

IEEE 802.11ax (Wi-Fi 6/6E)

Wireless LAN Access Point Modules

SX-PCEAX-AP/6E

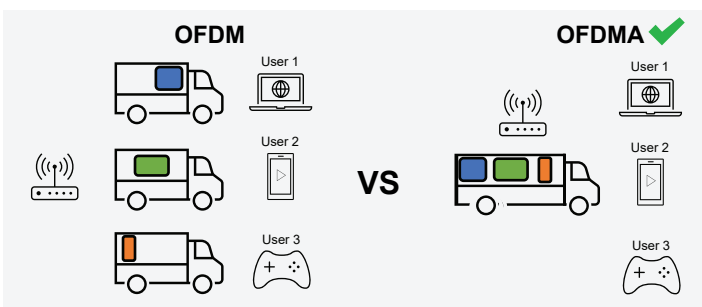
OFDMA MU-MIMO



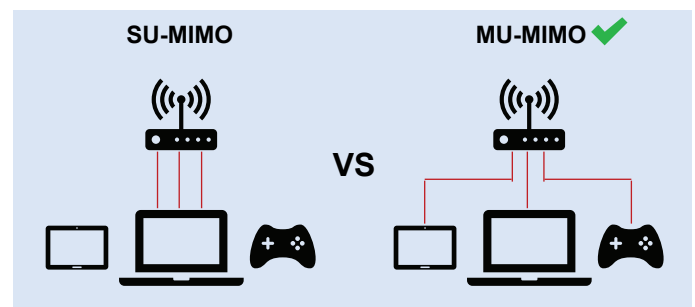
Silex's SX-PCEAX-AP Series modules are embedded wireless LAN modules using Qualcomm's QCN9072 chipset, ideal for access points, gateways, and routers in medical and industrial applications. The SX-PCEAX-AP Wi-Fi 6 module enables a stable 2.4GHz/5GHz communication even in crowded wireless environments, while the SX-PCEAX-AP6E Wi-Fi 6E module provides a 6GHz connection. Combining both the Wi-Fi 6 and 6E modules can seamlessly provide a Wi-Fi access point compatible with 2.4GHz/5GHz/6GHz.

► Faster data speeds and lower latency in congested wireless environments

With the benefits of OFDMA and MU-MIMO, enjoy improved efficiency during multi-device communications, maximizing communication stability. Data is delivered reliably with low latency even in congested wireless environments.



OFDMA supports multiple access, enabling multiple users or devices to transmit and receive data simultaneously within the same frequency band.



While single-user MIMO (SU-MIMO) can transmit multiple data streams to only one device at a time, multi-user MIMO (MU-MIMO) can send multiple streams of data to multiple devices simultaneously.

► Standard form factor reduces development and certification costs

The SX-PCEAX-AP Series modules' standard-compliant full-height Mini PCIe form factor enables customers to easily integrate the module in existing designs. By simply swapping out the wireless module of an existing access point, you can seamlessly upgrade it to Wi-Fi 6/6E without the high development and certification costs.



Only module redevelopment with minimal changes

No application software changes

Modular certifications. No extra testing required.

Intelligently Designed to be a Power Combo

Achieve Tri-Band Connectivity

Both modules are designed for side-by-side use to achieve tri-band connectivity (2.4GHz, 5GHz, 6GHz) for more efficient data distribution between multiple devices.

- Both Silex modules operate on a common driver, reducing software development costs.
- Built-in filters reduce radio wave interference between the modules, optimizing stable communication.

*The 2.4GHz and 5GHz can not be used simultaneously in a single module. In order to achieve both band capabilities, two modules would need to be used.

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Experience the Power of 6GHz Wi-Fi with SX-PCEAX-AP6E



- Resists radio interference for faster connectivity.**
Experience seamless connectivity with 6GHz Wi-Fi, offering a hassle-free connection in a single frequency band with minimal radio interference and no DFS restrictions.
- Eliminates channel shortage.**
6GHz Wi-Fi eliminates channel shortage to ensure an abundance of available channels for seamless and uninterrupted connectivity, addressing the issue commonly faced in lower frequency bands.
- Provides a more reliable and efficient wireless connection.**
The 6GHz band can only be used by Wi-Fi 6E-compatible devices, thus maximizing performance by filtering out interference from other frequency bands. This results in improved data speeds, reduced latency, and an overall enhanced user experience.

Product Specifications

*Subject to change without notice due to on-going development



Part no.	SX-PCEAX-AP	SX-PCEAX-AP6E
Bandwidth	2.4GHz/5GHz (Wi-Fi 6)	6GHz (Wi-Fi 6E)
Chipset	QCN9072	QCN9072
Host interface	PCI Express 3.0	PCI Express 3.0
WLAN	IEEE 802.11a/b/g/n/ac/ax (2x2)	IEEE 802.11ax (2x2)
Antenna connector	MHF Connector x2	MHF Connector x2
Operation power	3.3V	3.3V
Operating environment	Temperature: -40~+85°C Humidity: 10~95%RH (no condensation)	Temperature: -40~+85°C Humidity: 15~95%RH (no condensation)
Storage environment	Temperature: -40~+90°C Humidity: 10~95%RH (no condensation)	Temperature: -40~+90°C Humidity: 10~95%RH (no condensation)
Size	29.85 x 50.80 x 4.55mm	29.85 x 50.80 x 4.55mm
Package type	Mini PCI Express Card	Mini PCI Express Card
Certification	JP, US, Canada, EU, UK	Contact us

Product Lineup	Part no.	Form Factor	Lot	Package Type
Wi-Fi 6	SX-PCEAX-AP	PCI Express Mini Card	100	Bulk
	SX-PCEAX-AP-SP	PCI Express Mini Card	1	Box antenna x2 inside
Wi-Fi 6E	SX-PCEAX-AP6E	PCI Express Mini Card	100	Bulk
	SX-PCEAX-AP6E-SP	PCI Express Mini Card	1	Box antenna x2 inside

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