

EC2x&EG9x TTS

Application Note

LTE Module Series

Rev. EC2x&EG9x_TTS_Application_Note_V1.0

Date: 2018-10-15

Status: Released



Our aim is to provide customers with timely and comprehensive service. For any assistance, please contact our company headquarters:

Quectel Wireless Solutions Co., Ltd.

7th Floor, Hongye Building, No.1801 Hongmei Road, Xuhui District, Shanghai 200233, China

Tel: +86 21 5108 6236

Email: info@quectel.com

Or our local office. For more information, please visit:

<http://www.quectel.com/support/sales.htm>

For technical support, or to report documentation errors, please visit:

<http://www.quectel.com/support/technical.htm>

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About the Document

History

Revision	Date	Author	Description
1.0	2018-10-15	Duke XIN/ Ketrn WANG	Initial

Contents

About the Document	2
Contents	3
Table Index	4
1 Introduction	5
2 Description of TTS AT Commands	6
2.1. AT+QTTS Start/Stop TTS	6
2.2. AT+QWTTTS Play TTS during a Voice Call	7
2.3. AT+QTTSETUP Set/Get TTS Parameters.....	9
3 Summary of Error Codes.....	12
4 Appendix A References	13

Table Index

TABLE 1: SUMMARY OF ERROR CODES	12
TABLE 2: RELATED DOCUMENT	13
TABLE 3: TERMS AND ABBREVIATIONS	13

1 Introduction

This document describes how to use the TTS function of Quectel EC2x&EG9x modules. Customers can input text and output speech by using this function via the auxiliary channel of the module.

This document is applicable to following Quectel modules.

- EC2x (including EC25, EC21, EC20 R2.0 and EC20 R2.1)
- EG9x (including EG91 and EG95)

2 Description of TTS AT Commands

2.1. AT+QTTS Start/Stop TTS

The command starts or stops the function of broadcasting text.

AT+QTTS Start/Stop TTS	
Test Command AT+QTTS=?	Response +QTTS: (0-2),<text> OK
Read Command AT+QTTS?	Response +QTTS: <status> OK
Write Command AT+QTTS=<mode>[,<text>]	Response OK If there is any error related to ME functionality: +CME ERROR: <err> Report when broadcasting text is over: +QTTS: 0

Parameter

<mode>	Start or stop TTS, and define the format of text. 0 Stop TTS, and <text> is omitted. 1 Start TTS, and <text> is in UCS2 format. 2 Start TTS, and <text> can be inputted directly. Normal characters are in ASCII format and Chinese characters are in GBK.
<text>	Text to be played. The format depends on <mode>. The maximum length is 960 bytes.
<status>	TTS status. 0 Idle 1 Playing

Example

AT+QTTS=?	//Query the parameters
+QTTS: (0-2),<text>	
OK	
AT+ QTTS?	//Query the current state
+QTTS: 0	
OK	
AT+QTTS=1,"6B228FCE4F7F752879FB8FDC6A215757"	//Start to play text encoded in UNICODE
OK	
+QTTS: 0	
AT+QTTS=2,"Welcome to use the module of QUECTEL"	//Start to play text encoded in ASCII
OK	
+QTTS: 0	
AT+QTTS=2,"欢迎使用移远模块!"	//Start to play text encoded in GBK
OK	
+QTTS: 0	
AT+QTTS=2,"Welcome to use the module of QUECTEL"	
AT+QTTS=0	//Stop TTS when playing it
OK	
+QTTS: 4111	//Module would report URC "4111"

NOTE

URC "4111" means TTS or WTTS is interrupted when it is played.

2.2. AT+QWTTTS Play TTS during a Voice Call

AT+QWTTTS Play TTS during a Voice Call

Test Command	Response
AT+QWTTTS=?	+QWTTTS: (0,1),(0,1),(0-2),<text>
	OK

Read Command AT+QWTTTS?	Response +QWTTTS: <status> OK
Write Command AT+QWTTTS=<ulmute>,<dlmute>,<mode>[,<text>]	Response OK If there is any error related to ME functionality: +CME ERROR: <err> Report when broadcasting text is over: +QWTTTS: 0

Parameter

<ulmute>	Uplink mute. The range is 0~1. 0 Enable mute 1 Disable mute
<dlmute>	Downlink mute. The range is 0~1. 0 Enable mute 1 Disable mute
<mode>	Start or stop TTS, and define the format of text. 0 Stop TTS, and <text> is omitted. 1 Start TTS, and <text> is in UCS2 format. 2 Start TTS, and <text> can be inputted directly. Normal characters are in ASCII format and Chinese characters are in GBK.
<text>	Text to be played. The format depends on <mode>. The maximum length is 960 bytes.
<status>	TTS status. 0 Idle 1 Playing

NOTES

1. This command must be executed during a voice call.
2. Hex string should be placed in big-endian sequence if <mode> is 2.
3. Some module versions only support English TTS library.

