Opreational Description

EUT is a **Wireless Terminal** with 11 channels(2412MHz~2462MHz, Space 5MHz). It allows you to connect to other WLAN device. The 8071 Series Portable Terminal can be equipped with a CCD scanner or a Laser scanner.

General Operational Description:

1. Time base of the transmission frequency:

   For RF frequency, Crystal is a clock reference.

2. Synthesizer:

   Synthesizer inside Transceiver IC and operate frequency in 2.4GHz ISM Band. Internal voltage controlled oscillator (VCO) provides the desired LO signal base on the phase-locked loop (PLL) with a relatively wide tuning range for this application.

3. Transmission:

   KCJ-1 module has DSSS (BPSK/QPSK/CCK) modulation function, it provides transmission data rate are 1, 2, 5.5, 11 Mbps on DSSS. Digital data signal will be converted to analog (TX IQ) signals through DAC in KCJ-1 module, TX IQ pass through to low pass filter. TX I/Q signal use direct conversion (zero-IF) architecture converter to generate carrier frequency signal. Transceiver IC and external PA magnify output power.

4. Receiver:

   Reverse direction isolation of LNA inside Transceiver IC suppresses unwanted radiation. Then 2.4GHz RF signal will be directly down to zero-IF signal (RX IQ) and high frequency spurious emissions are suppressed by LPF. At last RX IQ signal will be demodulated digital data.

5. Base band Processing:

   Channel Selection: Channel selection is controlled by KCJ-1 module.

   Data Modulation: DSSS (BPSK/QPSK/CCK) modulation type is controlled by KCJ-1 module.

   Power Control Level: KCJ-1 module has the power leveling loop table are calibrated by manufacturer, then uses closed-loop power control function to limit RF output power level. Power leveling step accuracy is ±0.5dB.

   Transmit/Receive Switch: EUT has Transmit/Receive Switch and Antenna switch

   Data Link Layer:

   Firmware implements the full IEEE 802.11 Wireless LAN MAC protocol. It supports BSS and IBSS operation under DCF, and operation under the optional Point Coordination Function (PCF). Lower level protocol functions such as RTS/CTS generation and acknowledgment, fragmentation and de-fragmentation, and automatic beacon monitoring are handled without host intervention. Active scanning is performed autonomously once initiated by host command. Host interface command and status handshakes allow concurrent operations from multi-threaded I/O drivers.

6. Interface: CF

7. Power: Input 3.3Vdc from Main Board. This power is provided to regulator components to regulated DC power.

Product Details

EUT IS a Wireless Terminal with IEEE 802.11b radio function. only for the 802.11b part shown in the table below. For more detailed features description, please refer to the manufacturer's specifications or user's manual.

Items	Description
Product Type	WLAN
Radio Type	Intentional Transceiver
Power Type	5V DC from adapter; 3.7V DC from battery
Interface Type	Charger Port
Modulation	DSSS for IEEE 802.11b
Data Modulation	DSSS (BPSK / QPSK / CCK)
Data Rate (Mbps)	DSSS (1/ 2/ 5.5/11)
Frequency Range	2400 ~ 2483.5MHz
Channel Number	11
Channel Band Width (99%)	11b: 15.60 MHz
Conducted Output Power	11b: 15.80 dBm
Carrier Frequencies	2412-2462 MHz
Antenna	PIFA Antenna

Accessories

Power	Brand	Model	Rating
Adapter 1	SINO-AMERICAN	SA10-0515U	INPUT: 100~240V AC OUTPUT: 5V DC
Battery	Li-ion	-	3.7V DC
Others			
Power Cable / Charger Desktop / RS232			

Table for Filed Antenna

Ant.	Antenna Type	Connector	Gain (dBi)
1	PIFA Antenna	NA	1.00