12 Audio Commands

12.1. AT+CLVL Loudspeaker Volume Level Selection

This command selects the volume of the internal loudspeaker of the MT.

AT+CLVL Loudspeaker Volume Level Selection	
Test Command **AT+CLVL=?**	Response **+CLVL: (**range of supported **<level>**s**)** **OK**
Read Command **AT+CLVL?**	Response **+CLVL: <level>** **OK**
Write Command **AT+CLVL=<level>**	Response **OK** Or **ERROR** If there is any error related to ME functionality: **+CME ERROR: <err>**
Maximum Response Time	300 ms
Characteristics	The command takes effect immediately. The configurations will be saved.
Reference 3GPP TS 27.007	

Parameter

<level>	Integer type. Volume level with manufacturer specific range (Smallest value represents the lowest sound level). Range: 0–5. Default: 3.
<err>	Error codes. For more details, please refer to ***Chapter 15.4***.

12.2. AT+CMUT Mute Control

This command enables/disables the uplink voice muting during a voice call.

AT+CMUT Mute Control	
Test Command **AT+CMUT=?**	Response **+CMUT: (**list of supported **<n>**s**)** **OK**
Read Command **AT+CMUT?**	Response **+CMUT: <n>** **OK**
Write Command **AT+CMUT=<n>**	Response **OK** Or **ERROR** If there is any error related to ME functionality: **+CME ERROR: <err>**
Maximum Response Time	300 ms
Characteristics	The command takes effect immediately. The configurations will not be saved and must be set during the call.
Reference 3GPP TS 27.007	

Parameter

<n>	Integer type.	
	0	Mute OFF
	1	Mute ON
<err>	Error codes. For more details, please refer to ***Chapter 15.4***.	

12.3. AT+QAUDLOOP Enable/Disable Audio Loop Test

This command enables/disables audio loop test.

AT+QAUDLOOP Enable/Disable Audio Loop Test	
Test Command **AT+QAUDLOOP=?**	Response **+QAUDLOOP: (**list of supported **<enable>**s**)** **OK**
Read Command **AT+QAUDLOOP?**	Response **+QAUDLOOP: <enable>** **OK**
Write Command **AT+QAUDLOOP=<enable>**	Response **OK** Or **ERROR**
Maximum Response Time	300 ms
Characteristics	The command takes effect immediately. The configurations will not be saved.

Parameter

<enable>	Integer type. To enable or disable audio loop test. 0 Disable audio loop test 1 Enable audio loop test
<err>	Error codes. For more details, please refer to ***Chapter 15.4***.

12.4. AT+VTS DTMF and Tone Generation

This command sends ASCII characters which cause MSC to transmit DTMF tones to a remote subscriber. This command can only be operated in voice call.

AT+VTS DTMF and Tone Generation	
Test Command **AT+VTS=?**	Response **+VTS: (**list of supported **<DTMF_string>**s**),(**range of supported of **<duration>**s**)** **OK**

Write Command **AT+VTS=<DTMF_string>[,<duration>]**	Response **OK** Or **ERROR** If there is any error related to ME functionality: **+CME ERROR: <err>**
Maximum Response Time	Depends on the length of **<DTMF_string>** and **<duration>**.
Characteristics	/
Reference 3GPP TS 27.007	

Parameter

<DTMF_string>	String type. ASCII characters in the set **0...9**, #, *****, **A**, **B**, **C**, **D**. The string should be enclosed in quotation marks ("..."). When sending multiple tones at a time, the time interval of two tones **<interval>** can be specified by **AT+VTD**. The maximal length of the string is 31.
<duration>	The duration of each tone in 1/10 seconds with tolerance. Range: 0–255. If the duration is less than the minimum time specified by the network, the actual duration will be the network specified time. If this parameter is omitted, **<duration>** is specified by **AT+VTD**.
<err>	Error codes. For more details, please refer to ***Chapter 15.4***.

Example

```
ATD12345678900;                  //Dial.
OK
//Call connect
AT+VTS="1"                       //The remote caller can hear the DTMF tone.
OK
AT+VTS="1234567890A"             //Send multiple tones at a time.
OK
```

12.5. AT+VTD Set Tone Duration

This command sets the duration of DTMF tones. It can also set time interval of two tones when sending multiple tones at a time.

AT+VTD Set Tone Duration	
Test Command **AT+VTD=?**	Response **+VTD: (**range of supported **<duration>**s**),(**range of supported of **<interval>**s**)** **OK**
Read Command **AT+VTD?**	Response **+VTD: <duration>,<interval>** **OK**
Write Command **AT+VTD=<duration>[,<interval>]**	Response **OK** Or **ERROR** If there is any error related to ME functionality: **+CME ERROR: <err>**
Maximum Response Time	300 ms
Characteristics	The command takes effect immediately. The configurations will not be saved.
Reference 3GPP TS 27.007	

Parameter

<duration>	The duration tone in 1/10 seconds with tolerance. Range: 0–255. Default value: 3. If the duration is less than the minimum time specified by the network, the actual duration will be network specified time.
<interval>	The time interval of two tones when sending multiple tones at a time by **AT+VTS**. Range: 0–255. Default: 0.
<err>	Error codes. For more details, please refer to ***Chapter 15.4***.

12.6. AT+QAUDMOD Set Audio Mode

This command sets the audio mode required for the connected device.

AT+QAUDMOD Set Audio Mode	
Test Command **AT+QAUDMOD=?**	Response **+QAUDMOD: (**range of supported **<mode>**s**)** **OK**
Read command **AT+QAUDMOD?**	Response **+QAUDMOD: <mode>** **OK**
Write Command **AT+QAUDMOD=<mode>**	Response **OK** If there is any error related to ME functionality: **+CME ERROR: <err>**
Maximum Response Time	300 ms
Characteristics	The command takes effect immediately. The configuration will be saved automatically.
Reference Quectel	

Parameter

<mode>	Integer type. Indicates the current configured audio mode. 0 Echo canceller, noise suppressor, digital gain and calibration parameter for handset 1 Echo canceller, noise suppressor, digital gain and calibration parameter for headset 2 Echo canceller, noise suppressor, digital gain and calibration parameter for speaker 3 Turn off all audio processing functions 4 Echo canceller, noise suppressor, digital gain and calibration parameter for Bluetooth 5 Echo canceller, noise suppressor, digital gain and calibration parameter for general audio modes
<err>	Error codes. For more details, please refer to ***Chapter 15.4***.

12.7. AT+QDAI Digital Audio Interface Configuration

This command configures the digital audio interface.

