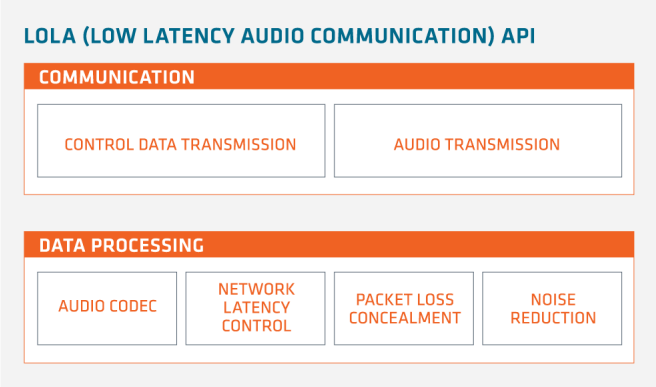
Datasheet

lola by Jacoti



Jacoti Lola is a new Wireless Protocol implemented with the goal of having Low Latency Audio Communication applications work effectively on off-the-shelf devices and network infrastructures; hence allowing to bring this technology to end-users for a fraction of the price of other equivalent technologies without compromising latency, quality or signal-to-noise ratio.

The Jacoti Lola software development kit (SDK) is especially suited for applications running on connected devices located in small to medium sized venues with the aim of facilitating the communication of audio—speech and CD quality music—between the users of such devices.

The Jacoti Lola SDK enables low latency high-quality audio transmission thus being especially adequate for conference rooms, classrooms and other situations where there is one person speaking to many, all of them physically present. In such situations, Jacoti Lola ensures that audio is not too delayed with respect to the lip movement of the speaker so the listeners can have a comfortable experience. It also features bi-directional communication that allows the listeners to speak up and make themselves be heard by the lead speaker and fellow listeners.

Benefits

+ Easy integration with apps for faster deployment.
+ Predictable performance (such as latency) across multiple devices.
+ Automatic device discovery, which facilitates the development of easy-to-use applications.

Jacoti Lola is a trademark of Jacoti bvba.

Features

HearingKit®

Jacoti Lola leverages HearingKit® signal processing algorithms to provide noise reduction and sound limiting (higher possible output without distortion in the signal).

Real-time Audio Encoding

Jacoti Lola uses the Opus codec, which is unmatched for interactive speech and music transmission over the Internet, and it is standardized by the Internet Engineering Task Force (IETF) as RFC6716.

Low and adjustable latency

Jacoti Lola provides end-to-end (from the speaker's mouth to the listener's ear) communication in less than 30 milliseconds*. Jacoti Lola adjusts the latency automatically according to the network performance.

Device discovery

Jacoti Lola features device discovery so it allows creating minimal yet very usable graphical user interfaces which make Jacoti Lola enabled applications very easy to use.

Bidirectional communication

Jacoti Lola supports bidirectional communication that allows M-to-N audio transmission.

Summary

- Support for noise reduction
- Wi-Fi and Bluetooth
- Low latency & Real-time
- Binary data messaging protocol
- Full duplex audio streaming
- CD Quality
- Flexible audio streams routing between devices

Technical Features

Written in Objective-C
Support for Mac OS X and iOS
Wi-Fi devices
Works with 5GHz band routers (802.11n, 802.11ac)
Algorithmic latency: 5 ms
Round-trip latency: 30 ms
Compression ratio: 1:12
Audio Format: 32-bit, 24kHz (CD-Quality)
Data Rates: 128 kbps
Frequency Response: 10Hz to 24kHz
Algorithmic Latency: 2.5ms @ Fs 48KHz
Access points: We recommend using the EAP767 WiFi AP from 4ipnet (tested with up to 16 devices). Apple Airport Extreme and other mid-high end routers are also known to work well.

Products powered by Jacoti Lola

The Jacoti Lola technology currently powers the Jacoti Lola Classroom application, the wireless audio communication solution for in-room situations.

* On the iPhone 5 (and later), iPad (4th gen), iPad mini (2nd gen) and later and iPod touch 6th over an 4ipnet EAP767 WiFi Access Point network.

Contact

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About Jacoti

We make state-of-the-art hearing solutions accessible and affordable for hearing-impaired individuals all over the world. As a company we realize this mission by focusing on the development and commercialization of hearing aid software and hearing support systems. We achieve this by integrating our proprietary technology with internet-ready consumer hardware such as smartphones.