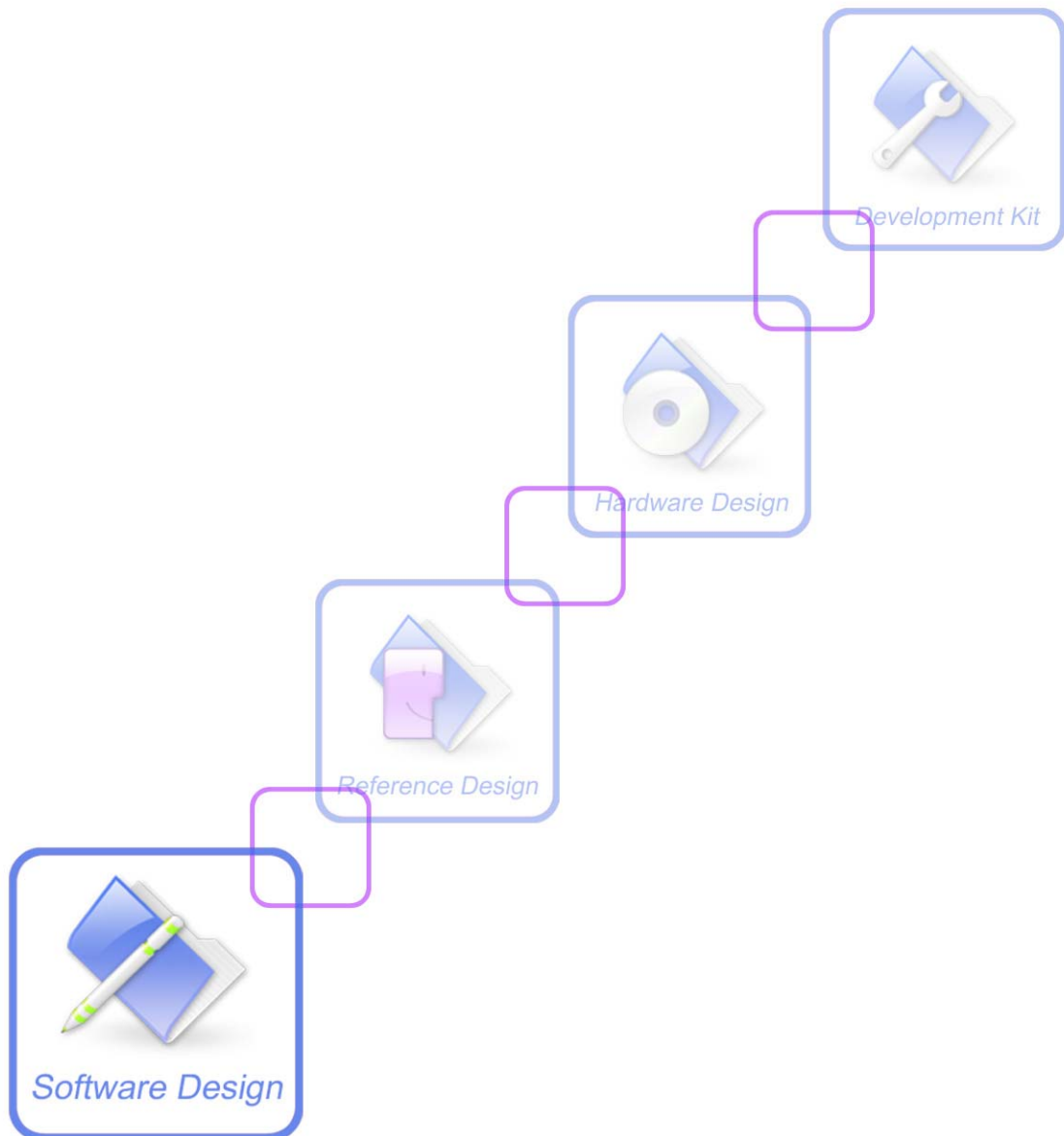




# SAT Application Note



<b>Document Title:</b>	SIM5360 SAT Application Note
<b>Version:</b>	0.01
<b>Date:</b>	2014-02-21
<b>Status:</b>	Developing
<b>Document ID:</b>	SIM5360_SAT_Application_Note_V0.01