- When **<io>**=1, you can define the PCM formats. In the following conditions, the module can be used directly with default settings (master mode, short-synchronization, 2048 kHz clock frequency, 16-bit liner data format, 8 kHz sampling rate).
- When **<io>**=2, and the external codec chip linked with PCM interface is the NAU8814 model and configurable through the I2C.
- When **<io>**=3, and the external codec chip linked with PCM interface is the ALC5616 model and configurable through the I2C.
- When **<io>**=5, and the external codec chip linked with PCM interface is the TLV320AIC3104 model and configurable through the I2C.
- When **<io>**=6, and the external codec chip linked with PCM interface is the NAU8810 model and configurable through the I2C.

AT+QDAI Digital Audio Interface Configuration	
Test Command **AT+QDAI=?**	Response **+QDAI: (**range of supported **<io>**s**),(**list of supported **<mode>**s**),(**list of supported **<fsync>**s**),(**range of supported **<clock>**s**),(**range of supported **<format>**s**),(**list of supported **<sample>**s**),(**list of supported **<num_slots>**s**),(**range of supported **<slot_mapping>**s**)** **OK**
Read Command **AT+QDAI?**	Response **+QDAI: <io>[,<mode>,<fsync>,<clock>,<format>,<sample>,<num_slots>,<slot_mapping>]** **OK**
Write Command **AT+QDAI=<io>[,<mode>,<fsync>,<clock>[,<format>[,<sample>[,<num_slots>,<slot_mapping>]]]]**	Response **OK** Or **ERROR**
Maximum Response Time	300 ms
Characteristics	The command takes effect after module is rebooted. The configurations will be saved automatically.
Reference Quectel	

Parameter

<io>	Integer type. 1 Digital PCM output (customer defined) 2 Analog output (for audio codec NAU8814) 3 Analog output (for our default audio codec ALC5616) 4 Analog output (for audio codec MAX9860) 5 Analog output (for audio codec TLV320AIC3104) 6 Analog output (for audio codec NAU8810)
<mode>	Integer type. 0 Master mode 1 Slave mode
<fsync>	Integer type. 0 Primary mode (short-synchronization) 1 Auxiliary mode (long-synchronization)
<clock>	Integer type. Clock frequency. 0 128 kHz 1 256 kHz 2 512 kHz 3 1024 kHz 4 2048 kHz 5 4096 kHz
<format>	Integer type. Data format. 0 16-bit linear
<sample>	Integer type. Sampling rate. 0 8 kHz 1 16 kHz
<num_slots>	Integer type. Number of slot. Default: 1.
<slot_mapping>	Integer type. Slot mapping value. Range: 1–16.

NOTES

1. 4096 kHz clock frequency is only applicable for 16 kHz sampling rate.
2. 128 kHz clock frequency is not supported.
3. 8-bit a-law and 8-bit u-law data formats are not supported.
4. Bit per frame=**<clock>**/**<sample>**. For example, if **<clock>** is 2048 kHz and **<sample>** is 8 kHz, then bit per frame is 256. Bit per frame should be greater than 16.
5. When slave mode is selected, master and synchronization clock should be provided for the module.
6. When a recommended codec is selected and 16 kHz sampling rate is desired, please input **<sample>**. Currently only ALC5616 supports 16 kHz (**AT+QDAI=3,0,0,5,0,1,1,1**).
7. Project software versions with R07 (e.g. EG91NAXGA**R07**A03M1G_01.003.01.003) support automatically matching codec drivers, thus you cannot configure the digital audio interface with this command.

Example

```
AT+QDAI=?                       //Query the range.
+QDAI: (1-6),(0,1),(0,1),(0-5),(0-2),(0,1),(1),(1-16)

OK
AT+QDAI?                        //Query the current interface configuration.
+QDAI: 3,0,0,4,0,0,1,1

OK
AT+QDAI=1,1,0,4,0,0,1,1         //Set AUX PCM interface to slave, short-synchronization, 8 kHz sample
                                  and 2048 kHz BCLK.
OK
```

12.8. AT+QEEC Set Echo Cancellation Parameters

This command sets echo cancellation parameters.

AT+QEEC Set Echo Cancellation Parameters	
Test Command **AT+QEEC=?**	Response **+QEEC: (**range of supported **<index>**s**),(**range of supported **<value>**s**)** **OK**
Read Command **AT+QEEC?**	Response **+QEEC: <index>,<value>** **.....** **+QEEC: <index>,<value>** **OK**
Write Command **AT+QEEC=<index>,<value>**	Response **OK** Or **ERROR**
Characteristics	The command takes effect immediately. The configurations will not be saved.

Parameter

<index>	Integer type. Indicates the parameter's index. Range: 0–50.
<value>	Integer type. Indicates the parameter's value. Range: 0–65535.

Example

```
AT+QEEC=?           //Query the range.
+QEEC: (0-50),(0-65535)

OK
AT+QEEC=6,1234      //Set the value of index 6 to 1234.
OK
```

12.9. AT+QSIDET Set the Side Tone Gain in Current Mode

This command sets the side tone gain value in current mode.

AT+QSIDET Set the Side Tone Gain in Current Mode	
Test Command **AT+QSIDET=?**	Response **+QSIDET: (**range of supported **<st_gain>**s**)** **OK**
Read Command **AT+QSIDET?**	Response **+QSIDET: <st_gain>** **OK**
Write Command **AT+QSIDET=<st_gain>**	Response **OK** Or **ERROR**
Maximum Response Time	300 ms
Characteristics	The configuration takes effect at next sound activity. The configuration would not be saved.
Reference Quectel	

Parameter

<st_gain>	Integer type. Indicates the configured side tone gain in current mode. Range: 0–65535. Default: 0.

12.10. AT+QMIC Set Uplink Gains of Microphone

This command sets the uplink gains of microphone.

AT+QMIC Set Uplink Gains of Microphone	
Test Command **AT+QMIC=?**	Response **+QMIC: (**range of supported **<txgain>**s**),(**range of supported **<txdgain>**s**)** **OK**
Read Command **AT+QMIC?**	Response **+QMIC: <txgain>,<txdgain>** **OK**
Write Command **AT+QMIC=<txgain>[,<txdgain>]**	Response **OK** Or **ERROR**
Maximum Response Time	300 ms
Characteristics	The command takes effect immediately. The configurations will be saved.

Parameter

<txgain>	Integer type. Indicates uplink codec gain. Range: 0–65535. The default value might be different in different audio modes.
<txdgain>	Integer type. Indicates uplink digital gain. Range: 0–65535. The default value might be different in different audio modes.

12.11. AT+QRXGAIN Set Downlink Gains of RX

This command sets RX digital gains to change the downlink volume.

AT+QRXAGIN Set Downlink Gains of RX	
Test Command **AT+QRXGAIN=?**	Response **+QRXGAIN: (**range of supported **<rxgain>**s**)** **OK**

Read Command **AT+QRXGAIN?**	Response **+QRXGAIN: <rxgain>** **OK**
Write Command **AT+QRXGAIN=<rxgain>**	Response **OK** Or **ERROR**
Maximum Response Time	300 ms
Characteristics	The command takes effect immediately. The configuration will not be saved.

