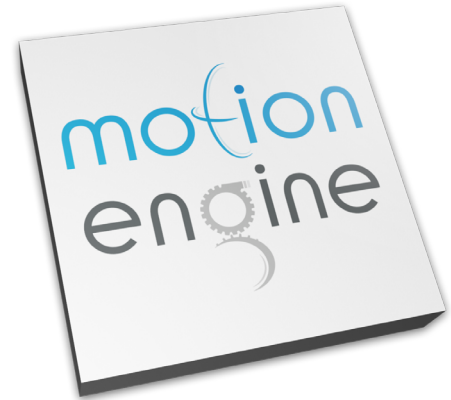


# MotionEngine™ Hear

Consumers want their technology to be easy-to-use, affordable, and long-lasting. The hearables market is no exception. CEVA's MotionEngine Hear helps ODMs and OEMs address consumer demands with confidence and flexibility for TWS, PSAP, on-ear/over-ear headsets, hearing aids, and AR glasses. MotionEngine Hear offers gesture recognition that simplifies the interface with taps and in-ear detection to play/pause music. The activity classifier algorithms can tell when you're on the move so you can hear the right sounds the right way at the right time. And with the added use of a gyroscope, Hear enables manufacturers to elevate their devices with accurate 3D and spatial audio. And isn't the best audio experience why you're... here?



## FEATURE HIGHLIGHTS

- ✓ Simple Gestures Interface – tap and double tap gestures, combined with in-ear detection, make control more convenient and natural compared to buttons
- ✓ 3D Head Tracking – specialized head tracking algorithms enable immersive 3D and spatial audio experiences
- ✓ Device Context Awareness – data from multiple sensors and activity classifiers guide decision making
- ✓ Low Power Sensor Fusion – Sensor fusion optimized for low-power operation using intelligent sensor management
- ✓ Activity Tracking – walk, run, stationary, and step count, alongside energy and distance estimation, promote fitness and support contextual awareness
- ✓ Flexible Implementation – accelerometers can be used alone, or in concert with gyroscopes and/or proximity sensors, for greater accuracy and functionality
- ✓ Sensor Qualification – CEVA's comprehensive sensor qualification process improves performance and increases the value of all sensors

## KEY BENEFITS

**Simplified Interface** – Hitting a button on an earbud (on the first try) is not an easily repeatable action, but tapping anywhere on the earbud is. In-ear detection can automatically pause music when you take out an earbud to talk to a friend, and play the moment you put it back in. This simple, yet intuitive, functionality creates a user experience free of frustration.



**Design Flexibility** – MotionEngine Hear is designed to work with accelerometers only. Or with additional gyroscopes. Or additional proximity sensors. Or all three together. This allows ODMs and OEMs to use the same code base while diversifying their product lines to capture the needs of multiple target markets.



## ABOUT CEVA

CEVA is the leading licensor of wireless connectivity and smart sensing technologies. We offer Digital Signal Processors, AI processors, wireless platforms and complementary software for sensor fusion, image enhancement, computer vision, voice input and artificial intelligence, all of which are key enabling technologies for a smarter, connected world. We partner with semiconductor companies and OEMs worldwide to create power-efficient, intelligent and connected devices for a range of end markets, including mobile, consumer, automotive, robotics, industrial and IoT. Our ultra-low-power IPs include comprehensive DSP-based platforms for 5G baseband processing in mobile and infrastructure, advanced imaging and computer vision for any camera-enabled device and audio/voice/speech and ultra-low power always-on/sensing applications for multiple IoT markets. For sensor fusion, our Hillcrest Labs sensor processing technologies provide a broad range of sensor fusion software and IMU solutions for AR/VR, robotics, remote controls, and IoT. For artificial intelligence, we offer a family of AI processors capable of handling the complete gamut of neural network workloads, on-device. For wireless IoT, we offer the industry's most widely adopted IPs for Bluetooth (low energy and dual mode), Wi-Fi 4/5/6 (802.11n/ac/ax) and NB-IoT.

© Copyright 09/2020 CEVA, Inc. and/or its subsidiaries. All rights reserved. All specifications are subject to change without notice.

