



SIM7022 Series_LwM2M _Application Note

LPWA Module

SIMCom Wireless Solutions Limited

SIMCom Headquarters Building, Building 3, No. 289 Linhong
Road, Changning District, Shanghai P.R.China

Tel: 86-21-31575100

support@simcom.com

www.simcom.com

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SIMCom Wireless Solutions Limited

SIMCom Headquarters Building, Building 3, No. 289 Linhong Road, Changning District, Shanghai
P.R.China
Tel: +86 21 31575100
Email: simcom@simcom.com

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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
SIM7022	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

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1 Introduction

1.1 Purpose of the document

Based on module AT command manual, this document will introduce LwM2M application process on SIM7022 series of module, developers could understand and develop application quickly and efficiently based on this document.

1.2 Related documents

[1] SIM7022 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 "SIM7022 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?

+CGREG: 0,1

//Need to check network registration state until
get 1(home register) or 5(roaming register)

OK

AT+CGDCONT=1,"IP","APN"

OK

//Customer need to set IP type(IP or IPV6) and
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

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