Parameter

<rxgain>	Integer type. Downlink digital gains. Range: 0–65535. The default value varies depending on audio modes.

Example

```
AT+QRXGAIN=?
+QRXGAIN: (0-65535)

OK
AT+QRXGAIN?                 //Query the current configuration.
+QRXGAIN: 20577

OK
AT+QRXGAIN=8192             //Set digital gain to 8192.
OK
AT+QRXGAIN?                 //Query the current configuration.
+QRXGAIN: 8192

OK
```

12.12. AT+QIIC Read and Write Codec via IIC

This command configures the codec via IIC interface.

AT+QIIC Read and Write Codec via IIC	
Test Command **AT+QIIC=?**	Response **+QIIC: (**list of supported **<rw>**s**),(**range of supported **<device>**s**),(**range of supported **<addr>**s**),(**list of supported **<bytes>**s**),(**range of supported **<value>**s**)** **OK**
Write Command **AT+QIIC=<rw>,<device>,<addr>,<bytes>[,<value>]**	Response If **<rw>**=0, all configuration parameters should be specified: **OK** If **<rw>**=1, **<value>** should be omitted: **+QIIC: <value>** **OK**
Maximum Response Time	300 ms
Characteristics	The command takes effect immediately. The configurations will not be saved.

Parameter

<rw>	Integer type. 0 Write command 1 Read command
<device>	Hex integer type. 0-0xFF 7-bit device address
<addr>	Hex integer type. 0-0xFF Register address
<bytes>	Integer type. Length of the read or write bytes. Range: 1–2.
<value>	Hex integer type. 0-0xFFFF Data value

Example

```
AT+QIIC=1,0x1B,0x00,2          // Read register value, slave address: 0x1B, register
                                  address: 0x00, read two bytes.
+QIIC: 0x0021

OK
```

AT+QIIC=0,0x1B,0x00,2,0x0000	//Write register value, slave address: 0x1B, register address: 0x00, write two bytes.
OK	

12.13. AT+QTONEDET Enable/Disable DTMF Detection

This command enables or disables DTMF detection. If this function is enabled, DTMF tones sent by the other side are detected and reported on the assigned serial port.

AT+ QTONEDET Enable/Disable DTMF Detection	
Test Command **AT+QTONEDET=?**	Response **+QTONEDET: (**list of supported **<enable>**s**)** **OK**
Read Command **AT+QTONEDET?**	Response **+QTONEDET: <enable>** **OK**
Write Command **AT+QTONEDET=<enable>**	Response **OK** Or **ERROR**
Maximum Response Time	300 ms
Characteristics	The command takes effect immediately. The configuration will not be saved.

Parameter

<enable>	Integer type. Enable or disable DTMF detection.	
	0	Disable
	1	Enable

NOTE

DTMF characters - ASCII:

DTMF	ASCII	DTMF	ASCII
0	48	8	56
1	49	9	57
2	50	A	65
3	51	B	66

4	52	C	67
5	53	D	68
6	54	*	42
7	55	#	35

12.14. AT+QLDTMF Play Local DTMF

This command plays a local DTMF string. The maximum length of a local DTMF string is 20 characters. It can also be used to stop playing local DTMF.

AT+QLDTMF Play Local DTMF	
Test Command **AT+QLDTMF=?**	Response **+QLDTMF: (**range of supported **<n>**s**),(**list of supported **<DTMF_string>**s**)** **OK**
Write Command **AT+QLDTMF=<n>,<DTMF_string>[,<y>]**	Response **OK** Or **ERROR** If error is related to ME functionality: **+CME ERROR: <err>** After the DTMF string is completely played: **+QLDTMF:5**
Execute Command Stop playing the DTMF string **AT+QLDTMF**	Response **OK**
Maximum Response Time	300 ms
Characteristics	The command takes effect immediately. The configurations will not be saved.

Parameter

<n>	Integer type. Indicates every DTMF's play time and mute time. Range: 1–1000. Unit: 1/100 second when **<y>**=1, or 1/10 second when **<y>** is not set.
<DTMF_string>	String type. DTMF string. Maximum length: 20 characteristics (separated by comma). DTMF format: 0-9,*, #, A-D.

<y>	Integer type. If this parameter is omitted, the unit of **<n>** is 1/10 second. If this parameter is specified to 1, the unit of **<n>** is 1/100 second.
<err>	Error codes. For more details, please refer to ***Chapter 15.4***.

Example

```
AT+QLDTMF=?
+QLDTMF: (1-1000),(0-9,*,#,A-D)

OK
AT+QLDTMF=2,"A,B,1,2,#"          //Play local DTMF string A,B,1,2,#, and the ON & mute time is 200 ms.

OK
AT+QLDTMF                        //Stop playing local DTMF.
OK
```

12.15. AT+QWDTMF Play or Send DTMF Files to Far End

This command plays or sends DTMF files to far end during a call.

AT+QWDTMF Play or Send DTMF Files to Far End	
Test Command **AT+QWDTMF=?**	Response **+QWDTMF: (**list of supported **<ulmute>**s**),(**list of supported **<dlmute>**s**),(**list of supported **<DTMF_string>**s**),(**range of supported **<duration>**s**),(**range of supported **<pause>**s**)** **OK**
Read Command **AT+QWDTMF?**	Response **+QWDTMF: <status>** **OK**
Write Command **AT+QWDTMF=<ulmute>,<dlmute>,<DTMF_string>,<duration>,<pause>**	Response **OK** After the DTMF playing is completed: **+QWDTMF: 6** Or **ERROR**
Maximum Response Time	300 ms
Characteristics	/

Parameter

<ulmute>	Integer type. Whether to mute uplink DTMF or not. 0 Mute 1 Not mute
<dlmute>	Integer type. Whether to mute downlink DTMF or not. 0 Mute 1 Not mute
<DTMF_string>	String type. DTMF string. Maximum length: 16 characters (separated by comma). DTMF format: 0–9,*,#,A–D,E(1400 Hz),F(2300 Hz),G(1000 Hz).
<duration>	Integer type. DTMF play time in milliseconds. Range: 55–1000.
<status>	Integer type. Status of the DTMF player. 0 Idle 1 Busy
<pause>	Integer type. Interval of playing DTMF. Range: 55–1000.

