## V&M Bluetooth Audio Portfolio Roadmap

***Administrator***

*2018-11-10 13:20:26*

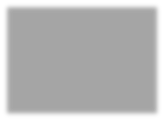
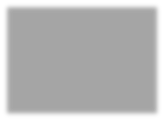
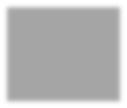
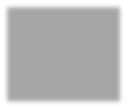
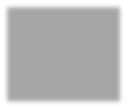
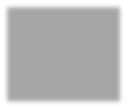
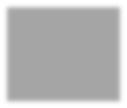
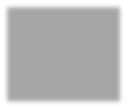
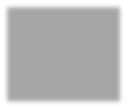
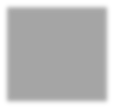
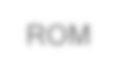
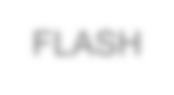
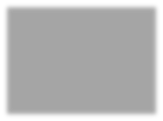
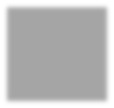
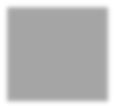
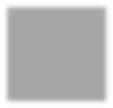
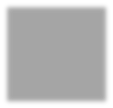
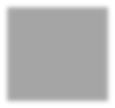
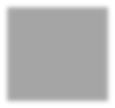
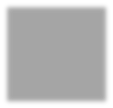
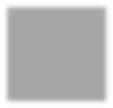
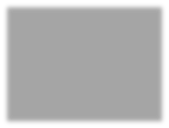
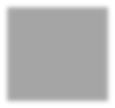
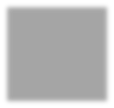
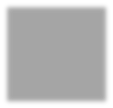
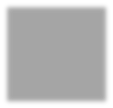
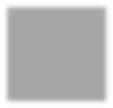
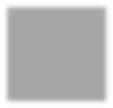
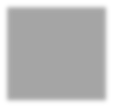
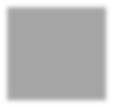
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流行的高通蓝牙芯片 Flash版本与Rom版本的分线图

##### Future Bluetooth Audio Flash and ROM launches

流行的高通蓝牙芯片 Flash版本与Rom版本的分线图

**Announced 14/Jun/2017**



CSR8670

**Announced 8/Jan/2018**

##### FLASH

CSR8675

###### Feature Waterfall

QCC5100

series

CSRA68100

STEREO

CSR8645

CSR8640

**Announced 14/Jun/2017 Entry Level Flash**

Speaker

CSRA64210

Speaker

CSRA64215

Speaker

QCC3007

Speaker

QCC3008

ROM

MONO

CSR8635

CSR8630

Headset

QCC3005

Headset

QCC3004

CSR8605 CSR8615

Speaker

CSRA64110

Speaker

QCC3006

Headset

CSRA63225

Headset

CSRA63220

Headset

CSRA63210

QCC302x

Series

CSR8610 CSR8620

Headset

CSRA63120

Headset

QCC3002

Headset

QCC3001

2015 2016

2017

2018



QCC300x

Part numbers and features

QCC3000 系列芯片的 功能特点

***Administrator***

*2018-11-10 13:21:14*

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QCC3000 系列芯片的 功能特点

[Top](#_bookmark0)

# Bluetooth® Headset Entry Level Flash



2-mic Stereo

QCC3004

1-mic Stereo

QCC3003



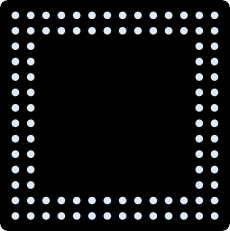
Roadmap

High-End

Qualcomm®

aptX™

QCC3005



Qualcomm®

aptX™

2-mic Mono

QCC3001

QCC3002

***Administrator***

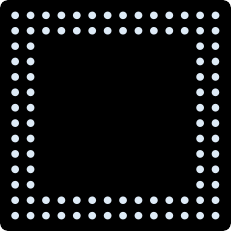
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入门级 Flash版本

入门级 Flash版本

Bluetooth® Speaker Entry Level Flash



Roadmap

High-End

Qualcomm®

aptX™

QCC3008



1-mic Stereo

QCC3007

1-mic Mono

QCC3006

Qualcomm aptX, QCC3008, QCC3004 and QCC3001 are products of Qualcomm Technologies International, Ltd. Confidential and Proprietary – Qualcomm Technologies International, Ltd

