



# **SIM7022 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
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
<b>AT+LWSTART</b>	Start LwM2M service
<b>AT+LWSTOP</b>	Stop LwM2M Service
<b>AT+LWCNF</b>	Configure the LwM2M
<b>AT+LWOPEN</b>	Register to a LwM2M server
<b>AT+LWCLOSE</b>	Deregister from LwM2M server
<b>AT+LWADDOBJ</b>	Add a LwM2M object
<b>AT+LWDELOBJ</b>	Delete a LwM2M object
<b>AT+LWREADRSP</b>	Send read response to LwM2M server
<b>AT+LWWRITERSP</b>	Send write response to LwM2M server
<b>AT+LWEXECUTERSP</b>	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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