SIM7672X & SIM7652X Series_UIM HOT SWAP_ Application Note

LTE Module

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About Document

Version History

Revision	Date	Owner	Description
V1.00	2023.05.22		New version

Scope

Based on module AT command manual, this document will introduce USIM Hot-swap application process. Developers could understand and develop application quickly and efficiently based on this document. This document applies to SIM7672X Series, SIM7652X Series.

Contents

1 Introduction

1.1 Purpose of the document

Based on module AT command manual, this document introduces UIM card detection and UIM hot swap. Developers could understand and develop application quickly and efficiently based on this document.

1.2 Related documents

[1] SIM7672X & SIM7652X Series_AT Command Manual

1.3 Conventions and abbreviations

Abbreviation	Description
ME	Mobile Equipment
MS	Mobile Station
TA	Terminal Adapter
DCE	Data Communication Equipment
PIN	Personal Identification Number
PUK	Personal Unlock Key
SIM	Subscriber Identity Module
TE	Terminal Equipment
DTE	Data Terminal Equipment

2 USIM hot-swap detect Application Guide

Note that the USIM peripheral circuit should be close to the USIM card socket. The following figure shows the 8-pin SIM card holder reference circuit.

Customer should use **AT+UIMHOTSWAPON=1** to open the hot-swap detect function. If the SIM card holder is normal open kind, customer should use the command **AT+UIMHOTSWAPLEVEL=0**, If the SIM card holder is normal close kind, customer should use the command **AT+UIMHOTSWAPLEVEL=1**.
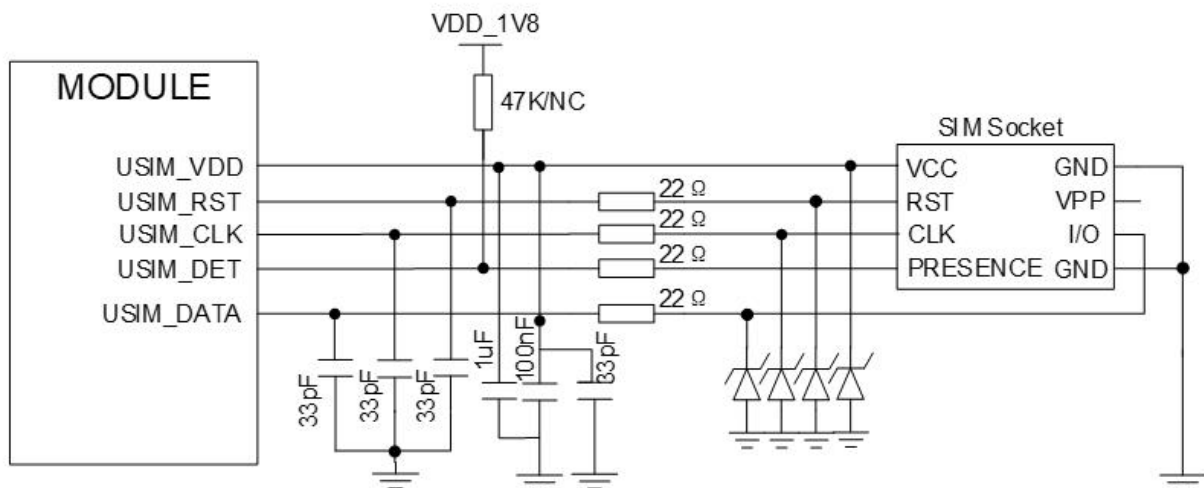

Figure 1: SIM card holder reference circuit(8 pin)

3 AT Command

Command	Description
AT+UIMHOTSWAPON	Set UIM hot-swap function on
AT+UIMHOTSWAPLEVEL	Set UIM card detection level

3.1 AT+UIMHOTSWAPON   Set UIM Hot-swap Function On

AT+UIMHOTSWAPON	Set UIM hot-swap function on
Test Command AT+UIMHOTSWAPON=?	Response 1) **+UIMHOTSWAPON: (0-1)** **OK** 2) **ERROR**
Read Command AT+UIMHOTSWAPON?	Response 1) **+UIMHOTSWAPON: <on/off>** **OK** 2) **ERROR**
Write Command AT+UIMHOTSWAPON=<on/off>	Response 1) **OK** 2) **ERROR**
Parameter Saving Mode	AUTO_SAVE
Max Response Time	5000ms
Reference	-

Defined Values

<on/off>	0 The UIM hot-swap function is disabled
	1 The UIM hot-swap function is enabled

Examples

AT+UIMHOTSWAPON=?
+UIMHOTSWAPON: (0-1)

OK
AT+UIMHOTSWAPON?
+UIMHOTSWAPON: 0

OK
AT+UIMHOTSWAPON=1
OK

3.2 AT+UIMHOTSWAPLEVEL   Set UIM Card Detection Level

AT+UIMHOTSWAPLEVEL	Set UIM Card Detection Level
Test Command **AT+UIMHOTSWAPLEVEL=?**	Response 1) **+UIMHOTSWAPLEVEL: (0-1)** **OK** 2) **ERROR**
Read Command **AT+UIMHOTSWAPLEVEL?**	Response 1) **+UIMHOTSWAPLEVEL: <level>** **OK** 2) **ERROR**
Write Command **AT+UIMHOTSWAPLEVEL=<level>**	Response 1) **OK** 2) **ERROR**
Parameter Saving Mode	AUTO_SAVE
Max Response Time	5000ms
Reference	-

Defined Values

<level>	0 ACTIVE LOW
	1 ACTIVE HIGH

Examples

AT+UIMHOTSWAPLEVEL=?
+UIMHOTSWAPLEVEL: (0-1)

OK
AT+UIMHOTSWAPLEVEL?
+UIMHOTSWAPLEVEL: 0

OK
AT+UIMHOTSWAPLEVEL=1
OK

> **NOTE**
>
> ● Refer the used SIM card holder, usually it's a "normal open kind" one, Set high or low level depends on the hardware.
> ● Set UIM card detection level to active high, Means high-level triggers SIM hardware interrupt.

4 UIM Hot Swap Exampls

4.1 Enable UIM Hot Swap

AT+UIMHOTSWAPLEVEL?   // The default value is 0
+UIMHTOSWAPLEVEL: 0

OK
AT+UIMHOTSWAPLEVEL=1   // Set UIM card detection level to active high
OK
AT+UIMHOTSWAPON=1   // Enable hot-swap.
OK