

Wireless Accessories

VIA  
EMIO-5531

IEEE 802.11b/g/n USB Wi-Fi  
& Bluetooth Module

Features

- Supports standard 802.11N 1T1R
- Controller chip: Realtek  
RTL8723BU WLAN + BT
- Fully qualified Bluetooth 4.0  
dual mode + EDR specification  
including both 2Mbps and  
3Mbps modulation mode
- Enterprise level security  
which can apply WPA/WPA2  
certification for Wi-Fi
- Support for Android, Linux, and  
Windows® 10/8.1/8/7



Specifications

| Model Name    |                           | EMIO-5531 USB Wi-Fi & Bluetooth Module                                                                                 |
|---------------|---------------------------|------------------------------------------------------------------------------------------------------------------------|
| Wireless      | Standard                  | IEEE 802.11b/g/n                                                                                                       |
|               | Frequency Band            | 2400 ~ 2483.5MHz ISM band                                                                                              |
|               | Data Transfer Rates       | 11n: MCS0 to MCS7 for HT20MHz/HT40MHz<br>11g: 54/48/36/24/18/12/9/6 Mbps (dynamic)<br>11b: 11/5.5/3/2/1 Mbps (dynamic) |
|               | Channel                   | 11 channels for United States (FCC)<br>13 channels for Europe (ETSI)<br>14 channels for Japan (TELEC)                  |
|               | RF Power                  | 11b : 17dBm<br>11g : 14dBm<br>11n : 13dBm                                                                              |
|               | Receive Sensitivity       | 11b : -82dBm<br>11g : -71dBm<br>11n : -67dBm                                                                           |
|               | Wireless Security         | 64/128 bit WEP<br>WPA/WPA2, WPA-PSK/WPA2-PSK<br>IEEE 802.1X                                                            |
| Bluetooth     | Data Transfer Rates       | Basic rate: 1Mbps<br>Enhanced rate: 2/3 Mbps<br>High Speed: 6/9/12/18/24/36/48/54 Mbps                                 |
|               | RF Power                  | Max + 8dBm                                                                                                             |
|               | Receive Sensitivity       | -89dBm@1Mbps<br>-90dBm@2Mbps<br>-83dBm@3Mbps                                                                           |
|               | Security                  | Simple pairing                                                                                                         |
|               | Antenna Connector Type    | 1 coaxial cable antenna connector                                                                                      |
| General       | Interface                 | USB 2.0 Interface                                                                                                      |
| Mechanical    | Dimensions                | 25mm(W) x 2mm(H) x 12mm(D)<br>(0.98" x 0.079 x 0.47")                                                                  |
| Environment   | Operating Temperature     | -10°C to 70°C                                                                                                          |
|               | Non-Operating Temperature | -40°C~80°C                                                                                                             |
|               | Operating Humidity        | 0%~95% non-condensing                                                                                                  |
|               | Non-Operating Humidity    | 0%~95% non-condensing                                                                                                  |
| Certification | Compliant                 | CE/ NCC/ TELEC                                                                                                         |



Ordering Information

| Part Number    | Description                                                                           |
|----------------|---------------------------------------------------------------------------------------|
| EMIO-5531-00A1 | VAB-820-W IEEE 802.11b/g/n USB Wi-Fi & Bluetooth module with assembly kit and antenna |

Packing List

| Items                                                  |
|--------------------------------------------------------|
| EMIO-5531 module                                       |
| 2 Screw pack for module                                |
| Dipole antenna and antenna cable with washers and nuts |
| USB transmittal cable                                  |

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