

## **Operation Description**

Operation Frequency: 2402M-2480MHz (Bluetooth v2.0)

Modulation Type: GFSK

The HXS G10-2306 wiimote system is mainly composed of three parts: BT(Bluetooth) module, gaming components and micro-controller. The BT module is a standard BT device. The antenna is an embedded PCB antenna matching is done by using lumped inductors and capacitors. The micro-controller scans gaming components like as CMOS sensor module, keypad, motion sensor and expansion port, then packs the data send to BT module. In the same time, BT module sends the data (motor, sound chip and LED state) to the micro-controller. The wiimote system transmits and receives date to the Wii console following the standard Bluetooth protocol. The wiimote is powered by 2-AA side batteries and regulated to 3.3V. The power consumption of BT module is about 20mA, the total power consumption of the wiimote system is about 50mA in normal working mode (Motion sensor and CMOS sensor turn on). It will enter sleep mode when Wii console turn off the wiimote, in this mode the total power consumption is only about 250uA.

## **Technical Description**

The Equipment Under Test (EUT) is a gamepad for the Nintendo Wii console. It is powered by a 2-AA side batteries and setup to 3.3V

The main function of EUT is a gamepad included 13 keys, motion sensor, CMOS sensor, motor, sound chip, expansion port and Bluetooth module. It connects to the Wii console by Bluetooth protocol.

Operating Frequency Band: 2402 MHz ~ 2480 MHz

Spread Spectrum: FHSS

Modulation Method: GFSK.

The functions of main ICs are mentioned as below.

- 1) U1(GH2705) is a Bluetooth module, including the BT (GH2705)TOD3003 and EEPROM. BT TOD3003 acts as Bluetooth Chip performs Bluetooth function, EEPROM acts as external memory.
- 2) U5 GH7161 acts as MCU for system and gaming control.
- 3) U9 FREESCALE 6331 acts as motion sensor for gaming.
- 4) U1 GH0323(GH2702) acts as CMOS sensor module for gaming.
- 5) U3 GH288 U4 GH8304(GH2702) acts as sound chip for gaming.
- 6) J1 acts as expansion port for gaming
- 7) U4 acts as setup voltage regulator provide 3.3VDC to all system.