First Commercial 802.11ah (HaLow) Ethernet to Wireless Bridge

BR-100AH

Easily Connect your Ethernet Devices to an 802.11ah Network

BR-100AH is the first commercially available bridge supporting IEEE's 802.11ah wireless standard which is a long-range technology which enables any Ethernet device to become an 802.11ah wireless network device, giving the freedom to place it anywhere in your facility. BR-100AH is all that you need to incorporate your device into your 802.11ah (HaLow) network. A benefit of 802.11ah is extended range, making it useful for long distance and rural communications.

**Features:**

1. **Wireless Bridge Function**
   
The BR-100AH allows any Ethernet enabled device to join a secure, high-speed 802.11ah enterprise WLAN network. It is software transparent meaning no changes to drivers, management tools, or applications are needed. The BR-100AH operates in Multi client mode. It can connect multiple devices, which are connected to a wired LAN port using HUB, to a wireless LAN environment.

   **Multi-client mode** has economical advantages, since up to 16 devices can be joined in a wireless environment via a single BR-100AH and an optional network hub.

2. **MAC Address Filtering**
   
The BR-100AH supports MAC address filtering, or hardware address filtering. You can secure your home network using MAC addresses, unique identifiers found on every device. When you enable MAC address filtering, only devices that you’ve enabled can be paired with the bridge and thus the network. It helps secure your devices and your network.

3. **Wi-Fi Certified WPA3™**
   
WPA3™ is the next generation of Wi-Fi security and provides cutting-edge security protocols to the market. Building on the widespread success and adoption of Wi-Fi CERTIFIED WPA2™, WPA3 adds new features to simplify Wi-Fi security, enable more robust authentication, deliver increased cryptographic strength for highly sensitive data markets, and maintain resiliency of mission critical networks. All WPA3 networks:

   - Use the latest security methods
   - Disallow outdated legacy protocols
   - Require use of Protected Management Frames (PMF)
Customization for OEM’s:

Even though we incorporate our proprietary technologies and “know-how” in our standard products which we often refer as showcase products, our real value to our customers is our ability to customize our showcase products for hardware, software, technologies and features to meet your unique requirements.

- Product Name
- Enclosure
- Packaging
- Software GUI
- Device Interface
- Application
- OS and Drivers
- Security
- Middleware
- CPU / MCU
- PCB Size
- Wi-Fi Specification
- LTE Specification
- Temperature Spec
- Custom design w/ Silex hardware
- Custom proposal & development to meet requirement

AMC Manager Support

The BR-100AH wireless bridge is compatible with the optional device management software “AMC Manager®”. With this software, network administrators can execute the functions required for device management of Silex networking products from one point, for example monitor device status, configuration settings, update firmware, automatically record device operating logs and restart the devices.

Product Specifications

<table>
<thead>
<tr>
<th>Wired LAN</th>
<th>Wireless LAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interface</td>
<td>BR-100AH: 16 stations simultaneously</td>
</tr>
<tr>
<td>Specification</td>
<td>802.11ah (1x1)</td>
</tr>
<tr>
<td>Channels</td>
<td>1 MHz, 2 MHz &amp; 4 MHz</td>
</tr>
<tr>
<td>BW1MHz</td>
<td>903.5, 904.5, 905.5, 906.5, 907.5, 908.5, 909.5, 910.5, 911.5, 912.5, 913.5, 914.5, 915.5, 916.5, 917.5, 918.5, 919.5, 920.5, 921.5, 922.5, 923.5, 924.5, 925.5, 926.5</td>
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<tr>
<td>BW2MHz</td>
<td>910, 914, 918, 922</td>
</tr>
<tr>
<td>BW4MHz</td>
<td>910, 914, 918, 922</td>
</tr>
<tr>
<td>Security</td>
<td>Open, Enhanced Open, WPA3-Personal Encryption: AES-CCMP</td>
</tr>
<tr>
<td>Data Rate</td>
<td>MCS 0, 1, 2, 3, 4, 5, 6, 7, 10</td>
</tr>
<tr>
<td>Range</td>
<td>3km</td>
</tr>
<tr>
<td>Modulation</td>
<td>OFDM</td>
</tr>
</tbody>
</table>

Environmental Specifications

- Storage: -20 °C ~ 80 °C / 20%RH ~ 90%RH
- Operating: 0 °C ~ 40 °C / 20%RH ~ 90%RH

Other Specifications

- Device Configuration: AMC Manager
- Power: 5.0V ± 5% DC Jack (EIAJ Class2) DSUB 9Pin(option) or 24V(option)
- Dimensions: 126mm x 75mm x 24mm
- Warranty: 5 years

802.11ah Wireless Access Point AP-100AH

AP-100AH is the first commercially available access point supporting IEEE’s 802.11ah wireless standard which is a long-range technology where a single access point can give you range up to 3 kilometers supporting up to 675 clients. The AP-100AH and BR-100AH is all that you need to incorporate 802.11ah into your existing or new infrastructure.