# QCC300x – Pin Compatibility

QCC3000系列芯片 引脚兼容列表

***Administrator***

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QCC3000系列芯片 引脚兼容列表

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **QCC300x family** | **Package** | **Size [mm x mm]** | **Ball pitch [mm]** | **Number of pins** | **Application** | |
| QCC3001 | BGA | 5.5 x 5.5 | 0.5 | 68 | Headset | Mono |
| QCC3002 | BGA | 5.5 x 5.5 | 0.5 | 68 | aptX mono |
| QCC3003 | QFN | 6 x 6 | 0.4 | 52 | stereo 1 mic |
| QCC3004 | BGA | 5.5 x 5.5 | 0.5 | 68 | stereo 2 mic |
| QCC3005 | BGA | 5.5 x 5.5 | 0.5 | 68 | aptx stereo |
| QCC3006 | QFN | 8 x 8 | 0.4 | 68 | Speaker | Mono |
| QCC3007 | QFN | 8 x 8 | 0.4 | 68 | Stereo |
| QCC3008 | QFN | 8 x 8 | 0.4 | 68 | aptX stereo |

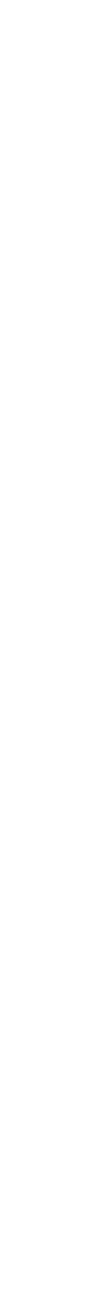
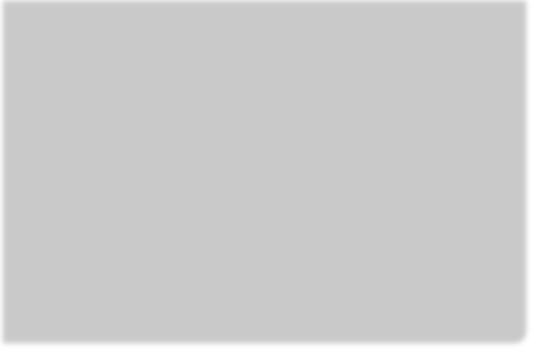
Bluetooth® Entry Level Flash Headsets/Speakers

Full Features table



|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | |  | | |
|  | **Features** | **QCC3001** | **QCC3002** | **QCC3003** | **QCC3004** | **QCC3005** | **QCC3006** | **QCC3007** | **QCC3008** |
| **Connectivity** | Dual Mode Bluetooth® | Bluetooth 5.0 | | | | |  | | |
| HFP / A2DP / AVRCP | v1.7 / v1.3 / v1.5 | | | | |  | | |
| Dual Mode Topology |  |  |  |  |  |  |  |  |
| Link Layer Topology |  |  |  |  |  |  |  |  |
| **Audio codecs** | Qualcomm® aptX™ / aptX LL / aptX HD audio | X / X / X |  / / X | X / X / X | X / X / X |  / / X | X / X / X | X / X / X |  /  / X |
| SBC Decoder |  |  |  |  |  |  |  |  |
| AAC Decoder |  |  |  |  |  |  |  |  |
| **Qualcomm® cVc™ technology** | # Mics / Generation | 2 HS / 8th | 2 HS / 8th | 1 HS / 8th | 2 HS / 8th | 2 HS / 8th | 1 HF / 8th | 1 HF / 8th | 1 HF / 8th |
| **Audio Interface** | DAC outputs | Mono | Mono | Stereo | Stereo | Stereo | Mono | Stereo | Stereo |
| Analog Inputs | Stereo | Stereo | Stereo | Stereo | Stereo | Stereo | Stereo | Stereo |
| I2S/PCM outputs | - | - | 1 | 1 | 1 | 1 | 2 | 2 |
| I2S/PCM inputs | **-** | - | 1 | 1 | 1 | 1 | 1 | 1 |
| SPDIF inputs | X | X | X | X | X | X |  |  |
| USB Audio enumeration (dual) |  |  |  |  |  |  |  |  |
| **Others** | HID camera shutter control |  |  |  |  |  |  | X | X |
| ShareMe | X | X |  |  |  | X | X | X |
| Qualcomm® TrueWireless™ Stereo |  |  | X | X | X |  |  |  |
| GAIA | v3 | V3 | v3 | v3 | v3 | v3 | v3 | v3 |
| Over The Air (OTA) Updates |  |  |  |  |  |  |  |  |
| Sample Rate Converter selection | X |  | X | X |  | X | X |  |
| Charger control |  |  |  |  |  |  |  |  |
| Bluetooth Low Energy remote | X | X | X | X | X |  |  |  |
| IR remote | X | X | X | X | X |  |  |  |
| Bluetooth Low Energy Battery service |  |  |  |  |  |  |  |  |
| Proximity features (find) |  |  |  |  |  |  |  |  |
| 3V8 battery support |  |  |  |  |  |  |  |  |

