

Wi-Fi 6 Access Point for Industrial Environments

For stable wireless communication even in noisy environments

AP-800AX

Product Overview

The AP-800AX is a Wi-Fi 6 (IEEE 802.11ax) compliant industrial access point that is resistant to wireless interference. By using Silex's unique wireless rate survey function and utilizing the functions added in Wi-Fi 6, the AP-800AX optimizes your wireless connectivity, even in environments with high wireless interference (multi-path environments) where stable communication can be compromised.

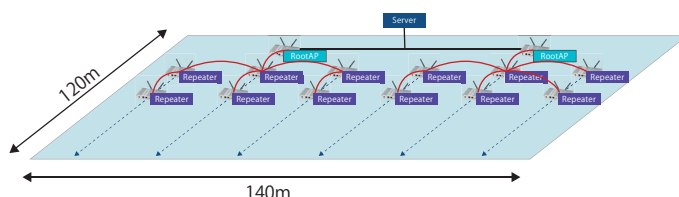
Benefits

Multipath Distortion Tolerance

Multipath is a phenomenon in which radio waves are multiply transmitted through multiple paths. Radio waves emitted from the transmitting side of data reach the receiving side while repeatedly hitting, reflecting, diffracting, or attenuating any objects (floors, ceilings, walls, devices, people, etc.) that exist between the transmitting and receiving devices. Compared to waves that arrive directly, waves that pass through various paths cause a slight time difference (wave shift) due to reflection, and each wave interferes with each other, strengthening or weakening the other. This phenomenon is called "multipath," and it causes data to be lost or, in some cases, communication to be interrupted. This phenomenon occurs especially in environments with many obstructions, such as factories and warehouses, and results in unstable communications.

AMC Mesh Topology Tolerant Against Radio Interference

The AMC Mesh function, Silex's proprietary tree-type connection mesh network, is supported. A single AMC Mesh network can be configured with up to 32 units. The network is configured by dynamically selecting a route from multiple route candidates, and hops are stacked to form a wide coverage wireless LAN network. In addition, by simultaneously connecting 2.4/5 GHz bands, it is possible to operate in the DFS band, which has been difficult to use until now.



*When AMC Mesh function is enabled, wireless transmission rate setting is not available. ⁽¹⁾



SCAN ME

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Features

Radio Rate Survey Function/Radio Transmission Setting:

In a multipath environment, adjusting the appropriate radio rate is essential for stable communications. However, setting the appropriate rate is a very difficult task. Silex provides a radio rate survey function and radio transmission rate settings that allow you to easily find and freely set the appropriate radio transmission rate for your environment.

Survey Result (5GHz)

| Rate | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|---------|---|---|---|---|---|---|-----|-----|-----|-----|-----|-----|
| 1Stream | 0 | 0 | 2 | 0 | 2 | 8 | 7 | 33 | 178 | 232 | 678 | 672 |
| 2Stream | 0 | 0 | 0 | 2 | 0 | 1 | 139 | 312 | 712 | 700 | 780 | 671 |

Unicast Transmit Rate Configuration (5GHz) ?

| Rate | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|---------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1Stream | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2Stream | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Uncheck items with 100 or more failures

Configurable Guard Interval

Resistance to Wireless Interference with Wi-Fi 6. With Wi-Fi 6, the Guard Interval (GI) can now be selected from three options: 0.8 / 1.6 / 3.2 μ sec. Normally, the GI is often shortened to achieve high-speed communication, but by lengthening the GI, connection stability can be improved.

AMC Mesh

The AMC Mesh functionality provides wider coverage by using WDS that can dynamically change connection paths. AMC Mesh minimizes wired LAN wiring work and eliminates wireless dead spots.

Customization

Custom Wireless LAN Access Point for OEMs

In addition to software, we offer flexible hardware customization. Please feel free to consult with us about modifying the initial settings, adding interfaces, changing the size, etc.

