

## EDUP EP-9651GS

# EDUP AX210 WiFi 6E PCIe Card and Bluetooth 5.2 Adapter User Manual

## 1. INTRODUCTION

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This manual provides detailed instructions for the installation, operation, and troubleshooting of your EDUP AX210 WiFi 6E PCIe Card with Bluetooth 5.2. This device is designed to enhance your desktop PC's wireless connectivity, offering high-speed Wi-Fi 6E and advanced Bluetooth 5.2 capabilities.

## 2. PACKAGE CONTENTS

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Please verify that all items listed below are included in your package:

- 1 x PCIe Wi-Fi 6E Network Card
- 2 x 6dBi Antennas
- 1 x Driver CD (for initial driver installation)
- 1 x Small Chassis Baffle (for low-profile cases)
- 1 x Screwdriver & 2 x Screws
- 1 x User Manual (this document)

# 160MHz Broadband Channel

Support Multiple Devices in parallel to Reduce Congestion



Image 2.1: Package Contents. This image displays all components included with the EDUP AX210 WiFi 6E PCIe Card, such as the main card, two high-gain antennas, a driver CD, a small chassis baffle, a screwdriver with screws, and the user manual.

## 3. FEATURES

The EDUP AX210 WiFi 6E PCIe Card offers a range of advanced features for superior wireless performance:

- **Intel AX210NGW Chip:** Powered by the Intel AX210NGW chipset, ensuring high network reliability and performance.
- **WiFi 6E Tri-Band Connectivity:** Supports 6GHz (up to 2400Mbps), 5.8GHz (up to 2400Mbps), and 2.4GHz (up to 600Mbps) frequencies for a combined speed of up to 5400Mbps. Backward compatible with IEEE 802.11 ac/b/g/n.
- **OFDMA and AX MU-MIMO:** Provides up to 4x more capacity than AC WiFi, allowing more devices to connect simultaneously with improved efficiency.
- **Bluetooth 5.2 Technology:** Expands Bluetooth signal range by 4x compared to previous versions, enabling faster large file transfers and reliable connections with Bluetooth devices like mice, headphones, and keyboards.
- **160MHz Broadband Channel:** Supports multiple devices in parallel to reduce network congestion, enhancing

overall performance.

- **6dBi High-Gain Antennas:** Two external antennas provide greater signal penetration and wider coverage, extending wireless range up to 50-150 meters.
- **High-Quality Heat Sink:** Effectively dissipates heat generated during operation, maintaining optimal card temperature and ensuring stable performance during demanding tasks like gaming or streaming.
- **Advanced WPA3 Security:** Keeps your network secure from potential threats and unauthorized access.



Image 3.1: Powerful Chipset. This image highlights the Intel Wi-Fi AX210NGW Chipset, emphasizing its role in providing high network reliability and performance for the EDUP PCIe card.

# Prepare For The Upcoming WiFi 6E

Expand to receive tri-band signal

6G band



5G band



2.4G band



Image 3.2: WiFi 6E Tri-Band Speeds. This diagram illustrates the speed capabilities across the three frequency bands: 6GHz and 5GHz both offering up to 2400Mbps, and 2.4GHz offering up to 574Mbps, showcasing the card's high-speed potential.

# Greater Range and Speed with Bluetooth 5.2

**2x** Speed  
**4x** Range  
**8x** Throughput

Bluetooth 5.2 achieves 2x faster speeds and 4x broader range than previous generations so you can connect your favorite devices



Image 3.3: Bluetooth 5.2 Connectivity. This image demonstrates the extended range and connectivity of Bluetooth 5.2, showing the card connecting to multiple devices such as a printer, keyboard, mouse, mobile devices, and audio peripherals.



Image 3.4: Advanced WPA3 Security. This graphic illustrates the WPA3 security feature, symbolized by a shield and lock, indicating enhanced protection for your network and connected devices.

## 4. SYSTEM REQUIREMENTS

Before installation, ensure your system meets the following requirements:

- **Operating System:** Windows 11/10 (64-bit)
- **PCIe Slot:** An available PCI Express x1, x4, x8, or x16 slot on your motherboard.
- **Bluetooth Header:** An available 9-pin USB 2.0 header on your motherboard for Bluetooth functionality.

## 5. INSTALLATION GUIDE

Follow these steps to install the EDUP AX210 WiFi 6E PCIe Card into your desktop PC:

1. **Power Off PC:** Shut down your computer completely and unplug the power cord from the wall outlet.
2. **Open PC Case:** Remove the side panel of your computer case to access the motherboard.