QCC3003, QCC3004, QCC3005, Qualcomm cVc, Qualcomm aptX, GAIA and Qualcomm TrueWireless Stereo are products of Qualcomm Technologies International, Ltd. Confidential and Proprietary – Qualcomm Technologies International, Ltd



QCC512x Product Selection



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Benefits of QCC5100 family over CSR8675

 Half the power (<10mA)

 Dedicated Apps Proc

 Qualcomm

TrueWireless™ Stereo

Plus

 Improved FF ANC

 24-bit 96khz audio USB

 2Msps BLE

 Sensor Hub

 5x5 BGA

 5 less I/Os

 No Cap Touch sensors

**HIGH TIER**

 As QCC5125 – plus

 Ultra low power <6mA

 2 x 120MHz DSP

 1-bit eMMC

 Hybrid ANC

 AoV + VAD\*

 5.5mm x5.5mm BGA

* Pin compatible with

QCC5125

 Features as QCC5124

+

 Smaller size - 4x4

WLCSP

 No eMMC

 5 less I/Os than QCC5124

 Features As QCC5121

+

 4-bit eMMC

 18 more I/Os than

CSR8675

(3 x I2S in/out)

 Larger size

(6.5mm x 6.5mm)

QCC5120

**QCC5121**

**QCC5125**

**QCC5124**

**CSR8675**

5

**MID TIER**

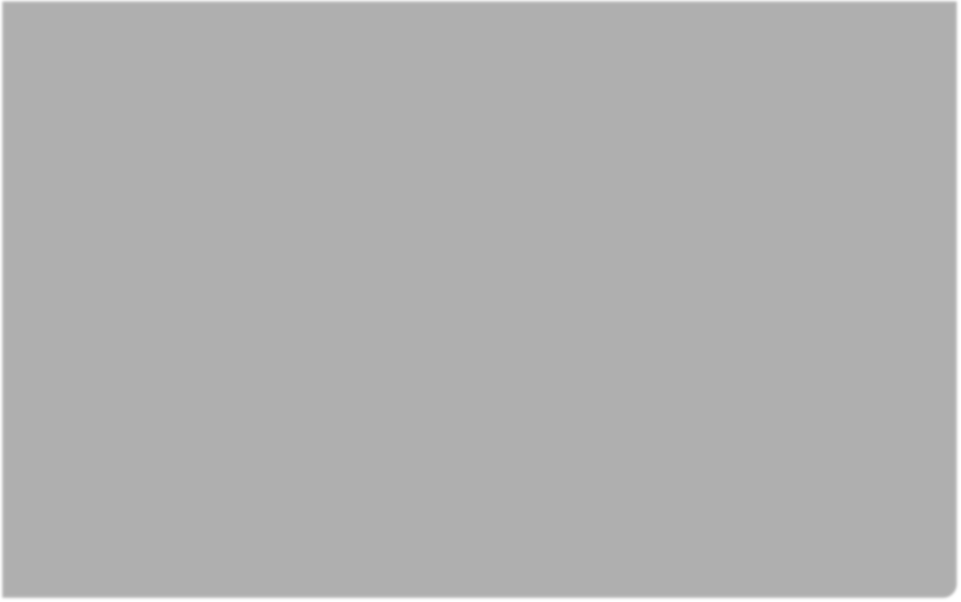
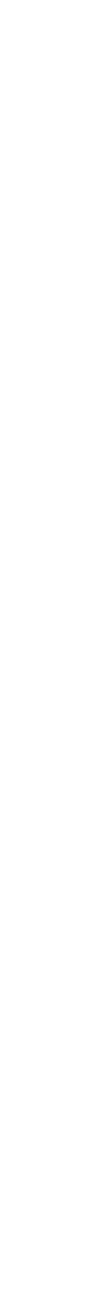
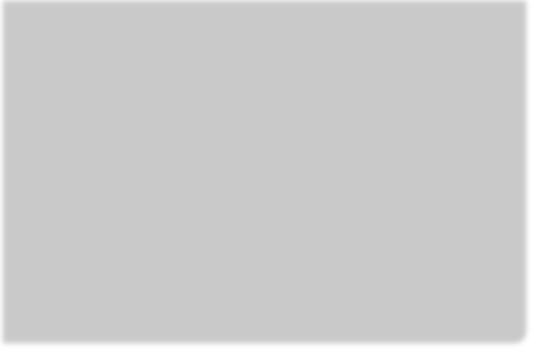
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The QCC5100 series variants – side by side

