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the digital world.

# Bluetooth Audio for Hearables and Wearables

Infineon's virtual show 2020



# Bluetooth Audio Solution Map for Hearables and Wearables

## Silicon

- › CYW20721 Bluetooth SoC
- › PSoC® 4 for touch, PSoC® 6 BLE
- › Infineon microphones
- › Modules

## Software/Features

- › Full-featured BT/BLE stack with advanced audio capabilities for audio source and sink
- › WASS – full wireless earbuds
- › CapSense for touch control and proximity detection

## Partner Ecosystem

- › Partnerships with leading HW audio codec vendors
- › Google Fast Pair Support
- › Alexa Mobile Accessory (AMA) Support

## Development Platforms

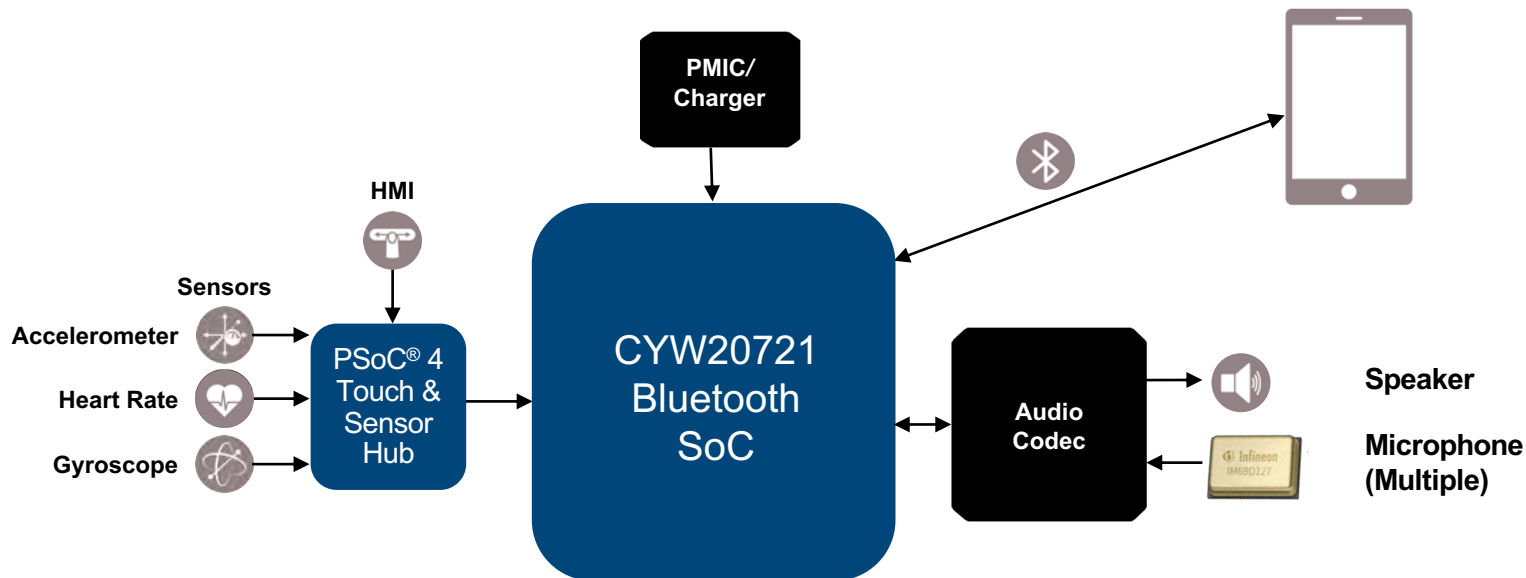
- › Earbud reference designs
- › Development kits with audio codec
- › ModusToolbox™ with Bluetooth SDK
  - Code examples to reduce TTM