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## Version History

Version	Chapter	Comments
V0.01	New Version	

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# 1 Introduction

## 1.1 Overview

This document describes how to implement STK application use SIMCOM module STK AT interface. The detail describe of STK AT INTERFACE please see document AT Commands Set. And this document mainly give out the AT command example to suggest how to use the interface.

## 1.2 References

The present document is based on the following documents:

[1] SIMCOM\_SIM5360\_ATC\_EN\_V0.05.doc.

## 1.3 Terms and Abbreviations

For the purposes of the present document, the following abbreviations apply:

- SAT           SIM Application Toolkit
- PIN           Personal Identification Number
- PUK           Personal Unlock Key
- SIM           Subscriber Identity Module
- SMS           Short Message Service
- SMS–SC       Short Message Service – Service Center
- TA           Terminal Adaptor; e.g. a data card (equal to DCE)
- TE           Terminal Equipment; e.g. a computer (equal to DTE)
- UE           User Equipment
- URC           Unsolicited Result Code
- UMTS         Universal Mobile Telecommunications System
- USIM         Universal Subscriber Identity Module
- WCDMA       Wideband Code Division Multiple Access

## 2 Command Example

### 2.1 Module Initialization

For each application should be given to the AT commands listed below before starting a SAT session over the AT interface. It is highly recommended that the response timer value be modified to allow the user more time to enter the required response data.

**NOTE:** The application must input correct SIM PIN if require. Otherwise the STK can't be used.

### 2.2 Command Description

AT+STIN?	SAT Indication	<p>Every time the SIM Application issues a Proactive Command, via the ME, the TA will receive an indication. This indicates the type of Proactive Command issued.</p> <p><b>AT+STGI</b> must then be used by the TA to request the parameters of the Proactive Command from the ME. Upon receiving the <b>+STGI</b> response from the ME, the TA must send <b>AT+STGR</b> to confirm the execution of the Proactive Command and provide any required user response, e.g. a selected menu item.</p>
AT+STGI?	Get SAT information	<p>Regularly this command is used upon receipt of an URC <b>" +STIN "</b> to request the parameters of the Proactive Command. Then the TA is expected to acknowledge the <b>AT+STGI</b> response with <b>AT+STGR</b> to confirm that the Proactive Command has been executed. <b>AT+STGR</b> will also provide any user information, e.g. a selected menu item. The Proactive Command type value specifies to which <b>" +STIN "</b> the command is related.</p>
AT+STGR	SAT respond	<p>The TA is expected to acknowledge the <b>AT+STGI</b> response with <b>AT+STGR</b> to confirm that the Proactive Command has been executed. <b>AT+STGR</b> will also provide any user information, e.g. a selected menu item.</p> <p>Module will report URC for nest command automatically after <b>AT+STGR</b> executed.</p>

### 2.3 Command Example

#### 2.3.1 Display Text

Output from phone	Response from accessory	Note
<b>Query current command:</b>		

AT+STIN?	+STIN: 21 OK	
<b>View the detail of current command:</b>		
AT+STGI=21	+STGI:21,0,0,10," 00540065007300740021" OK	Text display as UCS2.
<b>Execute command:</b>		
AT+STGR=21	OK +STIN: 25 ( <i>example</i> )	

### 2.3.2 Get Inkey

Input command	Response	Note
<b>Query current command:</b>		
AT+STIN?	+STIN: 22 OK	
<b>View the detail of current command:</b>		
AT+STGI=22	+STGI:22,1,0,12,"0069006E007000750074003A" " OK	Response will indicate the format input information.
<b>Input information:</b>		
AT+STGR=22,"Y"	OK +STIN: 24 ( <i>example</i> )	Refer to the response of AT+STGI=22, confirm the input format.

