

Billionton Bluetooth USB Adapter Class 1

OPERATION DESCRIPTION

Specifications

- Main chip : CSR BlueCore 02
- Bluetooth 2.4GHz~2.4835GHz license-free ISM Band frequency hopping
- Connections within ranges up to 328 feet (100 Meters)(Varies depending on use environment)
- Connect up to 7 devices in a Piconet
- Data Rate : 723 kbps
- Antenna: Single Sleeve Dipole Antenna
- Class 1 Bluetooth radio
- RF module sensitivity : -80dbm at 0.1% Bit Error Rate (BER)

Mechanical

- Dimension : 72.2 x 29.8 x 8.5 mm (L x W x H), width including external antenna

Environment Operating Ranges

- Operating Temperature : 0 ~50° C , Humidity 10 ~ 90%
- Storage Temperature : -20 ~90° C, Humidity 10 ~ 90%

Power Consumption

- Typical: 110mA/5V
- Maximum:
 - Transmit : 200 mA/5V (peak)
 - Receive : 80mA/5V (peak)
 - (Varies depending on use environment)
- Idle: 26mA/5V

LED Indication

- Orange : USB wake up
- Green : RX active

The product has been integrated with the following modules:

- 1.- Bluetooth module
- 2.- Power circuit
- 3.- Flash Memory
- 4.- LNA
- 5.- Crystal
- 6.- Power Amplify

ELECTRICAL CHARACTERISTICS

SYMBOL	PARAMETERS	MIN	NOM	MAX
Vcc	Vcc supplied voltage related to GND	4.75 V	5.00 V	5.25 V
Temperature	Storage			
	Operating	-5 °C	+25 °C	+55 °C
Humidity	Storage/Operating		90 %	

DC CHARACTERISTICS

SYMBOL	PARAMETER	MIN	NOM	MAX
Icc	Average current in connect mode	65mA	78mA	90mA
	AVG current in connect mode (sending)		324mA	
	AVG in connect mode (duplex)		267mA	
	AVG in connection mode (rx)		182mA	
	Peak current in connect mode		395mA	
	AVG in connect mode(sniff)		41mA	
	AVG in connect mode (park)		41mA	
	AVG in connect mode (hold)		41mA	
Iccs	AVG in standby mode		41mA	
	Peak current in standby mode		41mA	
Iccd	Power down current		38mA	

RF CHARACTERISTICS

PARAMETER	MIN.	NOM	MAX	NOTE
RECEIVER				
RX Sensitivity		-84dBm		
IF Band-width		1,2MHz		
C/I CO-Channel (0,1% BER)		12dB		
C/I 1MHz		-3.5dB		
C/I 2MHz		-36dB		
C/I 3MHz		-48dB		
Image rejection	-10			
Spurious emissions (30MHz-12,75GHz)			< -42dBm	
TRANSMITTER				
TX Power, radiated			20dBm	At max. power level
TX Power, conducted	16	17,5	18	At max. power level
TX Power, conducted		2	4	At min. power level
Modulation Index (no ISI)	0.28		0.35	
In Band spurious emissions			-20	At 2MHz
Out band spurious emissions (30MHz-1GHz)			< -42	Operating mode
Out band spurious emissions (1GHz-12.75GHz)			-34.7dBm	Operating mode
Out of band spurious emissions (1.8 GHz-1.9GHz)		-50dBm	-30dBm	Operating mode
Out of band spurious emissions (5.15GHz-5.3GHz)		-50dBm	-30dBm	Operating mode
FREQUENCY SOURCES				

Symbol timing accuracy			+/- 10ppm	
GENERAL				
AVG antenna gain		0 dBi		
Peak antenna gain			2,5 dBi	
Antenna Port Impedance		50Ohms		
Output VSWR		1:2		

RANGE CHARACTERISTICS

PARAMETER	MIN	NOM	MAX	
Range full duplex connection	250m			Note 8