TECHNICAL SPECIFICATION

Supported operating systems & architectures

Android 4.1 or newer, devices with ARM processor Windows 7 or newer, 64-bit Mac OS X 10.10 or newer, 64-bit 1
Ubuntu Linux 14.04 LTS, 64-bit 2



Client-server architecture

No servers required by default (servers are hosted by RadioKit in the cloud) 3

No network setup required by default

Built-in NAT traversal (UDP hole punching)

VPN access 4

IPv6 ready

Designed to operate with cable, WiFi and mobile (3G and newer) IP networks

Codecs

Opus 1.1 (RFC 6716)

Packet Loss Concealment enabled

Error Correction enabled

Bitrate from 5 to 510 kbit/s

- speech has broadcastable quality at 24 kbit/s
- music has broadcastable quality at 48 kbit/s

CBR or VBR mode

Sample rate from 8 to 48 KHz

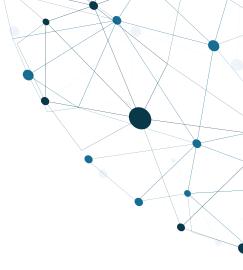
Audio bandwidth: from 4 (narrowband) to 20 kHz (fullband)

Server-side audio processing engine internally uses 32-bit float samples at 48 KHz

Mono or stereo

Dynamically adjustable bitrate, audio bandwidth, and frame size

- 1 Coming soon
- 2 Coming soon
- 3 Enterprise installations on client's servers are also possible, but extra charges may apply
- 4 Coming soon, VPN is enabled upon client's request, extra charges may apply





TECHNICAL SPECIFICATION

Transport layer

Open standards: RTP (RFC 3550), RTSP 1.0 (RFC 2326)

Transmission happening over UDP whenever possible with TCP fallback

Latency

Default latency: 80 ms + network latency:

- Codec frame size: 20 ms

- Receiver jitter buffer: 20 ms

- Server-side audio processing engine: 20ms

- Reciver transmission buffer: 20ms

- Network latency (60 ms on average in Central Europe)

Can be adjusted in the following range:

- Codec frame size: 2.5-60 ms

- Receiver jitter buffer: 5-1000 ms

- Receiver transmission buffer: 5-1000 ms

- Network latency: down to +/- 20 ms 5

Monitoring & management

100% web-based monitoring panel

Support multiple users operating collaboratively

Web-based peakmeter showing reference signal from the server

Ability to adjust connection parameters via web browser during transmission

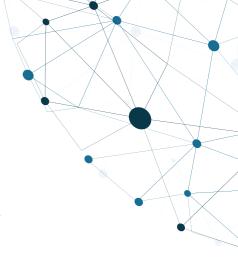
Authentication

Based on OAuth2 standard

Built-in web-based authentication system

5 May require setting up an exclusive servers for the client in the physically closer location, extra charges may apply





TECHNICAL SPECIFICATION

Routing

Extras

Multiple clients Bi-directional audio communication with clients Talkback

Built-in alternative communication channel: text chat Integration
All functions of the application are available through REST or WebSocket API
Open specification

