EC2x-Quecopen 9x07 USB Audio Class Sound Card Testing Method

LTE Standard Module Series

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About the Document

History

Revision	Date	Author	Description
1.0	2018-10-11	Will SHAO/ Zichar ZHANG	Initial
1.1	2019-04-30	Zichar ZHANG	Updated the supported sample rate and related data

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1.1. Open USB Sound Card Interface

UAC (USB Audio Class) function is not open by default. If it needs to be enabled, please configure the USB configuration file.

Modify Line 207 of configuration file 9025.

Add audio to functions, see details below.

After that, execute sync and reboot the module

1.2. Send AT Command and Open USB Voice

AT+QPCMV=<enable>,<port>

enable: 1 Open USB Voice, 0 Close USB Voice

port: 0 USB NEMA interface, 1 UART interface, 2 USB Audio Class

Send the following command to open UAC. After that, it will close EC20 Codec and switch to USB Voice.

AT+QPCMV=1,2

OK

Send the following command to close UAC. After that, it will switch to EC20 Codec.

AT+QPCMV=0,2
OK

In UAC Mode, it supports 8KHz sample rate with data length of 16 bits and mono channel by default.
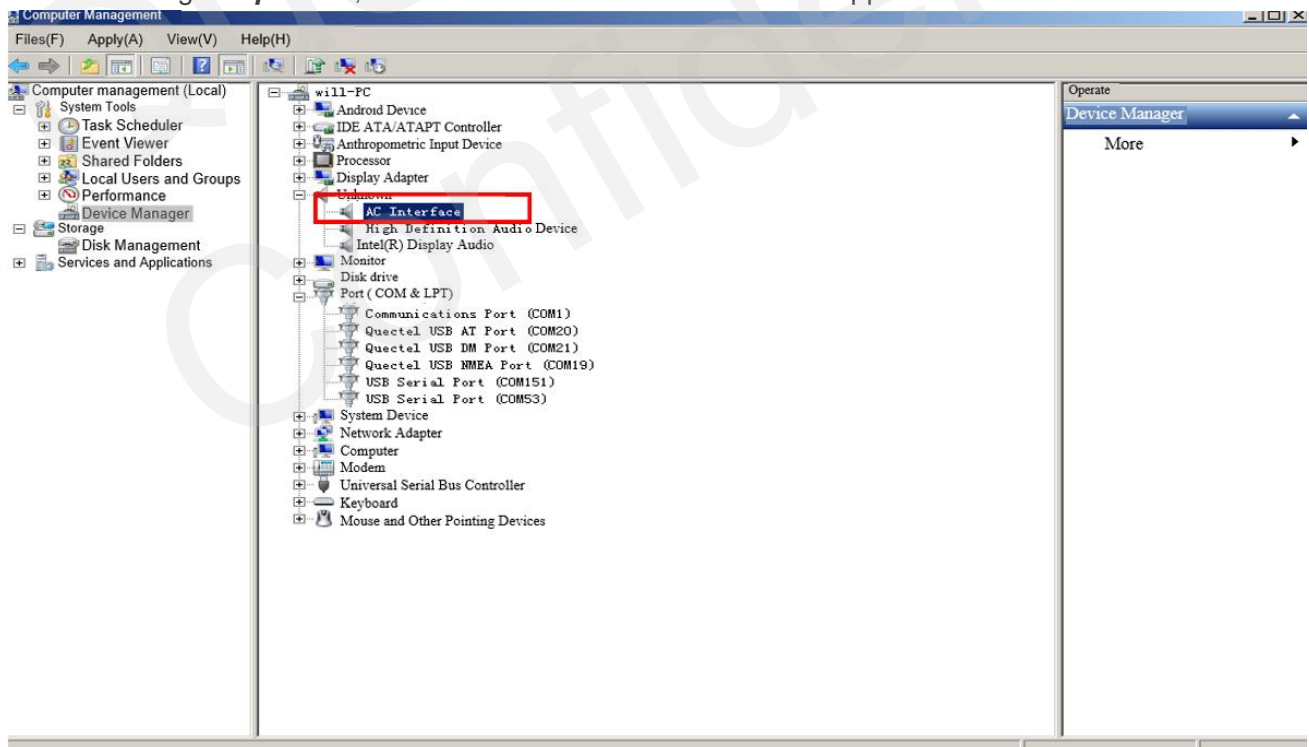
1.3. Set USB Audio Mode