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Function** | **Variant Features** | | | |
| **QCC5121** | **QCC5120** | **QCC5124** | **QCC5125** |
| WLCSP | VFBGA | VFBGA | VFBGA |
| 3.98x4.02x0.5mm | 6.5x6.5x1.0mm | 5.5x5.5x1.0mm | 5.5x5.5x1.0mm |
| 81 pins | 124 pins | 90 pins | 90 pins |
| 0.4mm pitch | 0.5mm pitch | 0.5mm pitch | 0.5mm pitch |
| Stereo/Mono | Stereo | Stereo | Stereo | Stereo |
| Power Consumption | <6mA | <6mA | <6mA | <10mA |
| Programmable Apps CPU | Yes | Yes | Yes | Yes |
| Apps CPU Max Speed | 80MHz 32bit | 80MHz 32bit | 80MHz 32bit | 32MHz 32bit |
| DSP programmable | Programmable | Programmable | Programmable | Programmable |
| DSP Max Frequency | 2 x 120MHz | 2 x 120MHz | 2 x 120MHz | 1 x 120MHz |
| DSP RAM | 80kB (P) + 256kB (D) | 80kB (P) + 256kB (D) | 80kB (P) + 256kB (D) | 80kB (P) + 256kB (D) |
| Qualcomm® aptX™ Audio | Yes\* | Yes\* | Yes\* | Yes\* |
| aptX HD | Yes\* | Yes\* | Yes\* | Yes\* |
| Qualcomm® Broadcast Audio | Yes | Yes\* | Yes | Yes |
| Always On Voice | Yes\*/\*\* | Yes\*/\*\* | Yes\*/\*\* | N/A |
| Digital Assistant Activation | Button Press / Keyword detect\* | Button Press / keyword detect\* | Button Press / keyword detect\* | Button Press |
| Qualcomm ANC | FF/FB - Hybrid by license key | FF/FB - Hybrid by license key | FF/FB -Hybrid by license key | FF/FB only |
| Qualcomm® cVc™ | up to 2-mic HS cVc | up to 2-mic HS cVc | up to 2-mic HS cVc | up to 2-mic HS cVc |
| Bluetooth Low Energy - Speed | 2Mbps (Bluetooth 5) | 2Mbps (Bluetooth 5) | 2Mbps (Bluetooth 5) | 2Mbps (Bluetooth 5) |
| Bluetooth Low Energy Sensor Hub | Yes | Yes | Yes | Yes |
| Qualcomm TrueWireless™ Stereo | TWS and TWS+ | TWS and TWS+ | TWS and TWS+ | TWS and TWS+ |
| eMMC interface (SDIO) | No | Yes (4 bit)\*\* | Yes (1 bit)\*\* | No |

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Introducing QCC302x/303x

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### QCC302x/3x

###### SKUs , Packages & Target applications, including Qualcomm TrueWireless™ Stereo (TWS)



|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | |  | | | | | | | | |  | | | | | |
|  | |  | | | |  | | | |  | |  | | |  | | |  | | |
| QCC3026 | Stereo Headset | | Mono Headset TWS / TWS+ | Mono aptX | Stereo aptX & aptXHD Headset | | 1-mic cVc | 2-mic cVc | Broadcast Audio | | Stereo Speaker TWS/TWS+ | | Stereo Speaker | Stereo aptX Speaker | | 1-mic cVc | Broadcast Audio | | Package | Pins/Balls – Pitch |
|  | | X | X |  | | X | X | X | |  | |  |  | |  |  | | WLCSP 3.98x4.02x0.54mm | 81 – 0.4mm |
| QCC3020 |  | | X | X |  | | X | X | X | |  | |  |  | |  |  | | BGA 5.5x5.5x1mm | 90 – 0.5mm |
| QCC3024 | X | |  |  |  | | X | X | X | |  | |  |  | |  |  | | BGA 5.5x5.5x1mm | 90 – 0.5mm |
| QCC3034 | X | |  |  | X | | X | X | X | |  | |  |  | |  |  | | BGA 5.5x5.5x1mm | 90 – 0.5mm |
| QCC3021 |  | |  |  |  | |  |  |  | | X | | X |  | | X | X | | QFN 8x8x0.85mm | 80 – 0.35mm |
| QCC3031 |  | |  |  |  | |  |  |  | | X | | X | X | | X | X | | QFN 8x8x0.85mm | 80 – 0.35mm |