Example

```
AT+QWDTMF=?
+QWDTMF: (0,1),(0,1),(0-9,*,#,A-G),(1-1000)

OK
AT+QWDTMF=1,1,"A,B,1,2,#",100          //Play DTMF string A,B,1,2,# and send it to far end
                                         during a call.

OK
+QWDTMF: 6                             //DTMF playing is completed.
AT+QWDTMF?                             //Query DTMF player status.
+QWDTMF: 0

OK
```

12.16. AT+QLTONE Play a Local Customized Tone

This command plays a local customized tone. **<period_on>** indicates play time, **<period_off>** indicates mute time, and **<duration>** indicates total time.

AT+QLTONE Play a Local Customized Tone	
Test Command **AT+QLTONE=?**	Response **+QLTONE: (**list of supported **<mode>**s**),(**range of supported **<frequency>**s**),(**range of supported **<period_on>**s**),(**range of supported **<period_off>**s**),(**range of supported **<duration>**s**)**

	OK
Write Command **AT+QLTONE=<mode>[,<frequency>,<period_on>,<period_off>,<duration>]**	Response **OK** Or **ERROR** If error is related to ME functionality: **+CME ERROR: <err>** After the tone is completely played: **+QLTONE: 0**
Execution Command Stop playing the local customized tone. **AT+QLTONE**	Response **OK** Or **ERROR**
Maximum Response Time	300 ms
Characteristics	The command takes effect immediately. The configurations will not be saved.

Parameter

<mode>	Integer type. 0 Stop playing 1 Start playing
<frequency>	Integer type. Tone's frequency. Range: 100–4000. Unit: Hz.
<period_on>	Integer type. Tone's play time. Range: 0–1000. Unit: ms.
<period_off>	Integer type. Tone's mute time. Range: 0–1000. Unit: ms.
<duration>	Integer type. Tone's total time. Range: 0–15300000. Unit: ms.
<err>	Error codes. For more details, please refer to ***Chapter 15.4***.

Example

```
AT+QLTONE=?
+QLTONE: (0,1),(100-4000),(0-1000),(0-1000),(0-15300000)

OK
AT+QLTONE=1,1000,200,300,3000     //Play a 1000 Hz tone, play time is 200 ms and mute time is 300 ms. Total time is 3000 ms.
OK

+QLTONE: 0
```

```
AT+QLTONE=0                    //Stop playing.
OK
```

12.17. AT+QAUDRD Record Media File

This command records the uplink or downlink speech during a voice call or sound from local microphone in idle state and saves it to files.

AT+QAUDRD Record Media File	
Test Command **AT+QAUDRD=?**	Response **+QAUDRD: (**list of supported of **<state>**s**),"filename",(**list of supported **<format>),(**list of supported **<dlink>**s**)** **OK**
Read Command **AT+QAUDRD?**	Response **+QAUDRD: <state>** **OK**
Write Command **AT+QAUDRD=<control>[,<filename>[,<format>[,<dlink>]]]**	Response **OK** Or **ERROR** If error is related to ME functionality: **+CME ERROR: <err>**
Maximum Response Time	300 ms
Characteristics	/

Parameter

<state>	Integer type.	
	0	Module is not recording media file
	1	Module is recording media file
<control>	Integer type.	
	0	Stop recording
	1	Start recording
<filename>	String type. Name of the recorded media file.	
<format>	Integer type. Format of the file.	
	3	FORMAT_AMR

	13 WAV_PCM16
<dlink>	Integer type. Record the uplink or downlink sound. 0 Record uplink sound 1 Record downlink sound
<err>	Error codes. For more details, please refer to ***Chapter 15.4***.

NOTES

1. **<filename>** is the path used to save the recording file, and the default path is */data/ufs* directory.
2. EC2x, EG9x, EG2x-G and EM05 series modules support playing media file in wav or amr format with 8 kHz and 16 kHz sampling frequency, mono, and 16-bit quantization.
3. If the recording file's name and format are same with that of an existing file or an unknown error occurs, the module reports **+QAUDRIND: 0,1**.
4. If the current recording is interrupted by other audio task, the module reports **+QAUDRIND: 0,6**.
5. If there is no space to record, the module reports **+QAUDRIND: 0,3**.
6. The module supports recording uplink and downlink audio data, but not simultaneous recording.
7. This command returns an error if the file format is inconsistent with the file extension.

Table 8: The Description of <code> in URC +QAUDRIND: 0,<code>

<code>	Meaning
0	Reserved
1	Unknown error
3	No space to record
6	Interrupted by other audio task

Example

```
AT+QAUDRD=1,"A.wav",13,0        //Record the uplink sound in wav format, and store it in UFS.
OK
AT+QAUDRD=0                     //Stop the recording.
OK
AT+QAUDRD=1,"B.wav",13,1        //Record the downlink sound in wav format, and store it in UFS.
OK
AT+QAUDRD=0                     //Stop the recording.
OK
```

12.18. AT+QPSND Play WAV File

This command plays local wave file.

AT+QPSND Play WAV File	
Test Command **AT+QPSND=?**	Response **+QPSND: (**list of supported **<control>**s**),"filename",(**list of supported **<repeat>**s**),(**list of supported **<ulmute>**s**),(**list of supported **<dlmute>**s**)** **OK**
Read Command **AT+QPSND?**	Response **+QPSND: <state>** **OK**
Write Command **AT+QPSND=<control>,<filename>,<repeat>[,<ulmute>[,<dlmute>]]**	Response **OK** Or **ERROR** If error is related to ME functionality: **+CME ERROR: <err>** After the playing is finished: **+QPSND: 0**
Maximum Response Time	300 ms
Characteristics	/

Parameter

<state>	Integer type. 0 Module is not playing local Audio file 1 Module is playing local Audio file
<control>	Integer type. 0 Stop playing local Audio file 1 Start playing local Audio file
<filename>	String type. Name of the file to be played.
<repeat>	Integer type. Repeat playing or not. 0 Play only once 1 Repeat playing

<ulmute>	Integer type. Mute uplink or not. 0 Mute 1 Not mute
<dlmute>	Integer type. Mute downlink or not. 0 Mute 1 Not mute
<err>	Error codes. For more details, please refer to ***Chapter 15.4***.

NOTES

1. **<filename>** includes file path, file name and file suffix. The default playing path is */data/ufs*.
2. EC2x, EG9x, EG2x-G and EM05 series modules support playing media file in wav, amr or mp3 format with 8 kHz and 16 kHz sampling frequency, mono, and 16-bit quantization.

Example

```
AT+QPSND=1,"A.wav",0                //Play a wave file stored in UFS.
OK

+QPSND: 0
AT+QPSND=1,"A.wav",0,1,1            //Play a wave file to far end when a call is ongoing.
OK

+QPSND: 0
```

12.19. AT+QTTS Play Text

This command plays text.