# Bluetooth SDK – Audio for hearables and wearables

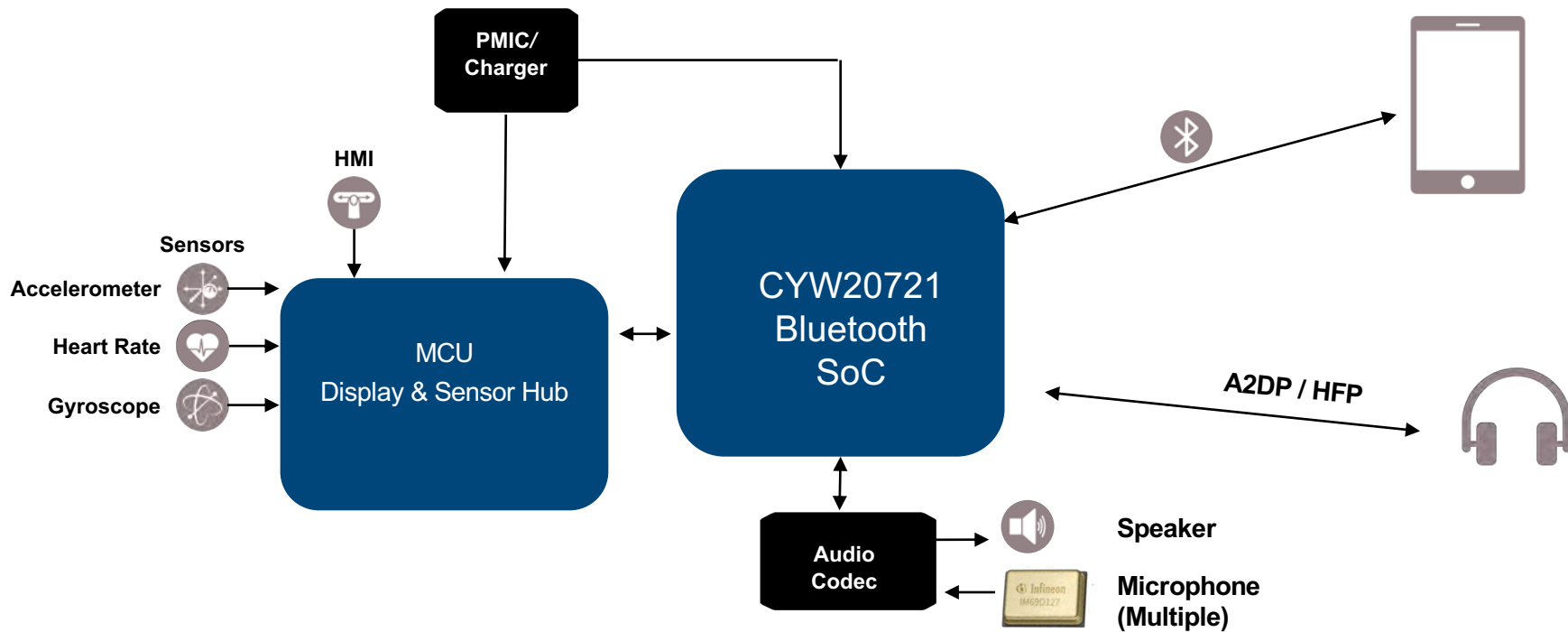


- › CYW20721 and CYW43012 are supported in the Bluetooth SDK for audio applications
- › Audio Specific Code Examples
  - A2DP sink (SBC decoding), Hands free (use client control application to send various commands)
  - audio gateway: Bluetooth Audio Gateway profile – Handsfree and Headset, handling of the uART WICED, and setting of the local BT device address from the host MCU
  - Watch: A2DP source (SBC), AVRCP, AMS, ANCS, BT GATT, handling of UART WICED, SDP, GATT Descriptor/Attribute configuration, audio gateway profile or HFP. Watch CE is limited to one BLE client connection
  - Headset and Speaker: A2DP sink (SBC decoding) with AAC decoding (20721B2 only), AVRCP, HFP, and Google Fast Pair Support
- › Pro Code Examples
  - More complex code examples which include support for button-initiated Alexa Mobile Accessory (AMA), and Wireless Audio Stereo Sync

# Bluetooth Audio Use Case: Headset/Earbud



# Bluetooth Audio Use Case: Smart Watch



## Bluetooth Audio Focus Product: CYW20721

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### **Best Bluetooth solution paired with the best audio solutions**

- › Infineon Bluetooth stack is the most reliable, interoperable stack on the market
- › Infineon Bluetooth has superior RF performance for robust connections. This is the foundation for the best audio user experience.
- › Programmability for optimized user experience
- › Design flexibility enables differentiated solutions

### **Infineon solution allows features to be scaled across a variety of products**

- › Implement a logical, scalable feature set across product lines with a common Bluetooth solution
- › Various Smart Codec options to perfectly fit functions into different product tiers
- › Eliminate audio functionality gaps or inconsistent feature sets across product tiers
- › PSoC® 4 CapSense for low power and robust touch control interface (buttons, slider, proximity detection, etc)



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