### 2.3.3 Get Input

Input command	Response	Note
<b>Query current command:</b>		
AT+STIN?	+STIN: 23 OK	
<b>View the detail of current command:</b>		
AT+STGI=23	+STGI:23,3,70,1,0,1,12,"0069006E007000750074003A" OK	Response will indicate the format and min/max length of the input information.
AT+STGI=23	+STGI:23,2,20,1,0,1,12,"0069006E007000750074003A" OK	
<b>Input information:</b>		
<i>If &lt;rsp_format&gt; is UCS2:</i> AT+STGR=23,"597D"	OK +STIN: 24 ( <i>example</i> )	Refer to the response of AT+STGI=23,

<p><i>If &lt;rsp_format&gt; is numer only:</i> AT+STGR=23,"88884444" "</p>	<p>OK +STIN: 24 (example)</p>	<p>confirm the input format and min/max length.</p>
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### 2.3.4 Set Up Menu

Input command	Response	Note
<b>Query current command:</b>		
AT+STIN?	+STIN: 25 OK	
<b>View the detail of current command:</b>		
AT+STGI=25	+STGI:25,0,0,8,"004D0065006E0075",4 +STGI:25,1,12,"004D0065006E007500200031" +STGI:25,2,12,"004D0065006E007500200032" +STGI:25,3,12,"004D0065006E007500200033" +STGI:25,4,12,"004D0065006E007500200034" OK	Menu text display as UCS2. The first line is menu title. Others are menu items.
<b>Select a submenu:</b>		
AT+STGR=25,1	OK +STIN: 24	After selected a submenu, return +STIN: 24 usually. Then it should display the submenu information.

### 2.3.5 Select Item

Input command	Response	Note
<b>Query current command:</b>		
AT+STIN?	+STIN: 24 OK	
<b>View the detail of current command:</b>		
AT+STGI=24	+STGI:24,0,0,0,0,"00",5 +STGI:24,1,12,"004900740065006D00200031" +STGI:24,2,12,"004900740065006D00200032" +STGI:24,3,12,"004900740065006D00200033" +STGI:24,4,12,"004900740065006D00200034" +STGI:24,5,12,"004900740065006D00200035" OK	Items text display as UCS2. The first line is menu title. Title maybe "00", its means no item title. Others are sub-items.
<b>Select a sub-item:</b>		
AT+STGR=24,1	OK +STIN: 23 (example)	After selected an item, different SIM/USIM cards



		will report different +STIN: command.
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### 2.3.6 Send Short Message

Input command	Response	Note
<b>Query current command:</b>		
AT+STIN?	+STIN: 24 OK	Send short message is a sub-item in items. Select the specifically item, SAT should send SMS automatically.
<b>View the detail of current command:</b>		
AT+STGI=24	+STGI:24,0,0,0,0,"00",2 +STGI:24,1,24,"006E006500770020006D006500730073006100670065003A" +STGI:24,2,10,"00730065006E0064003A" OK	
<b>Select a sub-item:</b>		
AT+STGR=24,2	OK +STIN: 21	After selected the send message item, the short message will be sent, the report +STIN:21.

### 2.3.7 Make a Voice Call

Input command	Response	Note
<b>Query current command:</b>		
AT+STIN?	+STIN: 24 OK	Make a voice call is a sub-item in items. Select the specifically item, SAT should make a voice call.
<b>View the detail of current command:</b>		
AT+STGI=24	+STGI:24,0,0,0,0,"00",1 +STGI:24,1,20,"006D0061006B0065002000630061006C006C003A" OK	
<b>Select a sub-item:</b>		
AT+STGR=24,1	OK +STIN: 24 (example) VOICE CALL: BEGIN (URC)	After selected the make call item, AT port will report a URC, indicate the

		call begin. If want to hang up the call, must execute AT+CHUP.
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