AT+QTTS Play Text	
Test Command **AT+QTTS=?**	Response **+QTTS: (**range of supported **<mode>**s**),<text>** **OK**
Read Command **AT+QTTS?**	Response **+QTTS: <status>** **OK**
Write Command **AT+QTTS=<mode>[,<text>]**	Response **OK**

	Or **ERROR** If error is related to ME functionality: **+CME ERROR: <err>** After the playing is finished: **+QTTS: 0**
Maximum Response Time	300 ms
Characteristics	The command takes effect immediately. The configurations will not be saved.

Parameter

<mode>	Integer type. Start/stop playing, and specify **<text>** format. 0 Stop playing, and **<text>** can be omitted. 1 Start playing, and **<text>** is UCS2 encoding. 2 Start playing, and **<text>** is character(s): ASCII normally, GBK encoding in Chinese.
<text>	String type. Text to be played. The text format varies depending on **<mode>**. Maximum length: 548 bytes.
<status>	Integer type. The status of the TTS player. 0 Idle 1 Busy
<err>	Error codes. For more details, please refer to ***Chapter 15.4***.

NOTES

1. The module supports playing TTS with **AT+QTTS** or **AT+QWTTS** during a non-call process.
2. The TTS is terminated when calling.
3. The module supports playing TTS and audio, but not simultaneously.

Example

```
AT+QTTS=?
+QTTS: (0-2),<text>

OK
AT+QTTS=1,"6B228FCE4F7F752879FB8FDC6A215757"//Play a UCS2 string.
OK

+QTTS: 0
AT+QTTS=2,"hello world,你好"                    //Play a ASCII string.
```

```
OK

+QTTS: 0
AT+QTTS=0                                   //Stop playing.
OK
```

12.20. AT+QTTSETUP Set TTS

This command sets the TTS speed and adjusts the volume.

AT+QTTSETUP Set TTS	
Test Command **AT+QTTSETUP=?**	Response **+QTTSETUP: (**list of supported **<mode>**s**),(**list of supported **<ID>**s**),(**range of supported **<value>**s**)** **OK**
Read Command **AT+QTTSETUP?**	Response **OK**
Write Command **AT+QTTSETUP=<mode>,<ID>[,<value>]**	Response **OK** Or **ERROR** If there is any error related to ME functionality: **+CME ERROR: <err>**
Maximum Response Time	300 ms
Characteristics	The command takes effect immediately. The configurations will not be saved.

Parameter

<mode>	Integer type. 1 Write the value of parameters 2 Read the value of parameters
<ID>	Integer type. 1 Set/read the speed 2 Set/read the volume
<value>	Integer type. Speed or volume value. If **<mode>**=2, please omit the value in the Write Command.

	TTS speed. Range: -32768–32767. Default: 0.
	TTS volume. Range: -32768–32767. Default: 0.
<err>	Error codes. For more details, please refer to ***Chapter 15.4***.

Example

```
AT+QTTSETUP=?
+QTTSETUP: (1,2),(1,2),(-32768~32767)

OK
AT+QTTSETUP=1,2,0                    //Set the volume to 0.
OK
```

12.21. AT+QWTTS Play Text or Send Text To Far End

This command plays text or sends text to far end when telephoning.

AT+QWTTS Play Text Or Send Text To Far End	
Test Command **AT+QWTTS=?**	Response **+QWTTS: (**list of supported **<ulmute>**s**),(**list of supported **<dlmute>**s**),(**range of supported **<mode>**s**),<text>** **OK**
Read Command **AT+QWTTS?**	Response **+QWTTS: <status>** **OK**
Write Command **AT+QWTTS=<ulmute>,<dlmute>,<mode>,<text>**	Response **OK** Or **ERROR** If error is related to ME functionality: **+CME ERROR: <err>** After the playing is completed: **+QWTTS: 0**
Maximum Response Time	300 ms
Characteristics	The command takes effect immediately. The configurations will not be saved.

Example

<ulmute>	Integer type. Whether to mute uplink volume or not. 0 Mute 1 Not mute
<dlmute>	Integer type. Whether to mute downlink volume or not. 0 Mute 1 Not mute
<mode>	Integer type. Start/stop playing, and specify **<text>** format. 0 Stop playing, and **<text>** can be omitted 1 Start playing, and **<text>** is UCS2 encoding 2 Start playing, and **<text>** is character(s), ASCII normally, GBK encoding in Chinese
<text>	String type. Text to be played. The text format varies with **<mode>**. Maximum length: 543 bytes.
<status>	Integer type. Status of the TTS player. 0 Idle 1 Busy
<err>	Error codes. For more details, please refer to ***Chapter 15.4***.

NOTES

1. Reporting **+QWTTS: 4111** means that TTS is interrupted by a call event.
2. In the non-call state, playing TTS reports **+CME ERROR: 903**.
3. In the call state, after muting the uplink and downlink volume, playing TTS reports **+CME ERROR: 903.**
4. If **<ulmute>** and **<dlmute>** are set to invalid values, the module reports **+CME ERROR: 902**.
5. The module supports playing txt characters, and the maximum length is 543 bytes.
6. When playing empty characters, the module reports **+CME ERROR: 902**.

Example

```
AT+QWTTS=?
+QWTTS:(0,1),(0,1),(0-2),<text>

OK
AT+QWTTS=1,1,1,"6B228FCE4F7F752879FB8FDC6A215757"   //Play an UCS2 string and send it to far end during a call.

OK

+QWTTS: 0                                           //The playing is completed.
AT+QWTTS=1,0,2,"hello world,你好"                    //Play an ASCII string to far end during a call.
OK
```

+QWTTS: 0	//The playing is completed.
AT+QWTTS=1,0,0	//Stop playing.
OK	

12.22. AT+QAUDCFG Query and Configure Audio Tuning Process

This command queries and configures various audio tunning process.

AT+QAUDCFG Query and Configure Audio Tuning Process	
Test Command **AT+QAUDCFG=?**	Response **+QAUDCFG: "alc5616/dlgain",(**range of supported**<level>**s**)** **+QAUDCFG: "alc5616/ulgain",(**range of supported**<level>**s**)** **+QAUDCFG: "tonevolume",(**range of supported **<tone_volume>**s**)** **+QAUDCFG: "alc5616/pwrctr",(**list of supported**<enable>**s**)** **+QAUDCFG: "nau8814/dlgain",(**list of supported**<level>**s**)** **+QAUDCFG: "nau8814/aoutput",(**list of supported**<level>**s**)** **+QAUDCFG: "encgain",(**list of supported**<control>**s**),(**range of supported**<gain>**s**)** **+QAUDCFG: "voltedtmfcfg",(**range of supported**<duration>**s**),(**range of supported**<volume>**s**)** **+QAUDCFG: "decgain",(**range of supported**<gain>**s**)** **+QAUDCFG: "fns",(**list of supported **<fns>**s**),(**list of supported **<enable>**s**)** **+QAUDCFG: "nau8810/config",(**range of supported **<addr>**s**),(**range of supported **<value>**s**),...** **OK**
Maximum Response Time	300 ms

12.22.1. AT+QAUDCFG="alc5616/dlgain" Set the Downlink Gain Level for Codec ALC5616

This command sets or queries the downlink gain level for codec ALC5616.