Example

```
AT+QWTTTS=? //Query parameters
+QWTTTS: (0,1),(0,1),(0-2),<text>

OK
AT+QWTTTS? //Query the current state
```

```
+QWTTTS: 0

OK
AT+QWTTTS=1,1,1,"6B228FCE4F7F752879FB8FDC6A215757"//Start to play text encoded in UNICODE
OK

+QWTTTS: 0
AT+QWTTTS=1,1,2,"Welcome to use the module of QUECTEL" //Start to play text encoded in ASCII
OK
+QTTS: 0

AT+QWTTTS=1,1,2,"欢迎使用移远模块!" //Start to play text encoded in GBK
OK

+QWTTTS: 0

AT+QWTTTS=1,1,2,"Welcome to use the module of QUECTEL"
AT+QWTTTS=0,0,0 //Stop TTS during a voice call
OK

+QTTS: 4111 //Module would report URC "4111"
```

NOTE

URC "4111" means TTS or WTTTS is interrupted when it is played.

2.3. AT+QTTSETUP Set/Get TTS Parameters

The command adjusts the TTS speed and volume of broadcasting.

AT+QTTSETUP Set/Get TTS Parameters

Test Command AT+QTTSETUP=?	Response +QTTSETUP: (1,2),(1-3),(-32768~32767) OK
Read Command AT+QTTSETUP?	Response OK
Write Command AT+QTTSETUP=<mode>,<ID>[,<value> >]	Response If the <value> is omitted, the current configuration is queried: +QTTSETUP: 2,<ID>,<value> OK

If <value> is inputted:

OK

Or

ERROR

Parameter

<mode>	Integer type. Set or query parameter values. 1 Set TTS parameters 2 Get TTS parameters
<ID>	Integer type. Parameter ID. Set speed or volume or language library. 1 Set TTS speed 2 Set TTS volume 3 Set TTS language library
<value>	When <ID>=1, the range is -32768~32767, and the default value is 0. When <ID>=2, the range is -32768~32767, and the default value is 0. When <ID>=3, the range is 0~1. 0 Support both Chinese and English TTS libraries, and Chinese pronunciation is the best. 1 Support only English TTS library When <mode> is 2, this parameter can be omitted.

NOTE

This command only supports getting TTS parameters when playing TTS, otherwise "ERROR" will be returned.

Example

```
AT+QTTSETUP=? //Query the parameters
+QTTSETUP: (1,2),(1-3),(-32768-32767)]
```

```
OK
AT+QTTSETUP? //Read command
OK
```

```
AT+QTTSETUP=1,1,-32768 //Set TTS speed
OK
```

```
AT+QTTS=1,"6B228FCE4F7F752879FB8FDC6A215757"
OK
```

```
AT+QTTSETUP=2,1 //Get TTS speed
```

+QTTSETUP: 2,1,-32768

OK

3 Summary of Error Codes

The error code <err> indicates an error related to mobile equipment or network. The details about <err> are described in the following table.

Table 1: Summary of Error Codes

<err>	Description of Error Codes
901	Audio unknown error
902	Audio invalid parameters
903	Audio operation not supported
904	Audio device busy

4 Appendix A References

Table 2: Related Document

SN	Document Name	Remark
[1]	Quectel_EC25&EC21_AT_Commands_Manual	EC25&EC21 AT Commands Manual
[2]	Quectel_EG9x_AT_Commands_Manual	EG9x AT Commands Manual

Table 3: Terms and Abbreviations

Abbreviation	Description
ASCII	American Standard Code for Information Interchange
GBK	Guo-Biao Kuozhan (Chinese Internal Code Extension Specification)
TTS	Text to Speech
UCS	Universal Coded Character Set