Operational description

1.The DWO-2 product uses the HFP, HSP, A2DP and AVRCP profiles of Bluetooth version 2.0 to connect to the mobile phone. The HFP and HSP profiles enable the DWO-2 to handle the phone call events, the A2DP and AVRCP profiles enable DWO-2 to accept the music source from mobile phone, and control its play, pause, forward, backward, and corresponding volume control.

2.Bluetooth chip The BlueCore device in the design is currently chosen to be BlueCore5-Multimedia External as this model, together with the companied RF filter and flash memory, is believed to be the most cost effective. There are several power supply chains inside the Bluetooth chip for different partitions. The supplied voltage scheme is described at appendix A in a form of listed, signal, IO and supply rail. Fully Bluetooth system (RF,BB, protocol stack, and profiles) to support Handsfree profile acting as an slave device. Programmable I/O pins for proper user interface interactions.

3.Flash Memory In current circuit design an 16MBits 3V3 flash memory is used, this is different compared to the published reference design from CSR which uses a 1.8V 16Mbits flash memory. The reason for this configuration is to address the risk we observed during the component survey that the price and availability for the 1.8V part is still not competitive to the 3V3 equivalents.

3.Radio front end A balanced antenna filter DBF81F101 from Cyntec. An L/C network providing DC bias from the 1.8 rail. The unbalanced signal leads to the antenna. The IFA Antenna and it is a kind of the printed antenna. The antenna matching network.

4. The DWO-2 Bluetooth frequency range is from 2402MHz to 2480MHz,The number of channels is79, the modulation type is GFSK.

3.While not in mobile phone call state, quick double press the MFB button can enter the FM receive state, DWO-2 can be tuned to receive the FM signals from FM76MHz~108MHz.

5．Power Amplifier This is a high efficiency class-AB audio power amplifier to drive the loudspeaker. And it is capable of 2.2W output on a 4-ohm load with under 1% THD+N @1kHz in a stereo BTL configuration. The gain setting for the power amplifier (adjustable) is determined by feedback resistor ratio.

6．This 3.3V LDO is a low noise, highly accurate voltage regulator and provide the 3.3V for the Bluetooth module. The 3.3V LDO can be enabled in one of three conditions as below.-User pressed the power switch. -From 1V8 output of Bluetooth

chip.

7. Lion polymer battery rated 3.7V, 550mAh is employed to supply electronic power. And a 5V DC power adapter is used to charge the product.

8. The flashing and configuration interface The slave SPI port of the Bluetooth chip is routed to the test points for access during the production for flashing and production test.