

### Operational Description

The MID is a low powered, human interface device for peripheral with touch screen. This product for low power radiation product. It has function of visiting internet with WiFi, playing audio in TF card ,audio recorder, alarm clock, calendar, camera and so on.

This system is consist of ARM Cortex-A13 dual-cores, NAND Flash,DDR3 RAM,7' inch screen. The 802.11/b/g/n WiFi module(crystal 40MHz), TF socket, CPU TQFP177P0(crystal 32.768KHz and 24MHz) and power conversions IC AXP209. The MID is powered by a 3.7 volt battery. It is designed to operated from 2412-2462MHz 11chs.

The MID is manually operated by the buttons clicked and controlled cursor by hand. Through the air transmit signal to host.

All tuning and verification are performed by the manufacture and there are no adjustments can be made by the user. No external ground is required.

### **Function description**

#### A) RECIEVER UNIT

- 1) A signal received by the antenna, amplified by the LNA is inputted to the mixer for frequency down conversion.
- 2) The received signal and local signal made by fractional N synthesizer 2412-2462are mixed by the mixer to remove carrier frequency, IF frequency is 1MHz
- 3) IF frequency passes the BPF (band pass filter) and sampled by ADC is putted to the demodulator for base band signal demodulation
- 4) After demodulation, base band signal is sent to MCU through the FIFO

#### B) TRANSMISSION UNIT

- 1) A base band signal from the MCU passes through SPI interface to the modulator for signal modulation. .
- 2) The modulated signal is sent to fractional N synthesizer to synthesize the transmit frequency.
- 3) The transmit frequency (2412-2462 MHz) is amplified by the PA (power amplifier) and goes to the antenna.