Smart EQ

" EXPERIENCE THE MOST OPTIMIZED VERSION OF YOUR SONG. "

Graphic EQ (Equalization) is broadly used in audio signal processing for various purposes as to shape a speaker response, to tune a tone balance to one's preference, to add flavors and etc. Different from its intention to change frequency responses for an input audio signal, when applying an EQ curve, it sometimes results in unwanted side effects of altering the source's loudness and/or making to make annoying clipping distortions. Gaudio Smart EQ is a versatile, high quality audio equalizer that can be applied in any applications without worrying about those inherent artifacts.

Where to apply

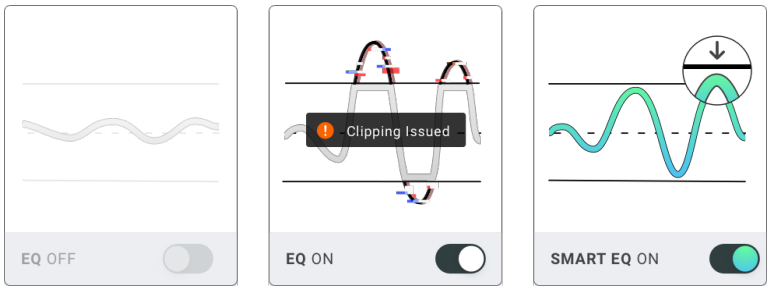
- **MEDIA PLATFORM** OTT • music streaming • live-streaming and more
- **ELECTRONIC DEVICES** smartphone • tablet • TWS • laptop • TV and more

FEATURES

- **High quality sound** : With anti-clipping logic and loudness normalization even after applying a EQ curve.
- **Low complexity** : Never neglects software optimization that runs great on low power and mobile devices.
- **Complete SDK** : Ready to be integrated on any platform and device.
- **Customer oriented customization** : Onsite & remote technical supports ensure complete integration
- **Audio input format** : Support for stereo/5.1/7.1/5.1.2 channels with standard sampling rates up to 192kHz

TECHNOLOGY

Gaudio Smart EQ consists of three processing blocks: analysis, equalization, and compensation. It first analyzes an input audio signal and measures loudness per frequency band. It equalizes the audio signal following any user-set EQ curves. It anticipates and compensates the changes in loudness of the equalized audio signal based on the measured loudness per band. During the process, as it understands the dynamic characteristics range of the output audio signal and the clipping problems potentially caused by the equalizer are resolved.



SOFTWARE SPECIFICATION

Deliverable Type	• Cross platform native C/C++ library • Android · iOS native SDK or any DSP and embedded MCU
Complexity	28.9 MCPS on Qualcomm Hexagon DSP
Latency	0.7 msec
Memory	187 kB
Library Size	604 kB