DBUB-S705
Bluetooth Module

User's Manual

This document provides safety instructions and describes the specifications. Read this document carefully before installing to ensure your safety and product performance.

Federal Communication Commission (FCC) Interference Statement

This device complies with Part 15B and 15C of FCC Rules and RSS-210 of IC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation of this device.
This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

Radiation Exposure Statement:
The product comply with the FCC portable RF exposure limit set forth for an uncontrolled environment and are safe for intended operation as described in this manual. The further RF exposure reduction can be achieved if the product can be kept as far as possible from the user body or set the device to lower output power if such function is available.

Industry Canada statement:

This device complies with RSS-210 of the Industry Canada Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Ce dispositif est conforme à la norme CNR-210 d'Industrie Canada applicable aux appareils radio exempts de licence. Son fonctionnement est sujet aux deux conditions suivantes: (1) le dispositif ne doit pas produire de brouillage préjudiciable, et (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

Radiation Exposure Statement:
This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Déclaration d'exposition aux radiations:

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.

Taiwan statement:

第十二條

經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

第十四條

低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。前項合法通信，指依電信法規定作業之無線電通信。低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

Caution:

Be aware of the following limits before using the Bluetooth Module .

- Do not subject the Bluetooth Module to high temperatures, direct sunlight or moisture.
- Do not bend, or subject the Bluetooth Module to strong impacts.
- Do not disassemble or alter the Bluetooth Module in any way.
- Do not attempt to install the Bluetooth Module in any incompatible device.
- Do not remove the Bluetooth Module from the TV’s during operations.
- Data transmitted and received over radio waves may be intercepted and monitored.
- To avoid malfunctions caused by radio wave interface, keep the TV away from the devices such as other wireless devices, microwaves and the devices that use 2.4 GHz signals when using the Bluetooth Module.
- Depending on the area, this Bluetooth Module may not be available.

Setup the Bluetooth connection

The Bluetooth Module is pre-installed in the TV set. No extra installation steps are required for users. Follow the steps below to start using the feature of this adapter:

1. Turn on your TV.
2. Switch to the channel that delivers 3D contents. If you are watching a disc with 3D contents, you will also need to activate your player for playing the disc.
3. Turn on your 3D glasses.
4. The 3D glasses will pair with this Bluetooth Module automatically and are now ready for use.

Specification

<table>
<tr><td>Power supply</td><td>DC 3.3V　38.5mA</td></tr>
<tr><td>Antenna</td><td>Tx 1, Rx 1</td></tr>
<tr><td>Host Interface</td><td>USB 2.0 + GPIO x1</td></tr>
<tr><td>Standard Compliance</td><td>Bluetooth 3.0</td></tr>
<tr><td>Frequency Range</td><td>2.4 GHz (2.40GHz-2.4835GHz)</td></tr>
<tr><td>Modulation</td><td>·GFSK
·Pi/4 QPSK
·8DPSK</td></tr>
<tr><td>Receiver Sensitivity</td><td>-88 dBm(typ.) GFSK, 0.1%BER
-85 dBm(typ.) for pi/4-DQPSK, 0.01%BER</td></tr>
<tr><td>Transfer rate (standard) *</td><td>3.0Mbps(MAX, Theoretical Value)</td></tr>
<tr><td>Output Power</td><td>Class 2, 0dBm typical, class 2 device (-6dBm < output power <4dBm).</td></tr>
<tr><td>Antenna Type and Gain</td><td>Metal Antenna with Peak Gain at 4.34dBi
<table>
<tr><th colspan="2">Freq. (MHz)</th><th>2400</th><th>2450</th><th>2500</th></tr>
<tr><td rowspan="3">Metal PIFA Antenna</td><td>Eff.</td><td>50.2%</td><td>61.2%</td><td>57.7%</td></tr>
<tr><td>Avg. Gain</td><td>-3.00</td><td>-2.13</td><td>-2.38</td></tr>
<tr><td>Peak Gain</td><td>3.58</td><td>4.34</td><td>4.31</td></tr>
</table></td></tr>
<tr><td>Security</td><td>BT E0/AES/SAFER+</td></tr>
</table>

* Transfer rate are theoretical values; however, actual communication rate will vary according to communication environment or connected equipment.