High Quality Auracast™ Audio – Powered by Cloud2GND and Ezurio!

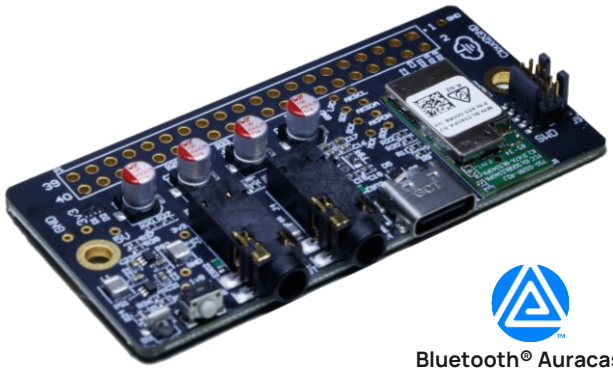
The primary function of the **Aurawave AW100 series** modules when combined with the **Aurawave Audio Framework** AT command software is to serve as an **Auracast™** transmitter, enabling the wireless broadcasting of high-quality audio to multiple Bluetooth receivers simultaneously.

Auracast™ technology is at the forefront of wireless audio streaming, offering a seamless and reliable user experience in environments such as public venues, conference halls, and personal audio setups.

Get started with your Broadcast audio experience with the AurawaveAW100:

- Simple and easy to use, in both HW and SW
- You don't need to be an LE Audio expert!
- Reduce your time to market
- Minimize your design risk and certifications
- From development board to prototypes to volume – ready to go now.
- Need a tweak or customisations– no problem for the Cloud2GND team

Cloud2GND + ezurio



Bluetooth® Auracast™

Key Features

Bluetooth Core 6.0
Seamlessly integrate with third-party Bluetooth LE devices, offering flexibility for various applications, including audio, data transfer, sensor connectivity

Audio Input & Output
I2S, USB, and onboard codec to handle analog and digital audio I/O.

Easy AT Command Interface
Ships with firmware that enables straight forward configuration and control of Bluetooth Auracast™ broadcasts via AT commands.

Customizable Firmware
Ships with pre-built binaries for out-of-the-box AT command use. Customized firmware available to meet your specific application needs. A standard 10-pin SWD header is available for the user to flash custom binaries using standard Nordic tools

Hosted Operation
Drive from an external MCU using AT control interface via UART/GPIO or USB. Flexible control of stream meta data and configuration with audio over I2S, USB, or line-level analog via 40-Pin header.

Auracast™ Source Capability
Broadcast high-quality audio streams to multiple Bluetooth receivers simultaneously, supporting use cases in public and private environments

40 Pin Expansion Header
Integrate LE audio into your product via the 40-pin header, which exposes power, serial, audio, GPIO and more

USB-C Interface
The Aurawave module can be powered and controlled by a USB-C host device using AT-Commands over a virtual serial port while also exposing a digital audio interface

Compact and Modular Design
The module is designed for easy integration into existing hardware setups, with a form factor that suits both consumer and industrial applications

Standalone Operation
When powered by common power adapters (USB-C), the Bluetooth LE Auracast™ module will operate without the need for other supporting hardware to broadcast analog audio

Specifications

Category	Feature	Specification
Aurawave	AT Command Interface	• Configure audio inputs • Configure broadcast parameters • Selectable audio source per broadcast channel • Configuration persistence • Factory reset • Enter firmware upgrade mode • See Aurawave AT Interface Specification for more information.
	Audio Source Options	• 2 Channels of Analog I/O at 48kHz or 16kHz sampling rate • 2 Channels of Digital Audio via USB at 48kHz sampling rate
	Auracast™ Transmitter (Public Broadcast Profile)	• Standard Quality Broadcast (16kHz) – Low latency: 16_2_1, – High reliability: 16_2_2 • High Quality Broadcast (48kHz) – Low latency: 48_2_1 – High reliability: 48_2_2 • 1 x Broadcast isochronous group, up to 2 Subgroups • Encode up to 2 audio input channels simultaneously • 2 x Broadcast Isochronous Streams with one audio channel per BIS • Configurable BAP Audio Locations (Mono, Left, Right, Center, etc.) • Broadcast Encryption
	Supported Bluetooth LE Features & Roles	• Public Broadcast Profile (PBP) - Public Broadcast Source • Common Audio Profile (CAP) - Initiator • Basic Audio Profile (BAP) - Broadcast Source • Bluetooth Core 6.0
	Firmware Upgrade	• Firmware upgrade via provided tools
	Push Button Input	• Factory Reset - Press and hold • Firmware upgrade mode - hold on boot
	Custom Firmware / Feature Development	• Additional services and custom support available.
Hardware	Bluetooth Module	Ezurio BL5340PA Series Module: • Nordic nRF5340 • Nordic nRF21540 Front End Module • 128/64 MHz Arm Cortex-M33 application processor with 1 MB Flash & 512 KB RAM • 64 MHz Arm Cortex-M33 network processor with 256 KB Flash & 64 KB RAM • Internal Antenna
	Audio Codec	AKM AK4558 Digital Sigma-Delta CODEC • 32Bit • 108dB Dynamic Range S/N DAC • 100dB S/(N+D) DAC • 108dB Dynamic Range S/N ADC • 92dB S/(N+D) ADC
	Flash	32MBit QSPI Flash
	Voltage	5Vdc Operating Voltage
Interfaces	Bluetooth	Bluetooth Core 6.0
	USB	USB-C Connector: 5VDC, Audio I/O, AT Control
	Analog Audio	Via AKM4558 Codec: 3.5mm TRS Stereo Line input, 3.5mm TRS Stereo Line output
	I/O	40-pin header (2x20 2.54mm pitch): • I2S In/Out • Line Audio In/Out • UWB • I2C • SPI • UART x2 • GPIO x 5 • PDM multiplexed with GPIO pins • +5V DC
	Physical Input	Pushbutton Control
	LED	2-color green/blue LED
	Programming	SWD Programming Interface
	Analog/PCM Audio	• nRF5340 I2S Controller --> AK4558EN I2S Target --> Line Out • Header I2S Controller --> BL5340 I2S Target --> LE Audio • Line In --> AK4558EN I2S Controller --> BL5340I2S Target -> LE Audio
Physical	Dimensions	32 x 65 x 10mm (LxWxH)

Ordering Information – AW100 Series Modules

Ezurio Part #	Cloud2GND Part #	I/O Option	Antenna Option	Availability
453-00068-K2	AW100PA-A-INT	Analog + Digital	Internal	**Stock Q3 2025**
TBC	AW100PA-D-INT	Digital Only	Internal	Special Order
TBC	AW100PA-A-EXT	Analog + Digital	External	Special Order
TBC	AW100PA-D-EXT	Digital Only	External	Special Order

Ezurio's products are subject to standard Terms & Conditions.