

Solution brief

MERUS™ audio amplifier HAT ZW board

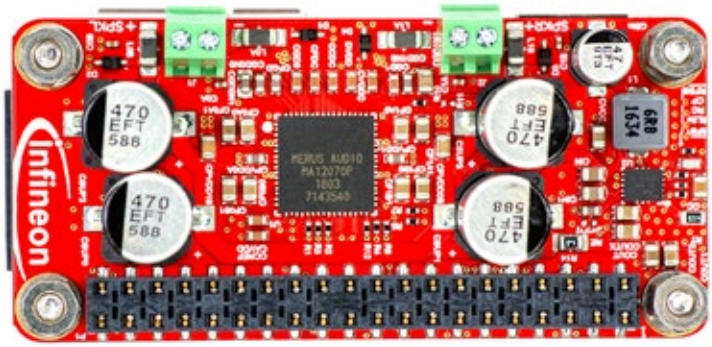
With the MA12070P class D multilevel amplifier for Raspberry Pi Zero W

The MERUS™ audio amplifier HAT ZW is a Hardware at the Top (HAT) audio power amplifier board that brings the Infineon's proprietary multilevel technology to Raspberry Pi users and makers. It is intended for loudspeaker building and wireless music streaming with minimum size and consumption, state-of-the-art power efficiency and HD audio quality. The MERUS™ audio amplifier HAT ZW board is equipped with the MA12070P class D multilevel amplifier and it can provide up to 40 W of instantaneous output power and up to 48 KHz/24 bit music streaming. Extra power supply is not needed because the MERUS™ audio amplifier HAT ZW board is powered directly from the same supply that runs the Raspberry Pi. It is compatible with the most popular audio streaming applications for Raspberry Pi such as Volumio or Max2Play and it can be also used in Raspbian as an airplay client or a Bluetooth audio receiver.

Key applications

- Multi-room wireless audio streaming
- Portable wireless speakers
- Set-top boxes

KIT_40W_AMP_HAT_ZW evaluation board



Key features

- Compatible with Raspberry Pi Zero W and Raspberry Pi 3 and 4
- MERUS™ MA12070P proprietary multilevel class D amplifier
- Single 5 V/2.5 A USB power supply required. No need for additional power supply
- Compatible with Raspbian, Volumio, JustboomPlayer and many more
- 40 W peak output power
- 2xBTL or 1xPBTL channel for TWS or subwoofer applications

Key benefits

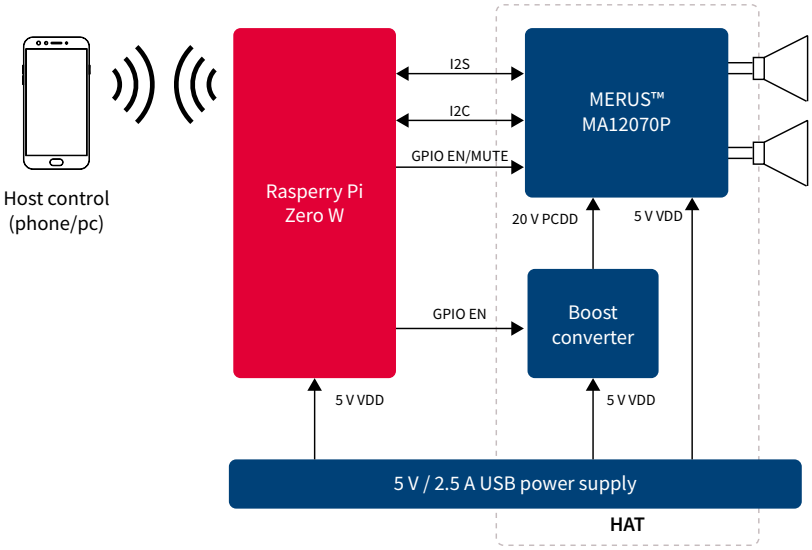
- MERUS™ multilevel class D amplification
- Small and compact design
- Best-in-class efficiency
- Up to 20 hours of playback time with ~6700 mAh power bank



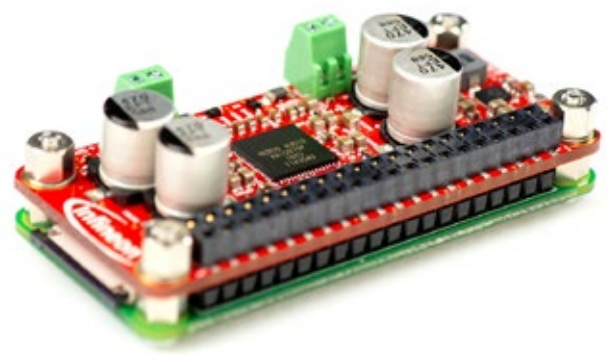
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Block diagram



KIT_40W_AMP_HAT_ZW evaluation board



Parametrics	Specification
Order number	KIT40WAMPHATZWTOBO1
Input type	DC
Output current min/max	0.077 A/2.25 A
Output voltage/chv max	9.0 V
P_{out} (instantaneous peak)	40.0 W
P_{out} (continuous)	7.0 W
Product description	Audio amp HAT for Raspberry Pi Zero W
Qualification	Standard
Supply voltage min/max	4.8 V/5.2 V
Target application	Audio
Topology	Amplifier

Published by
Infineon Technologies Austria AG
9500 Villach, Austria

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Document number: B188-I0988-V1-7600-EU-EC-P
Date: 04 / 2020

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