

Wireless Keyboard

Operation Principle

The Wireless Keyboard system is mainly composed of three parts: radio modem, frequency synthesizer and baseband microprocessor. The radio modem is GFSK, $\pi/4$ -DQPSK, 8DPSK modem. The RF Chip is YC1026, and use 24MHz Crystal. The antenna is an embedded PCB antenna matching is done by using lumped inductors and capacitors.

The microcontroller scans keystrokes on the Wireless Keyboard, then packs the data by adding preambles, frame information, and error checking bytes. The radio system uses one of 79 channels (the frequency range is 2.402-2.480GHz) to send signal in random.

The Wireless Keyboard is powered by 3.0V Dry Battery and regulated to 3.0V. The power consumption of RF module is about 1.8mA, the total power consumption of the Wireless Keyboard is about 2.5mA in normal working mode. It will enter sleep mode if no key be pressed after 10 minutes, in this mode the total power consumption of Wireless Keyboard is only about 90uA*.