Operational Description

The transmitter of the EUT (802.11b and Bluetooth class 2 board to board module) is powered by 3.7V batteries. The antenna type is PIFA antenna with PEX connector for WLAN and CHIP antenna for Bluetooth. Beside software control, the host equipment also provide hardware/physical signaling to prevent co-existence between WLAN & Bluetooth. Under normal use condition, the user has to keep at least 20cm separation distance between radiator and the body of the user. The other instruction, please have a look at the users manual.

DSSS Information

This device is using Direct Sequence Spread Spectrum, the data is mixed by pseudorandom code which is an orthogonal code. The mixed data is digital modulated by BPSK and QPSK technique depends on the data rates.
The CCK coding is applied for increasing the data rate, and also the processing gain will be increased. The bit rates are 1,2,5.5,11Mbps, the symbol rates are 1,1,1.375,1.375Mbps, the chip rates are always 11Mbps.
So, the Chip/symbol is 11,11,8 and 8 respectively. Although is higher bit rate, the processing gain is lower than 10, but the CCK coding used in higher bit rate will provide 2.2dB coding gain.

FHSS Information

This device is also using Frequency Hopping Spread Spectrum with 79 channels and its radio specification is compliant with the Bluetooth v1.1 class 1 specification. Bluetooth is a short-range wireless technology operating in the 2.4 GHz band. It enables devices to have the ability to form networks and exchange information.