Silex has extensive OEM experience. In many cases, it is particularly difficult to develop new wireless LAN access points on a small scale. By adopting Silex wireless LAN access points as an OEM, you can easily create your own brand from a small lot.

Optional Accessories (sold separately)

Wall and Ceiling Hanging Fixtures
Bracket Type 11



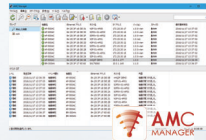
AC Adapter
AP-12V-OP-ACPW



Software

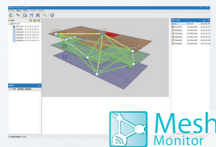
Mesh networks can be more easily managed and operated by utilizing software. These software are available for download from our website, but require the purchase of a license.

Remote Device Management Software AMC Manager®



AMC Manager® is an integrated management software that enables remote monitoring and batch configuration of Silex products via IP network. The software can manage up to 10,000 Silex products on the same network, allowing IT administrators to monitor network devices from their own seats.

Mesh Monitor (AMC Manager Plug-in)



Mesh Monitor is a plug-in option for AMC Manager® that visualizes AMC Mesh networks, mapping AMC Mesh-enabled devices and enabling users to check communication paths, link status between terminals, and signal strength at a glance. Mesh Monitor requires a separate license from AMC Manager®.

- (1): The AMC Mesh function uses Silex's proprietary method, and only products that support the AMC Mesh function can be connected. Not compatible with other Mesh products, including Silex products.
(2): Optional AC adapter "AP-12V-OP-ACPW 100-240V 50/60Hz (operating voltage 12V)"
(3): This product does not include an AC adapter. If using an AC adapter, please purchase the optional AC adapter separately.
(4): The radio wave output that can be set varies depending on each channel and bandwidth.

Product Specifications

| | |
|---------------------------------|---|
| Model number | AP-800AX |
| Wired LAN interface | RJ-45 x 2 (IEEE 802.3at PoE compatible x 1) 100BASE-TX / 1000BASE-T / 2.5GBASE-T (auto negotiation) |
| Wireless LAN interface | IEEE 802.11a/b/g/n/ac/ax 2T×2R - 5GHz Channel: 36-48,52-64,100-119,129-144ch - 2.4GHz Channel: 1-13ch |
| Switch | Push switch x2 |
| LED | Body x 5 / RJ-45x4 |
| Operating condition | Temperature: -20 to +55°C Humidity: 20 to 80%RH (no condensation) |
| Storage condition | Temperature: -30 to +70°C Humidity: 20 to 90%RH (no condensation) |
| Power supply | IEEE 802.3at compliant PoE (Optional AC adapter) ⁽²⁾ |
| Maximum power consumption | AC adapter: 15.6W (DC12V 1.3A) ⁽³⁾ PoE: 25.5W (Compliant with PoE+ standard) |
| External dimensions | 230×142×40mm (main body only, excluding protrusions) |
| Weight | Approx. 860g (body only) |
| Certification standards | US: EMC FCC Part15 Subpart B Class-A Radio regulation: FCC Part15 Subpart C/E FCC ID: N6C-AP800AX Canada: EMC ICES-003 Class-A Radio regulation: ISED RSS-247 IC Number: 4908A-AP800AX |
| Security Authentication methods | Open Enhanced Open WPA™ Personal WPA2™ Personal WPA3™ Personal WPA™ Enterprise WPA2™ Enterprise WPA3™ Enterprise WPA3™ Enterprise 192bit security |
| Encryption methods | AES, TKIP |
| Other | SSID concealment (Any connection refusal) Privacy separator MAC address filter Vendor code filter Firewall function |
| Maximum no. of terminals | 200 units |
| Multi SSID | 8 SSIDs (5GHz: 4 pcs / 2.4GHz: 4 pcs) |
| VLAN | IEEE 802.1Q compliant tag VLAN |
| Transmission power | 1 to 26 dBm ⁽⁴⁾ |
| QoS | WMM-EDCA |
| Warranty period | 5 years |

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