3. **Locate PCIe Slot:** Find an available PCI Express slot (x1, x4, x8, or x16).
4. **Insert WiFi Card:** Carefully align the EDUP WiFi 6E PCIe Card with the chosen slot and press it down firmly until it is securely seated.
5. **Secure Card:** Use a screw to fasten the card's bracket to the PC case. If you have a low-profile case, replace the standard bracket with the included small chassis baffle.
6. **Connect Bluetooth Cable:** Connect the small end of the included Bluetooth cable to the 9-pin header on the WiFi card and the other end to an available 9-pin USB 2.0 header on your motherboard. (*Note: This connection is essential for Bluetooth functionality.*)
7. **Attach Antennas:** Screw the two 6dBi antennas onto the connectors on the back of the WiFi card. Adjust their orientation for optimal signal reception.
8. **Close PC Case:** Replace the side panel of your computer case and reconnect the power cord.
9. **Power On PC:** Turn on your computer.

## 6. DRIVER INSTALLATION

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After physical installation, you need to install the drivers for the WiFi and Bluetooth functions:

1. **Using Driver CD:** Insert the included driver CD into your computer's optical drive and follow the on-screen instructions to install the drivers.
2. **Online Download (Recommended):** For the latest drivers, visit the Intel official website or the EDUP website: [szedup.com/search/9651](https://www.szedup.com/search/9651). Download and install the appropriate drivers for the Intel AX210 chipset.
3. **Restart PC:** After driver installation, restart your computer to ensure all changes take effect.

## 7. OPERATING INSTRUCTIONS

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### 7.1. Connecting to Wi-Fi

1. Once your PC has restarted and drivers are installed, click on the Wi-Fi icon in your system tray (usually in the bottom-right corner of your screen).
2. Select your desired Wi-Fi network from the list of available networks.
3. Enter the network security key (password) if prompted.
4. Click "Connect." Your PC should now be connected to the Wi-Fi network.

### 7.2. Connecting to Bluetooth Devices

1. Ensure your Bluetooth device is in pairing mode. Refer to your device's manual for specific instructions.
2. On your PC, go to **Settings > Devices > Bluetooth & other devices**
3. Toggle Bluetooth to "On" if it's not already enabled.
4. Click "Add Bluetooth or other device" and select "Bluetooth."
5. Select your device from the list and follow any on-screen prompts to complete the pairing process.

## 8. TROUBLESHOOTING

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If you encounter issues with your EDUP AX210 WiFi 6E PCIe Card, refer to the following troubleshooting tips:

- **No Wi-Fi Connection:**

- Ensure the card is properly seated in the PCIe slot.
  - Verify that the Wi-Fi drivers are correctly installed. Check Device Manager for any yellow exclamation marks next to the network adapter.
  - Confirm that the antennas are securely attached.
  - Check your router's settings and ensure Wi-Fi is enabled.
- **No Bluetooth Functionality:**
    - Ensure the Bluetooth cable is securely connected to both the WiFi card and the motherboard's 9-pin USB 2.0 header.
    - Verify that Bluetooth drivers are installed.
    - Check Windows Settings to ensure Bluetooth is enabled.
- **Slow Wi-Fi Speeds:**
    - Ensure your router supports Wi-Fi 6E and is configured for optimal performance (e.g., 160MHz channel width).
    - Position the antennas for best signal reception.
    - Update your router's firmware.
    - Minimize interference from other wireless devices.
- **Intermittent Connection:**
    - Check for driver updates.
    - Ensure the card is not overheating. The heat sink should be clear of obstructions.
    - Relocate your PC or router to reduce physical obstructions or interference.

## 9. SPECIFICATIONS

<b>Brand</b>	EDUP
<b>Model Number</b>	EP-9651GS
<b>Hardware Interface</b>	PCI Express x16, PCIE x 1, PCIE x 4, PCIE x 8
<b>Data Link Protocol</b>	Bluetooth, Wi-Fi
<b>Data Transfer Rate</b>	5400 Mbps (Max)
<b>Compatible Devices</b>	Desktop PC
<b>Item Weight</b>	0.24 Kilograms
<b>UPC</b>	723172895389
<b>Manufacturer</b>	EDUP

## 10. WARRANTY AND SUPPORT

This EDUP product comes with a **2-year manufacturer's warranty**.

For technical support, driver downloads, or further assistance, please visit the official EDUP website or contact their customer service. The latest drivers can be found at: [szedup.com/search/9651](https://szedup.com/search/9651).

