

Questyle Lossless Bluetooth Tx Specification and Operation instruction

Questyle | 2024.8

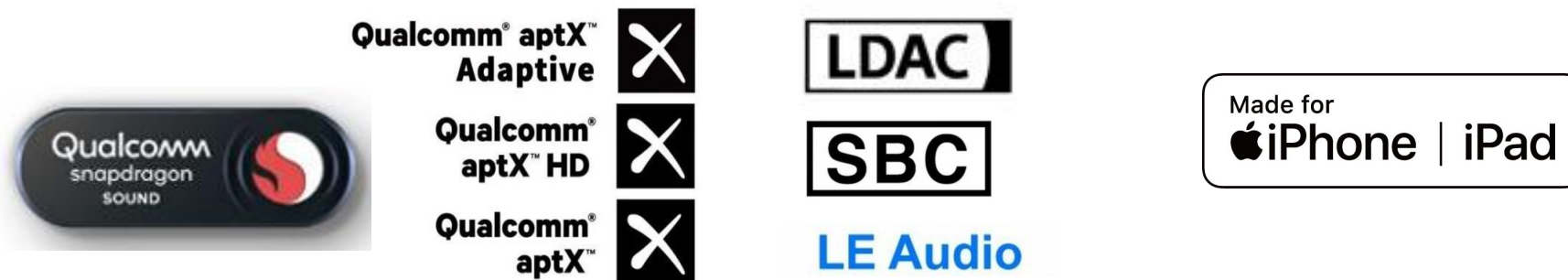
Questyle QCC Dongle -Lossless Bluetooth Tx

In this complex world, we pursue simplicity.

At Questyle, an integral part of our mission is to provide the simplest way for all cell phone users to enjoy lossless audio from streaming platforms, anytime and anywhere. In order to meet our customers' growing demand for utmost audio quality, we are now launching our newest lossless bluetooth transmitter "QCC Dongle"

QCC Dongle is an MFi certified and Lossless bluetooth audio transmitter, supporting full-duplex voice calls, 20m enhanced signal transmission, driving-free power automatic pairing and backconnection, automatic matching of audio priority codec protocol, using the new Qualcomm QCC3086 Bluetooth V5.4 chip, supporting the full range of APTX protocols, to achieve high quality music transmission.

Questyle QCC Dongle, as an audio transmission enhancement device designed for lossless and low-delay music playback, aims to transmit lossless music from audio devices such as mobile phones to Bluetooth speakers or headphones with the highest quality and lossless by optimizing audio transmission paths and codecs.

