

ReadSpeaker® speechEngine

SAPI

ReadSpeaker speechEngine SAPI provides production-ready and highly reliable text-to-speech voices fully compatible with Microsoft SAPI5. It delivers stable and scalable performance for Windows applications that require consistent, professional speech output. ReadSpeaker speechEngine SAPI provides a broad portfolio of highly accurate, highly intelligible ReadSpeaker TTS voices to use with Microsoft Speech API-compliant software.

Product Description

ReadSpeaker speechEngine SAPI enables Microsoft SAPI5-compatible applications to generate high-quality text-to-speech audio. It can be integrated into a wide range of professional software and devices, including accessibility tools, e-learning and authoring platforms, simulation and training systems, IVR and telephony solutions, ATMs and kiosks, audio-publishing tools, and screen readers.

Users can select from ReadSpeaker's continually expanding portfolio of ReadSpeaker SAPI voices to support multilingual or global deployments.

ReadSpeaker speechEngine SAPI (Speech Application Programming Interface) provides the required components (speech engine libraries, voice files, and documentation) to deploy one or more ReadSpeaker voices with Microsoft SAPI5-compliant applications.

Use of the product is governed by a separate License Agreement, which defines the licensed application(s)/device(s), voices, and permitted use context.

Features

High-quality Synthetic Speech

ReadSpeaker's text-to-speech voices deliver clear, natural, human-like synthetic speech and are continually optimized to ensure consistent quality and reliable output for a wide range of applications.

150+ Voices in 50+ Languages

speechEngine SAPI supports ReadSpeaker's catalog of more than 150 synthetic voices across over 50 languages. New voices and languages are added regularly. A complete list is available on the [ReadSpeaker website](#).

Modifiable Speaking Rate, Pitch, and Volume (DSP)

The speaking rate, pitch, and volume can be adjusted as required.

Voice and Language Switch

The product supports switching to another language or to another voice in the same language during text-to-speech conversion, based on SSML instructions in the input.

User Dictionary and IPA Support

The lexicon editor allows customers to create user dictionaries for each licensed language with the lexicon editor. Dictionary entries define custom pronunciations for words or patterns. This improves the reading accuracy for domain-specific vocabulary. Multiple user dictionaries per language and IPA transcription input are supported.

Viseme Output Support

ReadSpeaker speechEngine SAPI provides viseme data for real-time mouth-movement and lip-sync synchronization.

Technical Specifications

Supported Operating Systems

Windows 10 and Windows 11.

CPU Requirements

Intel x86/64 1 GHz or higher.

Note: AVX support is required on x64 architectures. If your environment lacks AVX support, please contact ReadSpeaker.

RAM Requirements

2 GB or more recommended.

Voice Footprint

9 MB – 35 MB per voice (Deep Neural Networks technology).

Runtime Memory Usage

20 MB – 30 MB.

Supported Input Formats

- Plain text
- SAPI XML
- SSML

Supported Character Encoding for Text Input

Unicode (UTF-16)

Supported Audio Formats

16-bit linear PCM Wave

Voice and Language Switch

Switching to another language or another voice in the same language can be performed using SSML.

Simple Implementation

ReadSpeaker speechEngine SAPI is installed using the provided installer. Once installed, the licensed voices become available to your SAPI-compatible application.

Support

speechEngine SAPI includes support from the ReadSpeaker Support Team. The team assists customers in understanding and carrying out the installation according to the provided instructions.

Licensing

ReadSpeaker speechServer is governed by a license agreement. See the Licensing section under Requirements and Limitations for more information. The license agreement is technically enforced by a license file that specifies and enforces:

- The text-to-speech voices that are licensed
- The number of devices covered
- The license term (duration of permitted use of the product)

Product Components

Installer Files

ReadSpeaker speechEngine SAPI is delivered as standard executable installers (.exe files) for Windows. After installation, the voice(s) become available to Windows and all SAPI-compatible applications.

ReadSpeaker TTS Engine

speechEngine SAPI includes a TTS engine for each licensed language. speechEngine SAPI invokes the TTS Engine to convert text into synthetic speech. The ReadSpeaker TTS Engine includes a pronunciation dictionary for the licensed language.

Lexicon Editor

Allows the user to create one or more user dictionaries for each licensed language to customize the pronunciation. The user dictionary files are used by the TTS Engine for the voice synthesis.

User Documentation

Instructions for installing speechEngine SAPI.

Requirements and Limitations

Licensing

A license agreement governs and restricts the use of ReadSpeaker speechEngine SAPI. It defines:

- The permitted usage context for the product, typically identified by the name and description of the speech-enabled server application(s)/device(s)
- The text-to-speech voices that are licensed
- The number of devices covered
- The license term (duration of permitted use of the product)

Intended Use

Customers may use ReadSpeaker speechEngine SAPI only in accordance with this product specification and the required license agreement.

Any use outside the scope defined in this specification and the license agreement is not considered intended use.

Disclaimer

The features listed in this document are guaranteed only when ReadSpeaker speechEngine SAPI is implemented according to the provided instructions. Specifications and features may be modified by ReadSpeaker at any time without prior notice.