ROHM Wireless Modules Technology

Wireless Communication

The correspondence of various wireless specifications

- 920MHz specified low-power wireless module
- Excellent receiver sensitivity
- Built-in antenna eliminates the need for high-frequency designs
- Transmitting power pre-adjusted
- MAC address included
- Japan radio law certified

Wi-SUN Communication Modules
(Specified Low Power Radio Modules)

- IEEE802.11b/g/n compliant Wireless LAN Module
- Built-in baseband IC that made in ROHM
- Transmitting power pre-adjusted
- MAC address included
- Japan radio law certified

Wireless LAN Modules

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<table>
<thead>
<tr>
<th>Part No.</th>
<th>Supply Voltage (V)</th>
<th>Operating Temperature (°C)</th>
<th>Host I/F</th>
<th>Terminal Standards</th>
<th>Onboard System LSI</th>
<th>Dimensions (mm)</th>
<th>Package*</th>
</tr>
</thead>
<tbody>
<tr>
<td>BP35A1</td>
<td>2.7 to 3.6</td>
<td>−20 to +80</td>
<td>UART</td>
<td>Wi-SUN</td>
<td>ML77488</td>
<td>18.0x8.5x1.8</td>
<td>SMD</td>
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<tr>
<td>BP35C0</td>
<td>5.0</td>
<td>−20 to +50</td>
<td>USB</td>
<td>Wi-SUN</td>
<td>ML7416N</td>
<td>17.4x13.0x2.0</td>
<td>SMD</td>
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<tr>
<td>BP35C2-J11</td>
<td>2.7 to 3.6</td>
<td>−20 to +80</td>
<td>UART</td>
<td>Wi-SUN</td>
<td>ML77488</td>
<td>20.0x13.5x2.0</td>
<td>SMD</td>
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<tr>
<td>BP35C1</td>
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<td>Wi-SUN</td>
<td>ML7416N</td>
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<td>SMD</td>
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ROHM is developing Wireless Communication devices in a broad range of fields.

Wireless LAN Modules

- IEEE802.11b/g/n compliant Wireless LAN Module
- Built-in baseband IC that made in ROHM
- Transmitting power pre-adjusted
- MAC address included
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<th>Supply Voltage (V)</th>
<th>Operating Temperature (°C)</th>
<th>Host I/F</th>
<th>Terminal Standards</th>
<th>Onboard IC</th>
<th>Dimensions (mm)</th>
<th>Package*</th>
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<tbody>
<tr>
<td>BP3580</td>
<td>2.7 to 3.6</td>
<td>−40 to +85</td>
<td>USB/SDIO/UART</td>
<td>IEEE802.11b/g/n</td>
<td>BU1805GU</td>
<td>17.0x17.0x2.3</td>
<td>Surface mount type</td>
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<tr>
<td>BP3591</td>
<td>3.3 to 3.5</td>
<td>−40 to +85</td>
<td>USB/SDIO/UART</td>
<td>IEEE802.11b/g/n</td>
<td>BU1805GU</td>
<td>24.0x33.1x4.7</td>
<td>Connector joint type</td>
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<tr>
<td>BP3595</td>
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<td>−40 to +85</td>
<td>USB/SDIO/UART</td>
<td>IEEE802.11b/g/n</td>
<td>BU1805GU</td>
<td>15.3x27.6x2.6</td>
<td>Connector joint type</td>
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<tr>
<td>BP3599</td>
<td>3.3 to 3.5</td>
<td>−40 to +85</td>
<td>USB/SDIO/UART</td>
<td>IEEE802.11b/g/n</td>
<td>BU1805GU</td>
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<td>USB/I2C/UART</td>
<td>IEEE802.11b/g/n</td>
<td>BU1805GU</td>
<td>24.0x33.1x4.7</td>
<td>Connector joint type</td>
</tr>
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</table>

*Original ROHM package used.
**EnOcean® Communication Modules**

EnOcean® products are based on energy harvesting battery-less/wireless telecommunication technology. ROHM has become a member of EnOcean alliance which promote next generation radio telecommunication standard since 2012, and we contribute to the expansion of EnOcean® communication method.

*EnOcean® is a registered trademark of EnOcean GmbH.

**Feature**

- EnOcean® Wireless Standard (ISO/IEC 14543-3-10/11)
- Built-in antenna eliminates the need for high-frequency designs
- Japan radio law certified

*This product (928MHz frequency band) is permitted as “specified low-power radio station” in Japanese radio law.

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**Bluetooth® low energy Modules (LAPIS Semiconductor products)**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Supply Voltage (V)</th>
<th>Operating Temperature (°C)</th>
<th>Host I/F</th>
<th>Supported Standard</th>
<th>Certification</th>
<th>Module Specification</th>
<th>Flash/RAM</th>
<th>Dimension (mm)</th>
<th>Package</th>
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<tbody>
<tr>
<td>MK71251-01</td>
<td>2.0 to 3.6</td>
<td>−20 to +75</td>
<td>SPI (BACI)*</td>
<td>Bluetooth® core spec v4.1 [Single mode]</td>
<td>Bluetooth® certification [End Product] Radio law certification [TELEC/FCC/IC/CE]</td>
<td>Role: Master/Slave</td>
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<td>8.5×11.0×2.0</td>
<td>M-FLGA33-8,0311-0,55-99</td>
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<tr>
<td>MK71251-02A</td>
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<td>UART</td>
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<td>Role: Slave only Application: Serial communication</td>
<td>28KB</td>
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<td>M-FLGA33-8,0311-0,55-99</td>
</tr>
</tbody>
</table>

* BACI (Bluetooth Application Controller Interface): Lapis Semiconductor proprietary host interface  
  * HCI (Host Control Interface): Bluetooth standard interface  
  Notes: 1. User need a confirmation and an agreement on an application and usage environment before using MK71251 series Bluetooth modules.  
  Notes: 2. Bluetooth® is a registered trademark of Bluetooth® SIG.

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**EnOcean® Communication Modules/Devices**

**Bluetooth® Modules**

- Low power consumption and the best solution for the instruments required a long-life of coin type/button battery
  - TX: 6.7mA, RX: 6.2mA (MK71251 series)
- Bluetooth® low energy single mode module
- Built-in pattern antenna and RF characteristic adjusted before shipment
- Certified radio regulation: TELEC, FCC, IC, CE

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**Notes**

- Please choose your region products by frequency band.
- Please contact a ROHM sales representative for purchase and inquiry.
- Please refer to our EnOcean® introduction page (https://www.rohm.com/enocean) for detail.