AT+QAUDCFG="alc5616/dlgain" Set the Downlink Gain Level for Codec ALC5616	
Write Command **AT+QAUDCFG="alc5616/dlgain"[,<level>]**	Response If the optional parameter is omitted, query the current configuration: **+QCFG: "alc5616/dlgain",<level>**

	OK If the optional parameter is specified, set the downlink gain level: **OK** Or **ERROR** If there is any error related to ME functionality: **+CME ERROR: <err>**
Maximum Response Time	300 ms
Characteristics	The command takes effects immediately. The configuration will not be saved.

Parameter

<level>	Integer type. Downlink gain of ALC5616. Range: 0–100. Default: 79.
<err>	Error codes. For more details, please refer to ***Chapter 15.4***.

Example

```
AT+QAUDCFG="alc5616/dlgain",85          //Set downlink gain to 85.
OK
AT+QAUDCFG="alc5616/dlgain"             //Query the current downlink gain.
+QCFG: "alc5616/dlgain", 85

OK
```

12.22.2. AT+QAUDCFG="alc5616/ulgain" Set the Uplink Gain Level for Codec ALC5616

This command sets or queries uplink gain level for codec ALC5616.

AT+QAUDCFG="alc5616/ulgain" Set the Uplink Gain Level for Codec ALC5616	
Write Command **AT+QAUDCFG="alc5616/ulgain"[,<level>]**	Response If the optional parameter is omitted, query the current configuration: **+QCFG: "alc5616/ulgain",<level>** **OK**

	If the optional parameter is specified, set the uplink gain level: **OK** Or **ERROR** If there is any error related to ME functionality: **+CME ERROR: <err>**
Maximum Response Time	300 ms
Characteristics	The command takes effects immediately. The configuration will not be saved.

Parameter

<level>	Integer type. Uplink gain of ALC5616. Range: 0–100. Default: 73.
<err>	Error codes. For more details, please refer to ***Chapter 15.4***.

Example

```
AT+QAUDCFG="alc5616/ulgain",85          //Set uplink gain to 85.
OK
AT+QAUDCFG="alc5616/ulgain"             //Query the current uplink gain.
+QCFG: "alc5616/ulgain", 85

OK
```

12.22.3. AT+QAUDCFG="tonevolume" Set the Tone Volume

This command sets or queries the tone volume.

AT+QAUDCFG="tonevolume" Set the Tone Volume	
Write Command **AT+QAUDCFG="tonevolume"[,<tone_volume>]**	Response If the optional parameter is omitted, query the current configuration: **+QCFG: "tonevolume",<tone_volume>** **OK** If the optional parameter is specified, set the tone volume: **OK** or **ERROR**

	If there is any error related to ME functionality: **+CME ERROR: <err>**
Maximum Response Time	300 ms
Characteristics	The command takes effects immediately. The configuration will be saved automatically.

Parameter

<tone_volume>	Integer type. Tone volume value. Range: 0–100. Default: 10.
<err>	Error codes. For more details, please refer to ***Chapter 15.4***.

Example

```
AT+QAUDCFG="tonevolume",10      //Set the tone of volume to 10.
OK
AT+QAUDCFG="tonevolume"         //Query the current volume.
+QCFG: "tonevolume",10

OK
```

12.22.4. AT+QAUDCFG="alc5616/pwrctr" Enable/Disable the Power Reset

This command enables or disables the power reset when the codec power is reset to the MX-66h register.

AT+QAUDCFG="alc5616/pwrctr" Enable/Disable the Power Reset	
Write Command **AT+QAUDCFG="alc5616/pwrctr"[,<enable>]**	Response If the optional parameter is omitted, query the current configuration: **+QCFG: "alc5616/pwrctr",<enable>** **OK** If the optional parameter is specified, enable/disable the power reset **OK** Or **ERROR** If there is any error related to ME functionality: **+CME ERROR: <err>**
Maximum Response Time	300 ms

Characteristics	The command takes effects immediately. The configuration will not be saved.

Parameter

<enable>	Integer type. Enable/disable the power reset when the codec power is reset to the MX-66h register. 0 Disable 1 Enable
<err>	Error codes. For more details, please refer to ***Chapter 15.4***.

Example

```
AT+QAUDCFG=?
+QAUDCFG: "alc5616/pwrctr",(0-1)

OK
AT+QAUDCFG="alc5616/pwrctr",1          //Enable the power reset.
OK
AT+QAUDCFG="alc5616/pwrctr"            //Query the current configuration.
+QCFG: "alc5616/pwrctr", 1

OK
```

12.22.5. AT+QAUDCFG="nau8814/dlgain" Set the Downlink Gain Level for Codec NAU8814

This command sets or queries the downlink gain level for codec NAU8814.

AT+QAUDCFG="nau8814/dlgain" Set the Downlink Gain Level for Codec NAU8814	
Write Command **AT+QAUDCFG="nau8814/dlgain"[,<level>]**	Response If the optional parameter is omitted, query the current configuration: **+QCFG: "nau8814/dlgain",<level>** **OK** If the optional parameter is specified, set the downlink gain level: **OK** Or **ERROR**

	If there is any error related to ME functionality: **+CME ERROR: <err>**
Maximum Response Time	300 ms
Characteristics	The command takes effects immediately. The configuration will not be saved.

Parameter

<level>	Integer type. Downlink gain of NAU8814. Range: 0–100. Default: 79.
<err>	Error codes. For more details, please refer to ***Chapter 15.4***.

Example

```
AT+QAUDCFG="nau8814/dlgain",85          //Set downlink gain to 85.
OK
AT+QAUDCFG="nau8814/dlgain"
+QCFG: "nau8814/dlgain",85              //Query the current downlink gain.

OK
```

12.22.6. AT+QAUDCFG="nau8814/aoutput" Set the Analog Output for Codec NAU8814

This command sets or queries the analog output for codec NAU8814.

AT+QAUDCFG="nau8814/aoutput"	Set the Analog Output for Codec NAU8814
Write Command **AT+QAUDCFG="nau8814/aoutput"[,<level>]**	Response If the optional parameter is omitted, query the current configuration: **+QCFG: "nau8814/output ",<level>** **OK** If the optional parameter is specified, set the analog output for codec NAU8814: **OK** Or **ERROR** If there is any error related to ME functionality:

	+CME ERROR: <err>
Maximum Response Time	300 ms
Characteristics	The command takes effects immediately. The configuration will not be saved.

