

Always on speech processing for 10 keywords consuming microwatts  
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Compact speech recognition applications run on small coin cells or hearing aid batteries that supply between 25mA hours to 250mA hours. An always-on speech recognition application, especially those that are flexible enough for phrases or larger vocabularies can quickly drain the batteries. Furthermore, peak currents for inferencing can further reduce 50% of a battery's life. In our demonstration, we use our TENSAI® AI processor with integrated DSP and Cortex-M3® to optimally implement speech processing on microwatts. TENSAI is a flexible solution that can be retrained for additional or different words and phrases. The net result is power consumption that enables small coin cells or hearing aid batteries to last up to 10X longer than other processing technologies.