

The wifi router is powered by DC 12V 1A. The 12V power step down to 5V 2A for USB. The 12V power step down to 3.3V 3A for core voltage via two power chips. U1 is a MCU, when the button (connected to pin13) is pressed or rolling ball switch (connected to pin14) is contacted. The MCU will generate an enable signal to turn on the RF chip and a serial ID code and apply to the RF chip for FSK modulation, Crystal oscillator is 20MHz. L623, L624 are the loading of the RF output. The L7, C85 & L8 are formed as antenna matching network. The modulated RF signal will be applied to the antenna via this network. The transmitter goes with a test pad. It is connected to the pin A1, B2 of U1 and ground. When this pad is connected, the transmitter will be turned on continually (for test only). Transmitter Frequency is 2.4GHz.

The router includes an 802.11n MAC and base band, a 2.4 GHz radio and FEM, a 580 MHz MIPS® 24K™ CPU core, a 5-port 10/100 switch and two RGMII. The embedded high performance CPU can process advanced applications effortlessly, such as routing, security and VoIP. The router also includes a selection of interfaces to support a variety of applications, such as a USB port for accessing external storage.