SIM7100_SIM7600M22
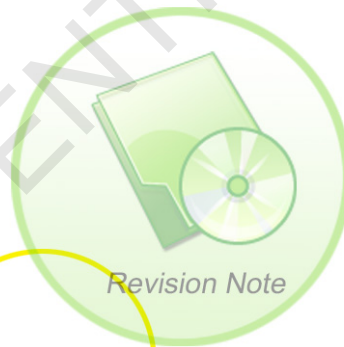
Series_TTS_Application Note_V1.02

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Version History

Version	Chapter	Comments
V1.00	New Version	
V1.01	2.2 AT+CTTS	Modify parameters of read command and write command
V1.02	2.2 AT+CTTS	Add write command
V1.02	3.6 TTS to wav format	Add TTS to wav format

Contents

1. Introduction

1.1 Overview

This document gives the usage of SIM7100/SIM7600CE-A/SIM7600CE-T/SIM7600I TTS functions. User can get useful information about the SIM7100/SIM7600CE-A TTS functions quickly through this document.

The TTS functions are provided in AT command format, and they are designed for customers to design their TTS applications easily. User can access these TTS AT commands through UART/ USB interface which communicates with SIM7100/SIM7600CE-A/SIM7600CE-T/SIM7600I module. Now Chinese and English languages can be supported.

2. TTS Related AT Commands

Below is the TTS associated with AT commands. Related.

Command	Description
At+CDTAM	Set TTS Play Path
AT+CTTS	TTS opteration
AT+CTTSPARAM	Set TTS parameters

2.1   AT+DTAM   Set Local or Remote Audio Play

AT+CDTAM Set TTS Play Path	
Test Command **AT+CDTAM=?**	Response +CDTAM: (0-1) **OK**
	No parameter
Read Command **AT+ CDTAM?**	Response **+ CDTAM: <status>** **OK**

	Parameter
	<status>
	    0 Local Path
	    1 Remote Path

Write Command **AT+CDTAM=< mode>**	Response +CDTAM: **OK**

	Parameter
	< mode >
	    0 Local Path
	    1 Remote Path

Reference	Note

2.2　AT+CTTS　TTS operation

AT+CTTS　TTS Operation	
Test Command **AT+CTTS=?**	Response **OK**
	No parameter
Read Command **AT+CTTS?**	Response **+CTTS: <status>** **OK**
	Parameter **<status>** 　　　0　　Idle status 　　　5　　Play status
Write Command **AT+CTTS=<mode>,<text>**	Response If <mode>is 0，return： +CTTS: **OK** If <mode>is 1 or 2，return: +CTTS: **OK** **+CTTS:0**　　*//speech synth and play end* **Note:** AT+CTTS? return value is 5 before the end of voice play (+ CTTS: 0) If error is related to MS functionality,response： **+CME ERROR: <err>**
	Parameter **<mode>** 　　　0　　Stop the speech synth and play 　　　1　　Start to synth and play, <text> is in UCS2 coding format. 　　　2　　Start to synth and play, <text> is in ASCII coding format, Chinese text is in GBK coding format **<text>**　　The text which is synthetized to speed to be played,maximum data length is 512 bytes. (including "")

Write Command AT+CTTS=<mode>,<text>,<filename>	Response If <mode>is 3，return： +CTTS: **OK** **+CTTS:0** *// transform end* If <mode>is 4，return: +CTTS: **OK** **+CTTS:0** *// transform end* **+CME ERROR: <err>**

	Parameter **<mode>**
	     0 TTS To wav format, <text> is in ASCII coding format, Chinese text is in GBK coding format
	     1 TTS To wav format, <text> is in UCS2 coding format.
	
	 <text> The text which is transformed to wav format,maximum data length is 512 bytes. (including "")
	
	 <filename> Saved location and name. The file should be put into the "E:/filename.wav".

Reference	Note

2.3　AT+CTTSPARAM　Set TTS Parameters

AT+CTTSPARAM	Set TTS Parameters
Test Command AT+CTTSPARAM =?	Response **+CTTSPARAM: (0-2), (0-3),(0-3),(0-2),(0-2)** **OK**
	No parameter
Read Command AT+CTTSPARAM ?	Response **+CTTS: <volume>,<sysvolume>,<digitmode>,<pitch>,<speed>** **OK**

Write Command **AT+ CTTSPARAM =\<volume\>[,\<sysvol ume\>[,\<digitmode\>[,\<pitch\>[,\<speed\>]]]**	Response **OK** If error is related to MS functionality,response: **+CME ERROR: \<err\>**

	Parameter
	\<volume\> TTS Speech Volume, 0-2
	          0 The mix volume
	          1 The normal volume
	          2 The max volume
	\< sysvolume\> The module system volume, 0-3
	          0 The mix system volume
	          1 The small system volume
	          2 The normal system volume
	          3 The max system volume
	\<digitmode\> The digit read mode 0-3
	          0 Auto read digit based on number rule first.
	          1 Auto read digit bases on telegram rule first.
	          2 Read digit based on telegram rule.
	          3 Read digit based on number rule.
	\<pitch\> The voice tone 0-2
	          0 The mix voice tone.
	          1 The normal voice tone.
	          2 The max voice tone.
	
	\<speed\> The voice speed 0-2
	          0 The mix speed
	          1 The normal speed
	          2 The max speed

Reference	Note

3. TTS Application example

Below is the TTS associated with application examples

3.1 Set Local or Remote Audio Play

AT+ CDTAM =1   //Set Remote Path
+CDTAM:

OK

AT+ CDTAM =0   //Set Local Path
+CDTAM:

OK

3.2   Play synthetic speech with UCS2 text

AT+CTTS=1,"6B228FCE4F7F75288BED97F3540862107CFB7EDF"
+CTTS:

OK
+CTTS:0

//note:txt UCS2 coding format.
//note:speech synthetic successful，the tts voice will play with the current channel。
//note:Speech played over,User need s to waiting this response to play the next speech!

3.3   Play synthetic speech with normal text

AT+CTTS=2,"hello，欢迎使用语音合成系统"
+CTTS:

OK
+CTTS:0

//note:txt ASIIC coding format，chinese is GBK coding format。
//note:speech synthetic successful，the tts voice will play with the current channel。
//note:Speech played over,User need s to waiting this response to play the next speech!

3.4   Stop the synthetic speech

AT+CTTS=0
+CTTS:

//note:stop playing synthetic speech.
//note:synthetic

OK   *speech.is successful end*

3.5   Set the speech parameters

AT+CTTSPARAM=1,3,0,1,1   *//note:set   the   speech parameters*

OK   *//note:set the successful for parameter.*

3.6   TTS to wav format

AT+CTTS=3,"欢迎使用语音合成系统","E:/tts.wav"   *//note:txt ASIIC coding format，chinese is GBK coding format。*
+CTTS:

OK   *//note: transform end*
+CTTS:0

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