Playing USB voice in default mode will produce some noise. Please send the following AT command and switch to USB Voice mode.
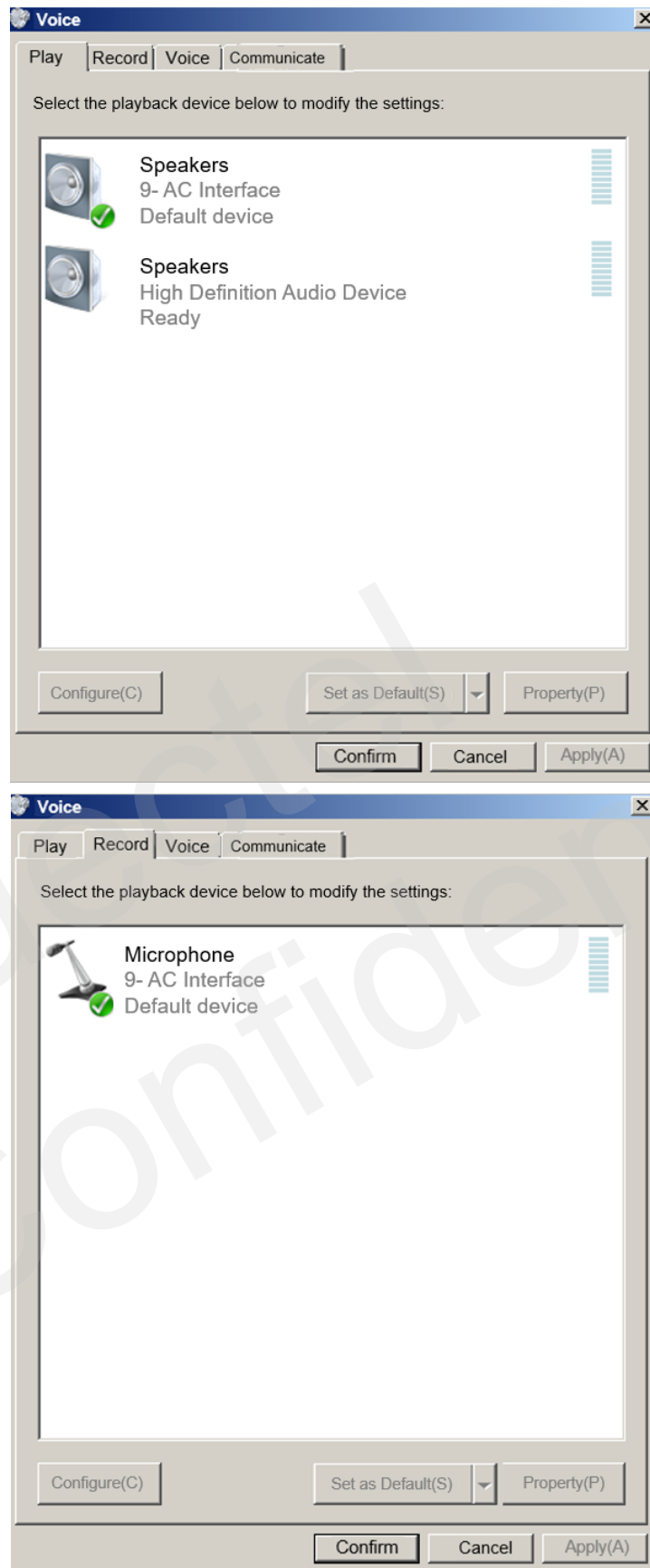
AT+QAUDMOD=3
OK

1.4. Test in Windows7

After executing **Chapter 1.1**, insert USB. The UAC sound card will appear in Windows7.

Set it as the default sound card.

Send AT Command **AT+QPCMV=1,2**. Open USB Voice.

Send AT Command **AT+QAUDMOD=3** to switch to USB Voice Audio mode.

Send the command to dial the cellphone number and answer it through via EC20 AT interface.

Play music in the Windows via certain music player (QQ Player, KUWO, Netease cloud music). The music played in the Windows can be heard on the cellphone.

Open the recording program in the Windows (Accessories->Recorder). All the sound sent from the cellphone terminal can be recorded.

1.5. Test in Linux

Users can play music via tinyplay, however, EC20 UAC only supports 8KHz sample rate with data length of 16 bits and mono channel. Therefore, the audio file needs to be played at 8KHz sample rate with data length of 16 bits and mono channel.

tinyplay music.wav -D x -d 0

Here "x" is the device number of EC20 UAC sound card, which should be the actual device number of the sound card in the system.

```
pi@NanoPi-M1-Plus:~$ ./tinyplay record_sample.wav -D 4 -d 0 -r 8000 -c 1
playing 'record_sample.wav': 1 ch, 8000 hz, 16 bit
```

Record with tinycap.

tinycap rec.wav -D x -d 0 -c 1 -r 16000

```
pi@NanoPi-M1-Plus:~$ ./tinycap rev.wav -D 4 -d 0 -r 8000 -c 1
Capturing sample: 1 ch, 8000 hz, 16 bit
```