME (Mobile Equipment);
● MS (Mobile Station);
● TA (Terminal Adapter);
● DCE (Data Communication Equipment) or facsimile DCE (FAX modem, FAX board);

In application, controlling device controls the GSM engine by sending AT Command via its serial interface. The controlling device at the other end of the serial line is referred to as following term:
● TE (Terminal Equipment);
● DTE (Data Terminal Equipment) or plainly "the application" which is running on an embedded system;

Other Conventions:
● LwM2M(Lightweight Machine-To-Machine);
● SSL(Secure Sockets Layer);
● PDP(Packet Data Protocol);

2 AT Commands for LwM2M

Command	Description
AT+LWSTART	Start LwM2M service
AT+LWSTOP	Stop LwM2M Service
AT+LWCNF	Configure the LwM2M
AT+LWOPEN	Register to a LwM2M server
AT+LWCLOSE	Deregister from LwM2M server
AT+LWADDOBJ	Add a LwM2M object
AT+LWDELOBJ	Delete a LwM2M object
AT+LWREADRSP	Send read response to LwM2M server
AT+LWWRITERSP	Send write response to LwM2M server
AT+LWEXECUTERSP	Send execute response to LwM2M server

For detail information, please refer to "SIM7028 Series_AT Command Manual".

3   LwM2M Examples

Before all LwM2M related operations, we should ensure the following:
Ensure network is available:

```
AT+CSQ
+CSQ: 23,0

OK
AT+CGREG?                                    //Need to check network registeration state until
+CGREG: 0,1                                  get 1(home register) or 5(roaming register)

OK
AT+CGDCONT=1,"IP","APN"                      //Customer need to set IP type(IP or IPV6) and
OK                                           correct apn name
```

3.1   Access to LwM2M server

Following commands shows how to connect with a LwM2M server.

```
AT+LWSTART                                   // start LwM2M service, activate PDP context
OK
AT+LWCNF="server","112.74.93.163"            //Set the server address
OK
AT+LWCNF="serverport","5683"                 //Set the server port
OK
AT+LWCNF="endpointname","simcom"             //Set the client device name
OK
AT+LWCNF="lifetime",800                       //Set the max connection life time
OK
AT+LWOPEN                                     //Register to the special LwM2M server
OK
```

+LWOPEN: 0

AT+LWADDOBJ=0,3303,0,6,5518,5601,5602,56   // Add a LwM2M object
03,5604,5605
OK