Truly Handsfree™ by Sensory

High Accuracy, Low Power, Customizable Voice Control for Devices & Applications

Exceptional flexibility, functionality, a safe user experience, and convenience. You retain complete ownership and control of your product and branding.

TrulyHandsfree™ (THF) has fast response times, ultra-low current consumption, and excellent performance, even from a distance or in noisy environments. Product command and control with TrulyHandsfree™ Voice Control creates great user experiences by utilizing word and phrase spotting to allowing the user to voice commands in a natural intuitive way.

Sensory's TrulyHandsfree™ Voice Control speech recognition technology delivers customizable wake words, small to medium-sized command sets, speaker identification, and speaker verification models. TrulyHandsfree™ technology has been included in products ranging from mobile phones, tablets, PCs, IoT, to wearables, hearables, medical equipment, and vehicles around the globe. Contact Sales at www.sensory.com to learn more about adding TrulyHandsfree™ to your product today!

Built from experience

Sensory is the go-to solution for state-of-the-art performance. 20• years of experience and innovation.

Private/Secure

Embedded execution negates the transfer of private information to the cloud.

Fast

Embedded hence zero cloud communication delay. Fewer MIPS means lower latency and quicker response.

Customizable

THF supports custom wake words, for brands and specific product environments. Supports multiple languages, dialects, and writing systems.

Optimized

Optimized engine is able to advantage of available hardware acceleration and multiple cores.

Noise Robust

A single solution works under a wide range of noise conditions.

Accurate

Best-in-class for embedded wake words. Outperforms published benchmarks.

DSP Compatible

TrulyHandsfree™ can operate on a variety of DSPs to provide a super low power solution.

Flexible

Able to run on platforms such as Raspberry Pi (Linux/Android) to Multicore ARM (iOS/Android).

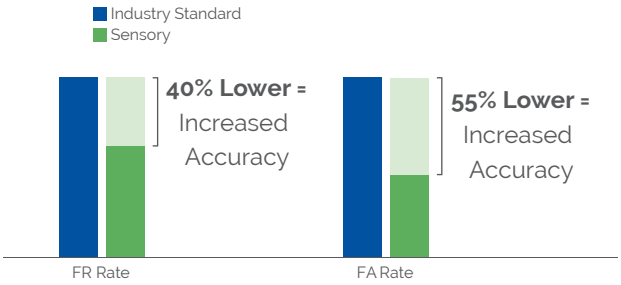

Mobile


Automotive


IoT


Medical Equipment


Hearables/Bluetooth



Outperforms Industry Standard

TrulyHandsfree™ is the best in class embedded wake word. It outperforms published benchmarks in accuracy by more than 40%. Lower False Accept errors (FA) and False Reject errors (FR) indicate higher accuracy.[1]

TrulyHandsfree™ Model Components

Fixed wake word (FW), a speaker-independent wake word that responds to a predefined wake word (i.e. "Hey Siri". "Alexa". "Ok Google", "Cortana") by any speaker in the wake word's native language. Sensory trains the wake word to work best in the real-world use-case and demographic required by the customer. Fixed wake words have the advantage of providing a ready to use out-of-the-box experience.

Enrolled wake word (EW), a wake word that is pre-determined and adapts to a user's voice. The adaptation requires a few recordings, collected during an enrollment phrase, of the user saying the wake word. After adaptation, the EW will respond better to the enrolled user's voice than other users. Enrolled wake words have the advantage of lower false reject errors and lower false accept errors than fixed wake words (FW).

User-defined wake word (UDW), a language independent wake word or phrase specified by the user. UDW enrollment requires a few recordings of the desired wake word, and results in a user-specific recognizer.

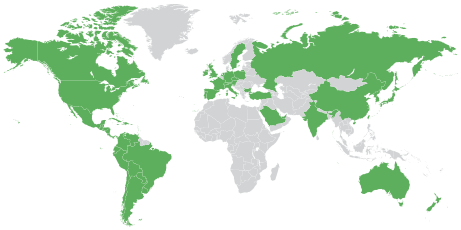
Command Sets, speech recognition for product control. THF supports small to medium-sized command sets in a listening window that can begin immediately after a FW/EW/UDW. Commands can be short sentences or a single word.

Speaker Verification (SV) and Speaker ID (SID) offer a secured wake word or phrase that authenticates a user's identity based upon a spoken, pre-defined, text-dependent password or phrase. Unlike other voice security solutions, SV and SID attempt to detect differences in the way a word is spoken, making it more sensitive to an individual's voice. SV and SID adaptation requires a few recordings, collected during an enrollment phrase, of the user saying the target phrase or password.

Memory Requirements. TrulyHandsfree™ wake words and small command sets (as small as 40KB) can fit and execute on small, low-power DSPs. Alternatively, standard OS SDKs are available that provide a greater degree of flexibility and larger command sets. This allows the right choice for low power or flexible features without compromising.

Expansive Language Coverage

Sensory currently supports THF for the following language populations. Sensory can most likely support additional demographic coverage by customer request (may need a few weeks additional lead time for custom in-vocabulary and noise collection).



Arabic, Bulgarian, Dutch, English, French, German, Italian, Japanese, Korean, Mandarin, Polish, Portuguese, Russian, Spanish, Swedish, Turkish

sensory™

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[1] Full report available at Vocalize.ai