



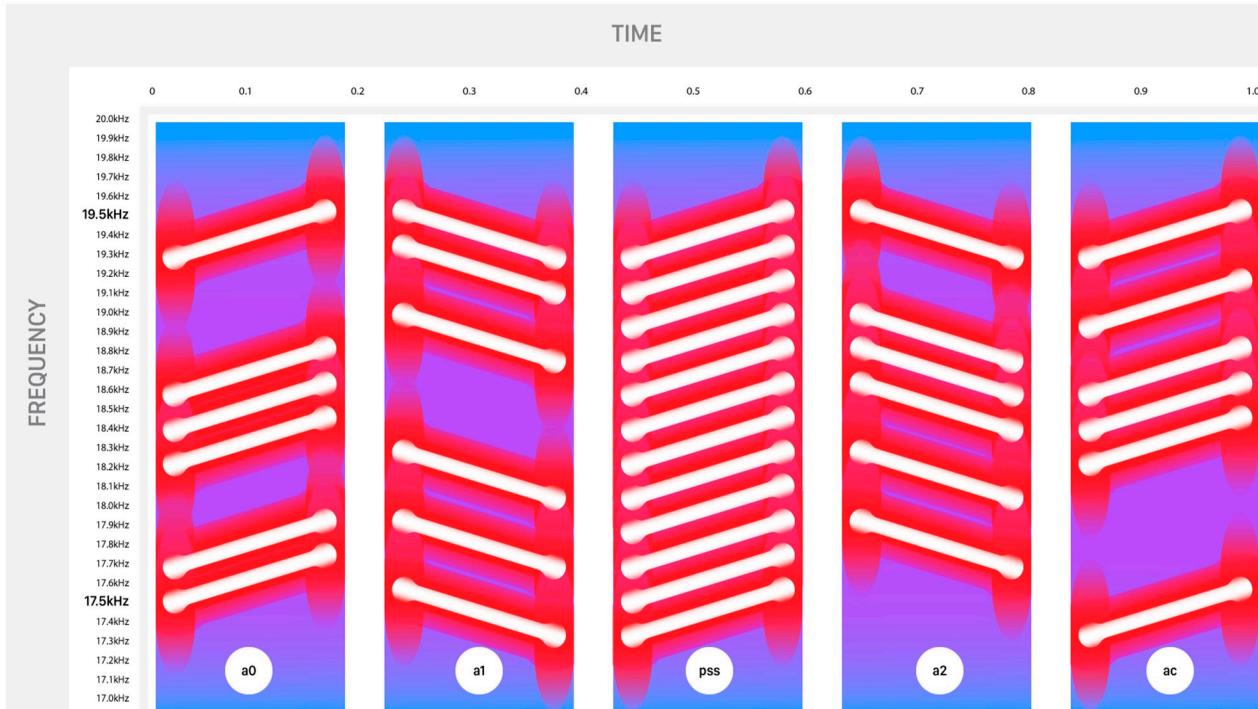
# High Reliability Acoustic Modem

CUE Audio provides an extremely reliable acoustic modem, permitting data exchange between any two devices with a microphone or speaker. CUE typically operates in the near-ultrasonic frequency band (17.5-19.5kHz) in order to be inaudible to the majority of people but detectable by commonplace microphones. Trusted by many of the world's largest brands and deployed on over nine million devices, with CUE you will have access to the world's most advanced acoustic modem.

***“After extreme due diligence of various data-over-audio SDKs, CUE Audio’s proved to be the highest performance by considerable margin”***

Johnathan Ny, Singapore Air Force

## Diagram & Description



The modem is capable of the resilient data communication in echoey environments with high inter-symbol interference.

Transmission format and signal processing algorithms are optimized for reliable operation in the acoustic channels having both time-varying and frequency-selective fading.

# Specs

- Throughput: 26 payload bits per second
- Range from mobile to mobile: up to 3-10 meters; large venue speakers: up to 150+ meters
- Modulation: (n choose k)-combined linear frequency with PAPR optimization
- Error correction: linear block code with ML decoder.

## SDK

CUE's engine brings data-over-audio technology to a host of popular platforms. Written with a C++ core, CUE's DoA engine can be integrated into virtually all embedded systems. Integration on iOS and Android consists of only a few lines of code.



### Mobile:

Android: API 19+  
iOS: 10.0+



### Desktop and Embedded Systems:

CUE's core C++ library can be built into any multi-threaded operating system, including Linux and Windows.

Objective-C   Swift   Java   Kotlin   Python

```
[CUEEngine.sharedInstance setupWithAPIKey:API_KEY];
[CUEEngine.sharedInstance startListening];
[CUEEngine.sharedInstance setReceiverCallback:
 ^void(NSString* jsonString)
{
    CUETrigger *cueTrigger = [[CUETrigger alloc] initWithJsonString:jsonString];
    NSLog(@"Look how easy it was to detect the CUETrigger: %@", cueTrigger);
}];
```