

# ReadSpeaker® speechEngine SDK

ReadSpeaker speechEngine SDK gives developers the tools they need to create speech-enabled applications on desktop and other pc-based devices.

## Product Description

ReadSpeaker speechEngine SDK is specifically designed to help developers quickly and seamlessly integrate ReadSpeaker's voices into their desktop applications or applications on other pc-based devices. The TTS engine is installed on the desktop/pc. A range of operating systems is supported.

The SDK consists of speech engine libraries, voice specific files, and documentation. It is shipped for the ordered platform. The use of ReadSpeaker speechEngine SDK is governed by a required separate License Agreement which determines the licensed platform and context.

## Features

### Leading synthetic speech for superior customer experience

ReadSpeaker's text-to-speech voices are extremely accurate, clear and natural, designed to deliver the highest quality sound and exceptional performance every time and are continually optimized.

### 90+ voices in 30+ languages available

New voices are being developed all the time. Presently, ReadSpeaker has TTS voices in 30+ languages and 90+ voices available. For a complete list of available languages go to [our languages web page](#).

### Modifiable speaking rate, pitch, and volume (DSP)

The speaking rate, pitch, and volume can be configured as desired.

### Voice/language switch

Switching to another language or to another speaking voice in the same language during the conversion from text to speech in response to SSML code in the input text is supported.

## User dictionary, IPA supported

The voice specific files included in ReadSpeaker speechEngine SDK for each licensed language include a dictionary file, the user dictionary, in which the customer can customize the pronunciation of words or sequences of words in a specific way to increase the quality of the reading. The user can create multiple user dictionaries per language if required. The user dictionaries accept IPA input.

## Technical Specifications

### Supported Operating Systems

- Windows 7, 8 and 10
- Linux
  - CentOS 5.x, 6.x, and 7.x
  - Ubuntu 16.x
  - RHEL 5.x, 6.x, and 7.x
- other OSs can be supported on request

### Supported architecture

Intel 32 and 64 bit (x86/x86\_64)

### CPU

1 GHz or higher

## Voice footprint

64 MB - 2.2 GB per voice developed using Unit Selection Synthesis (USS) technology

5 MB - 15 MB per voice developed using Hidden Markov Models or Deep Neural Networks (HMM or DNN) technology

## Runtime memory

- 35 MB ~ 90 MB (USS)
- 5 MB ~ 10 MB (HMM, DNN)

## Development languages

- C / C++ (Windows/Linux)
- C# / VB.NET (Windows)
- Java (Windows/Linux)

## Supported text input formats

- Plain text
- SSML

## Supported character encoding for text input

- UTF8 (all voices)
- Multibyte code set (certain voices only)

## Supported audio formats

- 16-bit linear PCM
- 16-bit linear PCM Wave
- 8-bit A-law PCM
- 8-bit A-law PCM Wave
- 8-bit  $\mu$ -law PCM
- 8-bit  $\mu$ -law PCM Wave
- 8-bit  $\mu$ -law PCM SUN AU
- 8-bit unsigned linear PCM Wave
- 4-bit Dialogic ADPCM

## Voice/language switch

Switching to another language or to another speaking voice in the same language can be realized through SSML tags.

## Simple implementation

ReadSpeaker speechEngine SDK is easy to implement using the supplied documentation and sample code.

## Installation and implementation support

ReadSpeaker speechEngine SDK includes implementation support by our Support Team, who will assist the customer wherever necessary in understanding the instructions to carry out the integration.

## License file required

The use of ReadSpeaker speechEngine SDK is governed by a required separate license agreement. This license agreement determines which voices are licensed and the context within which the product may be used, usually the name and a description of the application that will be speech-enabled. It also specifies technical restrictions to the text-to-speech conversion, such as the synthesis speed rate. A license file is a part of the product and technically enforces elements of the license agreement. The agreement is based on trust that the customer will not exceed the specified use.

## Product Components

### ReadSpeaker TTS Engine

The ReadSpeaker TTS Engine includes the voice database and a pronunciation dictionary for each licensed language/voice. The voices database(s) contain audio fragments which are used by the TTS Engine for voice synthesis. The TTS engine is called upon by the application to convert text to voice.

### User documentation

Includes the APIs needed and the implementation instructions.

# Requirements and Limitations

## Scope of use

ReadSpeaker speechEngine SDK may only be used within the context and with the restrictions described in the license agreement. These will include for which application the product was licensed and the intended use of that application.

## Intended Use

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

Any other use of ReadSpeaker speechEngine SDK is not considered intended use.

## Disclaimer

Features listed in this document are guaranteed only if ReadSpeaker speechEngine SDK has been implemented according to our implementation instructions. Specifications and features as described in this product specification can be changed by the manufacturer without prior notice.