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*

Networking

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

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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

Multiple clients
Bi-directional audio communication with clients
Talkback

Extras

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