

SAR Insight & Consulting

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Why scalable codecs will be the future of audio streaming

LC3 is set to create a foundation for the future of multi-purpose headphones—SAR Insight & Consulting.

LE Audio is primed to take the reins as the standard Bluetooth connection, as Bluetooth classic is phased out, opening up new markets in the process, according to market analyst [SAR Insight & Consulting](#).

“Bluetooth classic has been climbing the ranks of the audio connectivity market in the last ten years, and is today considered the standard connection for consumer devices,” Joe Murray, author of [‘Bluetooth Audio Streaming Codecs – Market Forecasts, Technology Trends and Key Devices’](#), said.

“And it has created a steady market for the new protocol in the process, LE Audio, which will expand its reach even further.”

CES 2020 saw the announcement of LE Audio and its new default codec LC3, which was developed to improve both audio streaming and VoIP for smartphone accessories.

SAR Insight & Consulting believes the deployment of LE Audio will see an initial influx of dual mode devices before a limited number of LE Audio-only devices begin to emerge. Dual mode devices will ensure that new devices will be compatible with both the new and old protocols.

The latest report found that the average number of codecs per device is expected to drop, which is due to rise of adaptive codecs and a limited number of third-party codecs available for LE Audio in its early adoption.

“Bluetooth has never been a major feature of gaming headphones due to latency that is much higher than the lip-sync threshold,” Joe said. “However, LC3 and LC3Plus are offering solutions that sit below noticeable latency (between 20ms-30ms). As a result, Bluetooth could easily become the standard connection for gaming headphones.

“Hearing aids will also reap a huge benefit from the new Bluetooth protocol. LE Audio is bringing new features with it, one of which is Broadcast audio that will offer an alternative for hearing loops and will be more prevalent due to the wide range of locations that could benefit in other ways from their own Bluetooth hotspots.

“Furthermore, hearing aid streaming from smart TVs and smartphones will see a boom of uses due to the low latency and high-resolution possibilities.”

SAR estimates that there will be an increase of 27% for the number of codecs used between 2020 and 2026. However, Bluetooth audio-enabled devices will raise by over 56% to reach 4.5 billion devices in 2026. This limited codec growth is due to the rise of adaptive codecs that can adjust to fit the needs of specific use cases. For example, if streaming music the codec will prioritize resolution, with higher latency being the tradeoff.

“We’ve calculated that more than 2.9 billion Bluetooth audio devices were shipped in 2020, adding up to almost 22 billion devices shipped between 2010 and 2020 (inclusive),” Joe said. “However, this is expected to slow down due to the development of multi-use case headphones (a trend that is possible due to adaptive codecs), and a drop in sales in the smartphone market.

“As the Bluetooth Classic protocol is phased out, the largest customer of AAC, Apple, will need to decide where to put its money next—most likely LC3Plus. However, there is a possibility that Apple will develop its own codec.”

These are some of the findings from [‘Bluetooth Audio Streaming Codecs – Market Forecasts, Technology Trends and key devices’](#) from SAR Insight & Consulting.

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Notes to editors: SAR Insight & Consulting provides detailed quantitative and qualitative research on established and emerging technology markets across multiple end applications, covering audio, voice, AI, UI, connectivity, sensors and more. www.sarinsight.com