

CLAIMS

1. A device comprising:
 - a board;
 - a first integrated device coupled to the board;
 - a speaker coupled to the first integrated device;
 - a microphone coupled to the first integrated device; and
 - a power source configured to provide power to the first integrated device, the speaker and the microphone,wherein the device has a length of about 2.4 centimeter (cm) or less, and a diameter of about 1.2 centimeter (cm) or less.
2. The device of claim 1, wherein the first integrated device includes a low power processor that use about 5-2000 micro-Watts of power.
3. The device of claim 1, further comprising a second integrated device configured to provide wireless communication.
4. The device of claim 3, wherein the wireless communication include Bluetooth wireless communication.
5. The device of claim 1, further comprising a second integrated device configured to provide compression/decompression (CODEC) functionality.
6. The device of claim 1, further comprising:
 - a wireless charging coil; and
 - a wireless charging circuit coupled to the wireless charging coil,wherein the wireless charging coil and the wireless charging circuit are configured to enable wireless charging of the power source.
7. The device of claim 1, further comprising a memory device.
8. The device of claim 1, further comprising a flex board coupled to the board, wherein the board comprises a rigid printed circuit board (PCB).

9. The device of claim 1, further comprising a second integrated device configured to provide power management functionality.
10. The device of claim 1, further comprising a second integrated device configured to provide magnetic near field communication (NFC).
11. An apparatus comprising:
 - a board;
 - a first integrated device coupled to the board;
 - means for generating a sound wave, the means for generating a sound wave coupled to the first integrated device;
 - means for detecting a sound wave, the means for detecting a sound wave coupled to the first integrated device; and
 - means for providing power to the first integrated device, the speaker and the microphone,
 - wherein the apparatus has a length of about 2.4 centimeter (cm) or less, and a diameter of about 1.2 centimeter (cm) or less.
12. The apparatus of claim 1, wherein the first integrated device includes a low power processor that use about 5-2000 micro-Watts of power.
13. The apparatus of claim 11, further comprising means for providing wireless communication.
14. The apparatus of claim 13, wherein the means for providing wireless communication include an integrated device that is configured to provide Bluetooth wireless communication.
15. The apparatus of claim 11, further comprising means for providing compression/decompression (CODEC) functionality.
16. The apparatus of claim 11, further comprising means for wireless charging of the power source.

17. The apparatus of claim 11, further comprising means for storing data.
18. The apparatus of claim 11, further comprising a flex board coupled to the board, wherein the board comprises a rigid printed circuit board (PCB).
19. The apparatus of claim 11, further comprising means for providing power management functionality.
20. The apparatus of claim 11, further comprising means for providing magnetic near field communication (NFC).