Parameter

<level>	Integer type. Output mode. 0 Speaker mixer output 1 Mono mixer output
<err>	Error codes. For more details, please refer to ***Chapter 15.4***.

Example

```
AT+QAUDCFG="nau8814/aoutput",1          //Set mono mixer output.
OK
AT+QAUDCFG="nau8814/aoutput"            //Query the current output configuration.
+QCFG: "nau8814/analog/output",0

OK
```

12.22.7. AT+QAUDCFG="encgain" Set Uplink ENC Gains

This command sets or queries the uplink ENC gains.

AT+QAUDCFG="encgain" Set Uplink ENC Gains	
Write Command **AT+QAUDCFG="encgain"[,<control>,<gain>]**	Response If the optional parameters are omitted, return the current configuration: **+QCFG: "encgain",<control>,<gain>** **OK** If the optional parameters are specified, set the uplink ENC gains: **OK** Or **ERROR** If there is any error related to ME functionality: **+CME ERROR: <err>**

Maximum Response Time	300 ms
Characteristics	The command takes effects immediately. The configuration will not be saved.

Parameter

<control>	Integer type. Enable/disable ENC. 0 Disable 1 Enable
<gain>	Integer type. ENC gains. Range: 0–65535. Default: 8192.
<err>	Error codes. For more details, please refer to ***Chapter 15.4***.

Example

```
AT+QAUDCFG="encgain",1,65535          //Enable ENC and set the ENC gain to 65535.
OK
AT+QAUDCFG="encgain"                  //Query the current uplink gain.
+QCFG: "encgain",1,65535

OK
```

12.22.8. AT+QAUDCFG="voltedtmfcfg" Set Duration and Volume of VoLTE DTMF Tone

This command sets or queries the duration and the volume of VoLTE DTMF tone received by the module. If this command has never been set or the duration is set to 0, the duration of VoLTE DTMF tone is controlled by network, and the volume is performed as the default one 200 x 2.5 ms. In this way, the duration set by network cannot be longer than the default 500 ms, otherwise, the module cuts it off to 500 ms.

AT+QAUDCFG="voltedtmfcfg" Set Duration and Volume of VoLTE DTMF Tone	
Write Command **AT+QAUDCFG="voltedtmfcfg"[,<duration>[,<volume>]]**	Response If the optional parameters are omitted, return the current configuration: **+QCFG: "voltedtmfcfg",<duration>,<volume>** **OK** If the optional parameters are specified, set the duration and volume of VoLTE DTMF tone: **OK**

	Or **ERROR** If there is any error related to ME functionality: **+CME ERROR: <err>**
Maximum Response Time	300 ms
Characteristics	The command takes effects immediately. The configuration will not be saved.

Parameter

<duration>	Integer type. Duration of DTMF tone. Unit: 2.5 ms. Range: 1–1000. Default: 200.
<volume>	Integer type. Volume of DTMF tone. Range: 0–65535. Default: 5000.
<err>	Error codes. For more details, please refer to ***Chapter 15.4***.

NOTES

The time interval between two tones of VoLTE DTMF is a little bit longer than the duration.

Example

```
AT+QAUDCFG="voltedtmfcfg",40,5000      //Set the VolTE DTMF duration to 100 ms, set the volume to 5000.
OK
AT+QAUDCFG="voltedtmfcfg"              //Query the current configuration.
+QCFG: "voltedtmfcfg",40,5000

OK
```

12.22.9. AT+QAUDCFG="decgain" Set Downlink DEC Gains

This command sets or queries the downlink DEC gains.

AT+QAUDCFG="decgain" Set Downlink DEC Gains	
Write Command **AT+ QAUDCFG="decgain"[,<gain>]**	Response If the optional parameter is omitted, query the current configuration: **+QCFG: "decgain",<gain>** **OK**

	If the optional parameter is specified, set the downlink DEC gains: **OK** Or **ERROR** If there is any error related to ME functionality: **+CME ERROR: <err>**
Maximum Response Time	300 ms
Characteristics	The command takes effects immediately. The configuration will not be saved.

Parameter

<gain>	Integer type. Downllink DEC gains. Range: 0–65535. The default value varies with the configuration of ACDB.
<err>	Error codes. For more details, please refer to ***Chapter 15.4***.

Example

```
AT+QAUDCFG="decgain",65535          //Set the downlink DEC gain to 65535.
OK
AT+QAUDCFG="decgain"                //Query the current downlink DEC gain.
+QAUDCFG: "decgain", 65535

OK
```

12.22.10. AT+QAUDCFG="fns" Enable/Disable Noise Suppression

This command enables/disables the feature of noise suppression and queries the current configuration.

AT+QAUDCFG="fns" Enable/Disable Noise Suppression	
Write Command **AT+QAUDCFG="fns"[,<fns>,<enable>]**	Response If the optional parameters are omitted, query the current configuration: **+QCFG: "fns",<fns>,<enable>** **OK** If the optional parameters are specified, enables/disables the feature of noise suppression: **OK**

	Or **ERROR**
Maximum Response Time	300 ms
Characteristics	The command takes effects immediately. The configuration will not be saved.

Parameter

<fns>	Integer type. Configure the feature of noise suppression. Always be 0.
<enable>	Integer type. Enable or disble the feature of noise suppression. 0 Disable 1 Enable

12.22.11. AT+QAUDCFG="nau8810/config" Set Register Value of Codec NAU8810

This command sets and queries register value of codec NAU8810.

AT+QAUDCFG="nau8810/config" Set Register Value of Codec NAU8810	
Write Command **AT+QAUDCFG="nau8810/config"[,<addr>,<value>[,<addr>,<value>[,…]]]**	Response If the optional parameters are omitted, query the current configuration: **+QCFG: "nau8810/config",<addr>,<value>[,<addr>,<value>[,..]]** **OK** If the optional parameters are specified, set the register value: **OK** Or **ERROR**
Maximum Response Time	300 ms
Characteristics	The command takes effects immediately. The configuration will be saved automatically.

Parameter

<addr>	Integer type. Address of NAU8810 register. Range: 0–255.
<value>	Integer type. Value of NAU8810 register. Range: 0–255.

12.23. AT+QAUDPLAY Play Media File

This command plays local media file.

AT+QAUDPLAY Play Media File	
Test Command **AT+QAUDPLAY=?**	Response **+QAUDPLAY: "filename",(**list of supported **<state>**s**)** **OK**
Read Command **AT+QAUDPLAY?**	Response **+QAUDPLAY: <state>** **OK**
Write Command **AT+QAUDPLAY=<filename>,<repeat>**	Response **OK** Or **ERROR** If error is related to ME functionality: **+CME ERROR: <err>** After the playing is finished: **+QAUDPLAY: 0**
Maximum Response Time	300 ms
Characteristics	The command takes effects immediately. The configuration will not be saved.