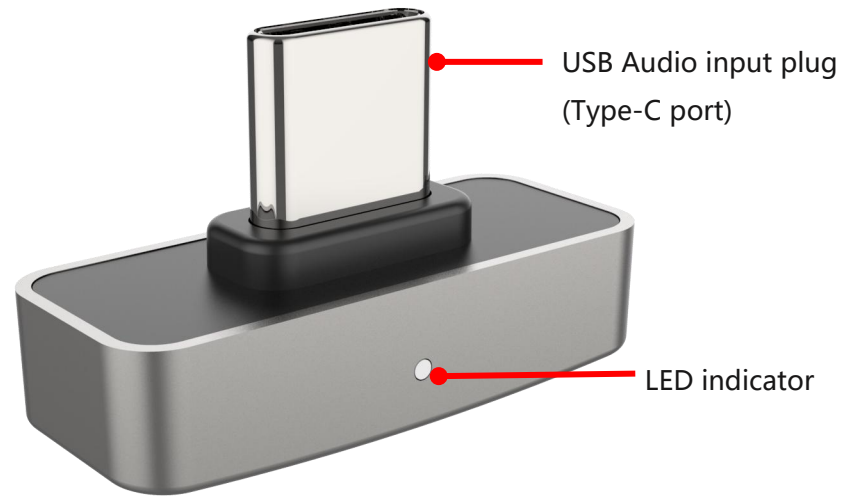


Questyel QCC Dongle (Lossless Bluetooth Tx) Technical Specification

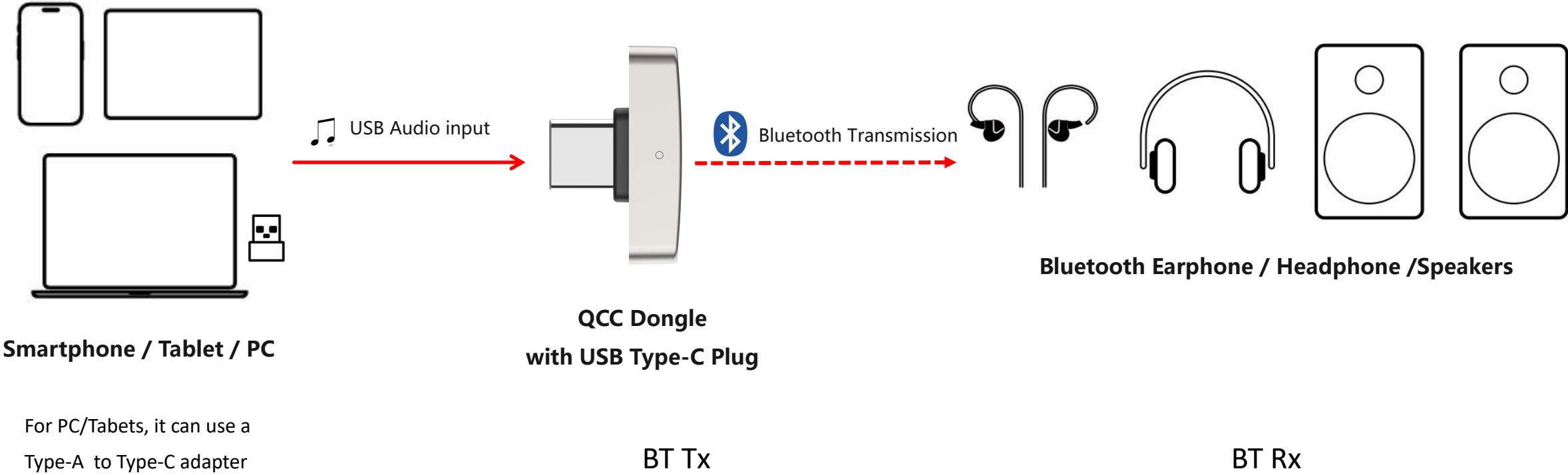
QCC Dongle Feature List

Feature	Category	Specification/Requirements
Main SOC	Chip type	QCC-3086-0-WLNSP99-TR-05-0
	Bluetooth Version	Bluetooth v5.4 ; Compatible with Bluetooth 5.2/4.2/4.2 LE/4.0/2.1+EDR
	Power Supply	Power supply by USB (Power supply range: 3.7V - 5V)
Bluetooth	BT codec /Profile	SBC; LC3; aptX Classic; atpX HD; aptX Adaptive; A2DP/HSP/AVRCP/SPP
	Audio codec Priority	aptX Adaptive > aptX HD > aptX Classic> SBC
	Call mode	Full duplex mode, support wechat, game call (uplink Sink should support microphone)
	Max. RF power	class1
	Transmission distance	20m (without occlusion)
USB	USB Type-C OTG	Full Speed USB2.0 free drive X 1
	USB compability	iOS、Android、HarmonyOS、macOS 、Windows
	HID	MFfi CP3.0 authentication
	DFU	Support Firmware upgrade via USB
System power consumption	Power Supply Current	Normal working < 100mA. At the beginning of startup, the working current is less than 30mA before shaking hands with Apple device CP3.0 communication
Interaction & display	LED X 3	White X 1 、 Red X 1 、 Blue X 1
	User Interaction	1、 The unit automatically enters the pairing state after power-on initialization (LED lights flashing red and blue alternately). If the unit is paired before, it will be automatically re-connect to the last bluetooth device within 20 seconds. After 20 seconds if the unit do not reconnect to any BT device, it will automatically enter the pairing mode to connect to a new device. 2、 When paried succesfully, LED will show the current audio codec protocol (the same protocol should be enabled for the sink devices) SBC Constant red; APTX adaptive Constant blue; APTX HD & Classic Constant white Priority: adaptive >HD >APTX> SBC

Questyle QCC Dongle Product Picture



Questyle QCC Dongle Audio Input and output connection



Questyle QCC Dongle Operation Instruction

1. Power On / Power Off

- Insert the QCC dongle USB Type-C Plug into a USB audio device such as a mobile phone /Tablet/PC, and the QCC dongle will be powered on automatically by power supply through the USB port. The LED lights up and displays the corresponding status.
- Unplug the QCC Dongle to power off and turn off, the LED lights off.

2. Bluetooth Pairing and Connect

- When the QCC Dongle is powered on(by plugging in a computer/mobile phone /iPad) for the first time after out of box, the Dongle will automatically enter the Bluetooth pairing mode, and the LED on the Dongle will flash red and blue alternately.
- At this time, set the Bluetooth SINK device (Bluetooth earphone or speakers) into the pairing state.
- The Dongle(Tx) and the SINK device(Rx) are automatically paired and connected. At this time, the LED on the Dongle enters the state of constant light (red/blue/white according to audio codec) as below.

The LED color indicates the current Audio Codec:

APTX Adaptive	<----->	Constant blue
Aptx HD & Classic	<----->	Constant white
SBC	<----->	Constant red

(Note: The connected Bluetooth SINK devices should support the corresponding Audio Decodec, priority: Aptx Adaptive > Aptx HD > Aptx classic > SBC)

Questyle QCC Dongle Operation Instruction

3. Bluetooth Reconnect

Power on re-connection::

- After the QCC Dongle is powered on again (through plug into USB audio devices), it will automatically try to re-connect to the last Paired device (Paired device list =2) within 20 seconds. When the Dongle fails to re-connect to the last paired device within 10 seconds, it will try to connect back to the second last paired device again within another 10s.
- If the QCC Dongle fails to reconnect to both two devices, it will switch to pairing mode and maintain the pairing mode for 20s before pairing a new device. If no device is paired and connected, the Dongle enters idle mode.

Out of Range re-connection:

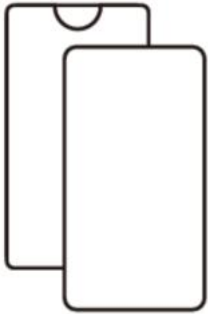
- If the distance between the QCC Dongle and the SINK device (eg Bluetooth earphone or speakers) is beyond the Bluetooth range(20m), it will disconnect and try to reconnect for 3 minutes. If Source and Sink devices return to the Bluetooth range within 3 minutes, the reconnection will be successful; If the connection fails within 3 minutes, the QCC Dongle will enter idle mode.
- At this time, user can power off and power on to enter reconnect mode again.

Packing and Accessories

	QTY	Remark?
QCC Dongle Unit	1	MFi Certified
Warranty Card	1	
User Manual	1	



主机 x 1



说明书 x 1
保修卡 x 1

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception,

which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.

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AUDIO ENGINEERING

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