SIM82XX_SIM83XX Series_TTS_Application Note

5G Module
GENERAL NOTES

SIMCOM OFFERS THIS INFORMATION AS A SERVICE TO ITS CUSTOMERS, TO SUPPORT APPLICATION AND ENGINEERING EFFORTS THAT USE THE PRODUCTS DESIGNED BY SIMCOM. THE INFORMATION PROVIDED IS BASED UPON REQUIREMENTS SPECIFICALLY PROVIDED TO SIMCOM BY THE CUSTOMERS. SIMCOM HAS NOT UNDERTAKEN ANY INDEPENDENT SEARCH FOR ADDITIONAL RELEVANT INFORMATION, INCLUDING ANY INFORMATION THAT MAY BE IN THE CUSTOMER’S POSSESSION. FURTHERMORE, SYSTEM VALIDATION OF THIS PRODUCT DESIGNED BY SIMCOM WITHIN A LARGER ELECTRONIC SYSTEM REMAINS THE RESPONSIBILITY OF THE CUSTOMER OR THE CUSTOMER’S SYSTEM INTEGRATOR. ALL SPECIFICATIONS SUPPLIED HEREIN ARE SUBJECT TO CHANGE.

COPYRIGHT

THIS DOCUMENT CONTAINS PROPRIETARY TECHNICAL INFORMATION WHICH IS THE PROPERTY OF SIMCOM WIRELESS SOLUTIONS LIMITED. COPYING, TO OTHERS AND USING THIS DOCUMENT, ARE FORBIDDEN WITHOUT EXPRESS AUTHORITY BY SIMCOM. OFFENDERS ARE LIABLE TO THE PAYMENT OF INDEMNIFICATIONS. ALL RIGHTS RESERVED BY SIMCOM IN THE PROPRIETARY TECHNICAL INFORMATION, INCLUDING BUT NOT LIMITED TO REGISTRATION GRANTING OF A PATENT, A UTILITY MODEL OR DESIGN. ALL SPECIFICATION SUPPLIED HEREIN ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME.

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

For more information, please visit:
https://www.simcom.com/download/list-863-en.html

For technical support, or to report documentation errors, please visit:
https://www.simcom.com/ask/ or email to: support@simcom.com

Copyright © 2021 SIMCom Wireless Solutions Limited All Rights Reserved.
About Document

Version History

<table>
<thead>
<tr>
<th>Version</th>
<th>Date</th>
<th>Author</th>
<th>What is new</th>
</tr>
</thead>
<tbody>
<tr>
<td>V1.00</td>
<td>2020.8.17</td>
<td>You Zhu</td>
<td>First Release</td>
</tr>
<tr>
<td>V1.01</td>
<td>2020.11.25</td>
<td>Shuai.Wang</td>
<td>Update the format</td>
</tr>
</tbody>
</table>

Scope

This document applies to the SIMCom SIM820X series, SIM821X series, SIM826X series and SIM83XX series.
Contents

About Document.............................................................................................................................................. 2
  Version History.................................................................................................................................................. 2
  Scope............................................................................................................................................................. 2

Contents.............................................................................................................................................................. 3

1 Introduction........................................................................................................................................................ 4
  1.1 Purpose of the document.......................................................................................................................... 4
  1.2 Related documents...................................................................................................................................... 4
  1.3 Conventions and abbreviations................................................................................................................ 4

2 TTS Introduction............................................................................................................................................... 5
  2.1 Characteristic............................................................................................................................................... 5
  2.2 The process of Using TTS AT Commands............................................................................................... 5

3 AT Commands for TTS.................................................................................................................................... 6

4 TTS Examples................................................................................................................................................... 7
  4.1 Set Local or Remote audio play................................................................................................................ 7
  4.2 Play synthetic speech with UCS2 text...................................................................................................... 7
  4.3 Play synthetic speech with GBK text....................................................................................................... 7
  4.4 Stop the synthetic speech......................................................................................................................... 8
  4.5 Set the speech parameters...................................................................................................................... 8
  4.6 TTS to wav format..................................................................................................................................... 8
1 Introduction

1.1 Purpose of the document

Based on module AT command manual, this document will introduce TTS application process. Developers could understand and develop application quickly and efficiently based on this document.

1.2 Related documents


1.3 Conventions and abbreviations
# 2 TTS Introduction

TTS (Text To Speech) is one of the applications of speech synthesis. TTS can translate text to sound, automatic recognition of Chinese and English, support Chinese and English mixed reading.

## 2.1 Characteristic

TTS, when you input a string of a text, engineer can translate it to sound. The encoding methods supported are ASCII, UCS2 and GBK.

## 2.2 The process of Using TTS AT Commands

Step 1: Ensure TTS function is available.
Step 2: Set play path by AT+CDTAM, if necessary, default is play to local.
Step 3: Set play parameters by AT+CTTSPARAM, if necessary, default parameters are set when power on.
Step 4: Use AT+CTTS to play TTS.
# 3 AT Commands for TTS

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT+CDTAM</td>
<td>TTS play path, local or remote</td>
</tr>
<tr>
<td>AT+CTTSPARAM</td>
<td>TTS Parameters, set or get</td>
</tr>
<tr>
<td>AT+CTTS</td>
<td>TTS operation, play or stop</td>
</tr>
</tbody>
</table>
4 TTS Examples

4.1 Set Local or Remote audio play

//Example of set play path
AT+CDTAM=1  //Set remote path
+CDTAM:
OK
AT+CDTAM=0  // Set local path
+CDTAM:
OK

4.2 Play synthetic speech with UCS2 text

//Example of TTS play with UCS2
AT+CTTS=1,"6B228FCE4F7F75288BED97F3540862107CFB7EDF"  //text UCS2 coding format.
OK
+CTTS:0  //Speech synthetic successful, the tts voice will play with the current channel.

//Speech played over. User needs to wait this response to play the next speech!

4.3 Play synthetic speech with GBK text

// Example of TTS play with normal text
AT+CTTS=2,"hello，欢迎使用语音合成系统"  //English is ASCII coding format, Chinese is GBK coding format.
OK  //Speech synthetic successful, the tts voice will
4.4 Stop the synthetic speech

// Example of TTS stop
AT+CTTS=0 //Stop playing synthetic speech.
+CTTS:0
OK //synthetic speech is successful end.

4.5 Set the speech parameters

// Example of TTS set parameters
AT+CTTSPARAM=1,3,0,1,1 //Set the speech parameters.
OK

4.6 TTS to wav format

// Example of TTS to wav format
AT+CTTS=3,"欢迎使用语音合成系统","E:/tts.wav" //English is ASCII coding format, Chinese is GBK coding format.
OK //E is map to /data/media
+CTTS:0 //Transform end.