Parameter

<state>	Integer type. 0 Module is not playing media file 1 Module is playing media file
<filename>	String type. Name of the file to play, includes file path, file name and file suffix. File path must be UFS.
<repeat>	Integer type. Whether to paly the file repeatedly. 0 Play only once 1 Repeat
<err>	Error codes. For more details, please refer to ***Chapter 15.4***.

NOTES

1. If there is an unknown error occurrs, the module reports **+QAUDPIND: 0,1**.
2. If current playing is interrupted by other audio tasks, the module reports **+QAUDPIND: 0,6**.
3. EC2x, EG9x, EG2x-G and EM05 series modules support playing media file in wav, amr or mp3 format with 8 kHz and 16 kHz sampling frequency, mono, and 16-bit quantization.

12.24. AT+QAUDPLAYGAIN Set Audio Playing Gain

This command sets audio play gain to change audio playing volume.

AT+QAUDPLAYGAIN Set Audio Playing Gain	
Test Command **AT+QAUDPLAYGAIN=?**	Response **+QAUDPLAYGAIN: (**range of supported **<audplay_gain>**s**)** **OK**
Read Command **AT+QAUDPLAYGAIN?**	Response **+QAUDPLAYGAIN: <audplay_gain>** **OK**
Write Command **AT+QAUDPLAYGAIN=<audplay_gain>**	Response **OK** Or **ERROR** If error is related to ME functionality: **+CME ERROR: <err>**
Maximum Response Time	300 ms
Characteristics	The command takes effects immediately. The configuration will not be saved.

Parameter

<audplay_gain>	Integer type. Audio playing gain. Range: 0–65535. The default value varies depending on audio modes.
<err>	Error codes. For more details, please refer to ***Chapter 15.4***.

Example

```
AT+QAUDPLAYGAIN=?
+QAUDPLAYGAIN: (0-65535)

OK
AT+QAUDPLAYGAIN?              //Query the current configuration.
+QAUDPLAYGAIN: 8192

OK
AT+QAUDPLAYGAIN=4096          //Set audio playing gain to 4096.
OK
AT+QAUDPLAYGAIN?              //Query the current configuration.
+QAUDPLAYGAIN: 4096

OK
```

12.25. AT+QAUDRDGAIN Set Audio Recording Gain

This command sets audio recording gain to change audio recording volume.

AT+QAUDRDGAIN Set Audio Recording Gain	
Test Command **AT+QAUDRDGAIN=?**	Response **+QAUDRDGAIN: (**range of supported **<audrd_gain>**s**)** **OK**
Read Command **AT+QAUDRDGAIN?**	Response **+QAUDRDGAIN: <audrd_gain>** **OK**
Write Command **AT+QAUDRDGAIN=<audrd_gain>**	Response **OK** Or **ERROR** If error is related to ME functionality: **+CME ERROR: <err>**
Maximum Response Time	300 ms
Characteristics	The command takes effects immediately. The configuration will not be saved.

Parameter

<audrd_gain>	Integer type. Audio recording gain. Range: 0–65535. The default value varies with audio modes.
<err>	Error codes. For more details, please refer to ***Chapter 15.4***.

Example

```
AT+QAUDRDGAIN=?
+QAUDRDGAIN: (0-65535)

OK
AT+QAUDRDGAIN?                  //Query the current configuration.
+QAUDRDGAIN: 8192

OK
AT+QAUDRDGAIN=4096              //Set audio record gain to 4096.
OK
AT+QAUDRDGAIN?                  //Query the current configuration.
+QAUDRDGAIN: 4096

OK
```

12.26. AT+QACDBLOAD Write ACDB File

This command writes audio DSP parameter configuration file (ACDB file) to module, and automatically saves one copy on modem side and AP side respectively. After a new ACDB file is imported, the value of **<version>** is increased by 1.

AT+QACDBLOAD Write ACDB File	
Test Command **AT+QACDBLOAD=?**	Response **+QACDBLOAD: "filename",<file_length>** **OK**
Write Command **AT+QACDBLOAD=<filename>,<file_length>**	Response **CONNECT** <input data> **OK** **+QACDBLOAD: <writen_length>** Or

	ERROR
Read Command **AT+QACDBLOAD?**	Response **+QACDBLOAD: "modem","filename",<file_length>,<version>,** **+QACDBLOAD: "ap","filename",<file_length>,<version>** **OK**
Maximum Response Time	300 ms
Characteristics	The command takes effect after the module is rebooted. The configurations will be saved automatically.

Parameter

<filename>	String type. Name of the ACDB file.
<file_length>	Integer type. Size of the ACDB file.
<written_length>	Integer type. Length of the ACDB file actually written.
<version>	Integer type. Version of the ACDB file.

Example

```
AT+QACDBLOAD="11.acdb",100
CONNECT
<input data>
OK

+QACDBLOAD: 100
AT+QACDBLOAD?
+QACDBLOAD: "modem","11.acdb",100,1
+QACDBLOAD: "AP",'11.acdb",100,1

OK
```

12.27. AT+QACDBREAD Read ACDB File

This command reads the audio DSP parameter configuration file (ACDB file) stored in modem side or AP side.

AT+QACDBREAD Read ACDB File	
Test Command **AT+QACDBREAD=?**	Response **+QACDBREAD: "filename",**(list of supported **<location>**s)

	OK
Write Command **AT+QACDBREAD="filename",<location>**	Response **CONNECT** <output data> **OK** **+QACDBREAD: <read_length>** Or **ERROR**
Maximum Response Time	300 ms
Characteristics	/

Parameter

<filename>	String type. Name of the ACDB file.
<read_length>	Integer type. Length of the ACDB file actually read.
<location>	Integer type. Position of the ACDB file. 0 Modem side 1 AP side

Example

```
AT+QACDBREAD="11.acdb",0
CONNECT
<output data>
OK

+QACDBREAD: 100
```

12.28. AT+QACDBDEL Delete ACDB File

This command deletes the audio DSP parameter configuration file (ACDB file) stored in modem side or AP side.

AT+QACDBDEL Delete ACDB File	
Test Command **AT+QACDBDEL=?**	Response **+QACDBDEL: "filename",**(list of supported **<location>**s)

	OK
Write Command **AT+QACDBDEL="filename",<location>**	Response **OK** Or **ERROR**
Maximum Response Time	300 ms
Characteristics	/

Parameter

<filename>	String type. Name of the ACDB file.
<location>	Integer type. Position of the ACDB file. 0 Modem side 1 AP side

Example

```
AT+QACDBDEL="11.acdb",1
OK
AT+QACDBLOAD?
+QACDBLOAD: "modem","11.acdb",100,1

OK
```