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QCC302x/303x Features (headsets)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Function** |  | **Variant Features** | | |
| **QCC3026** | **QCC3020** | **QCC3024** | **QCC3034** |
| WLCSP | VFBGA | VFBGA | VFBGA |
| 3.98x4.02x0.5mm | 5.5x5.5x1.0mm | 5.5x5.5x1.0mm | 5.5x5.5x1.0mm |
| 81 pins (9x9) | 90 pins | 90 pins | 90 pins |
| 0.4mm pitch | 0.5mm pitch | 0.5mm pitch | 0.5mm pitch |
| Stereo/Mono | Mono | Mono | Stereo | Stereo |
| Power Consumption | <6mA | <6mA | <6mA | <6mA |
| Programmable Apps CPU | Yes | Yes | Yes | Yes |
| Apps CPU Max Speed | 32MHz 32bit | 32MHz 32bit | 32MHz 32bit | 32MHz 32bit |
| DSP programmable | Configurable | Configurable | Configurable | Configurable |
| DSP Max Frequency | 1 x 120MHz | 1 x 120MHz | 1 x 120MHz | 1 x 120MHz |
| DSP RAM | 80kB (P) + 256kB (D) | 80kB (P) + 256kB (D) | 80kB (P) + 256kB (D) | 80kB (P) + 256kB (D) |
| Qualcomm® aptX™ Audio | Yes (mono) | Yes (Mono) | No | Yes (Stereo) |
| aptX HD | No | No | No | Yes |
| Qualcomm® Broadcast Audio | Yes | Yes | Yes | Yes |
| Always On Voice | No | No | No | No |
| Digital Assistant Activation | Button Press | Button Press | Button Press | Button Press |
| Qualcomm ANC | N/A | N/A | N/A | N/A |
| Qualcomm® cVc™ | up to 2-mic HS cVc | up to 2-mic HS cVc | up to 2-mic HS cVc | up to 2-mic HS cVc |
| Bluetooth Low Energy Speed | 2Mbps (Bluetooth 5) | 2Mbps (Bluetooth 5) | 2Mbps (Bluetooth 5) | 2Mbps (Bluetooth 5) |
| Bluetooth Low Energy Sensor Hub | Yes | Yes | Yes | Yes |
| Qualcomm TrueWireless™ Stereo | TWS and TWS+ | TWS and TWS+ | N/A | N/A |
| eMMC interface (SDIO) | No | No | No | No |

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#### QCC302x/303x Features (Speakers)

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| --- | --- | --- |
| **Function** |  | **Variant Features** |
| **QCC3021** | **QCC3031** |
| QFN | QFN |
| 8x8x0.85mm | 8x8x0.85mm |
| 80 pins | 80 pins |
| 0.35mm pitch | 0.35mm pitch |
| Stereo/Mono | Stereo or Mono | Stereo or Mono |
| Power Consumption | <7mA | <7mA |
| Programmable Apps CPU | Yes | Yes |
| Apps CPU Max Speed | 32MHz | 32MHz |
| DSP programmable | Configurable only | Configurable only |
| DSP Max Frequency | 1 x 120MHz | 1 x 120MHz |
| DSP RAM | 80kB (P) + 256kB (D) | 80kB (P) + 256kB (D) |
| Qualcomm® aptX | No | Yes |
| Qualcomm® aptX HD | No | Yes |
| Broadcast Audio | Yes | Yes |
| Always On Voice | No | No |
| Digital Assistant Activation | Button Press only | Button Press only |
| Qualcomm® cVc™ | 1-mic Speaker cVc included | 1-mic Speaker cVc included |
| BLE Speed | 2Mbps (Bluetooth 5) | 2Mbps (Bluetooth 5) |
| Qualcomm True Wireless™ Stereo | TWS and TWS+ | TWS and TWS+ |
| eMMC interface (SDIO) | No | No |
| Stereo/Mono | Stereo | Stereo |
| Power Consumption | <7mA | <7mA |

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