

BR-110AX

Low-Power Ethernet-to-Wi-Fi Bridge for Medical Devices



OVERVIEW

The BR-110AX is a compact, energy-efficient Ethernet-to-Wi-Fi bridge purpose-built for medical devices and healthcare environments. It enables secure wireless connectivity for existing wired equipment, allowing hospitals and medical device manufacturers to modernize their systems without hardware redesign. With enterprise-grade security, seamless mobility, and an IP21-rated, disinfectant-resistant design, the BR-110AX is engineered to withstand the cleaning and environmental conditions typical of clinical settings. This makes it an ideal choice for retrofitting medical devices into connected hospital ecosystems safely and reliably.

KEY FEATURES

Durable & Compact for Medical Use

At just 48 × 77 × 22 mm*, the BR-110AX is one of the smallest enterprise-grade Wi-Fi bridges available, ideal for installation inside medical device housings where space is limited.

Its IP21-rated enclosure is built with disinfectant-resistant and flame-retardant (UL94 V-0) materials, meeting the hygiene and safety demands of clinical environments while protecting against incidental fluid exposure.

**Currently in development, specifications subject to change*

USB-Powered for Mobile and Portable Devices

Powered directly via a standard USB cable (included), the BR-110AX draws power from the connected medical device itself, eliminating the need for a separate power supply or additional cabling.

This simplifies system integration and enhances mobility, making the BR-110AX ideal for portable diagnostic instruments, point-of-care testing systems, and bedside monitors that operate on battery or limited power sources.

By utilizing USB power, the bridge:

- Reduces wiring complexity and clutter around patient care areas
- Minimizes installation cost and effort, no external adapters required
- Improves portability, allowing the Wi-Fi bridge to move seamlessly with the medical device
- Ensures consistent operation as the bridge powers on and off in sync with the host device

Together, these benefits make the BR-110AX a plug-and-play wireless connectivity solution for mobile healthcare environments.

Single-Client Mode with IP Intercept

In Single-Client Mode, the BR-110AX connects a single wired medical device to the hospital's Wi-Fi network through a secure, transparent bridge, allowing the device to operate exactly as if it were still connected by Ethernet.

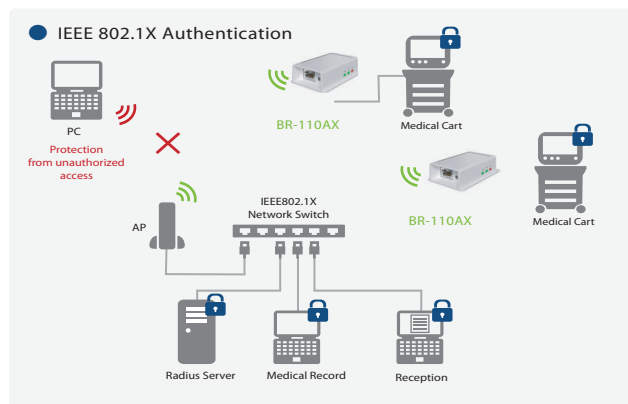
With IP Intercept technology, the bridge and the connected device share the same IP and MAC address, making the bridge invisible to the network. This ensures seamless integration with managed hospital systems, which often authenticate and track medical equipment by its unique network identity.

- No IT re-registration needed: The network continues to recognize the original device identity, no new IP or MAC setup required.
- Transparent connectivity: The bridge extends Wi-Fi access to the device while remaining completely hidden to the network.

Enterprise-Grade Security

Designed for compliance with stringent hospital IT and cybersecurity requirements.

- Supports WPA3 Enterprise 192-bit security for robust, enterprise-grade wireless protection and compliance with hospital cybersecurity standards.
Note: 802.1x authentication is available in client mode only and not supported when operating as an access point).
- MAC address filtering restricts usage to authorized Ethernet devices, safeguarding patient data and network integrity.



Seamless Mobility: Fast Roaming

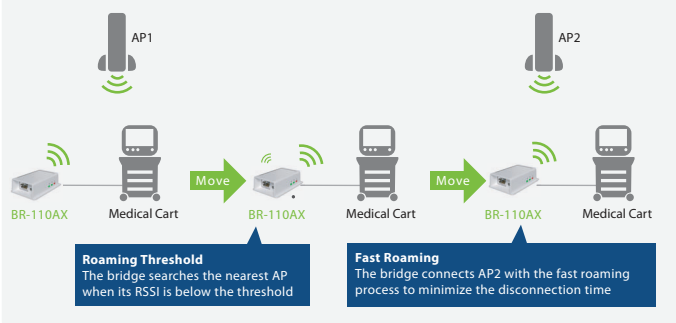
The BR-110AX is designed to maintain continuous, reliable wireless connectivity for mission-critical medical workflows.

With support for IEEE 802.11r fast roaming, the bridge enables medical devices to move between hospital Wi-Fi access points without losing connection or interrupting data transmission. This ensures that vital monitoring and patient data remain live and uninterrupted, even as equipment is relocated between patient rooms, operating suites, or departments.

By combining enterprise-grade Wi-Fi performance with medical workflow intelligence, the BR-110AX delivers optimized mobility and dependable connectivity tailored to the rigorous demands of healthcare operations.

**Requires Wi-Fi access points supporting IEEE 802.11r*

Fast Roaming Process



AP Mode (Access Point Mode)

When AP (Access Point) mode is enabled, the bridge functions as a localized Wi-Fi hotspot, allowing nearby wireless devices, such as those in a hospital room or clinical area, to connect directly to the bridge rather than the main hospital network.

Benefits:

- Local network for clustered devices: Multiple devices in the same room (e.g., bedside monitors, infusion pumps, portable diagnostic devices) can connect to the bridge without each needing separate hospital Wi-Fi credentials.
- Simplified deployment: Allows direct connection via smartphone or tablet to streamline provisioning, configuration, and firmware updates, eliminating the need for hospital network access.

Remote Device Management with AMC Manager

AMC Manager® software enables centralized remote management of Silex wireless products, providing key metrics like RSSI, noise level, and DFS channel usage while allowing easy configuration, including bulk configuration of multiple devices, monitoring, firmware updates, and remote reboots.

With AMC Manager®, hospital IT teams can:

- Remotely monitor device status and connectivity
- Perform firmware updates and maintenance
- Reduce downtime and service costs through centralized device management

Specifications

Model	BR-110AX
Chipset	RW-610
Wired LAN Interface	RJ-45×1 10BASE-T / 100BASE-TX (Auto)
Wi-Fi Interface	IEEE 802.11a/b/g/n/ac/ax 1T×1R (2.4GHz, 5GHz) Channel width 20 MHz
Switch	Push switch×1
LED	×3, Power, Wireless Status, Status
Operating Conditions	Temperature: 0~+40°C Humidity: 20~80%RH(no condensation)
Storage Conditions	Temperature: -20~+70°C Humidity: 10~93%RH(no condensation)
Power Supply	DC5V ±5%
Power Consumption	TBD
Dimension	48×77×22mm
Weight	TBD
Included Items	BR-110AX, USB power cable (Type A to Type C), Velcro
Regulatory Compliance	FCC Class B, ICES Class B, CE Class B, VCCI Class B, RoHS
Security	Wi-Fi authentication: Open, WPA/WPA2/WPA3-Personal, WPA/WPA2/WPA3-Enterprise, WPA3-Enterprise 192-bit Suite-B Encryption: TKIP, AES, CCMP Auto Others: MAC Address Filter
Warranty	5 Years

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