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› ALFA AWUS036NHA Wireless B/G/N USB Adaptor Instruction Manual

ALFA Network AWUS036NHA

ALFA AWUS036NHA Wireless B/G/N USB Adaptor

Instruction Manual

1. INTRODUCTION

The ALFA AWUS036NHA is a high-performance Wireless B/G/N USB Adaptor designed to provide extended range and reliable wireless connectivity for your computer. Featuring an Atheros chipset and a 5 dBi detachable antenna, this adaptor is ideal for enhancing Wi-Fi reception and performance, especially in areas with weak signals. It supports the 2.4 GHz frequency band and offers data transfer rates up to 150 Mbps, compliant with 802.11n standards.





Image 1.1: The ALFA AWUS036NHA Wireless USB Adaptor with its detachable antenna.

2. PACKAGE CONTENTS

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

- ALFA AWUS036NHA Wireless USB Adaptor
- 5 dBi Detachable Omni-directional Antenna
- USB Cable
- Driver CD
- Quick Installation Guide / Information Card



Image 2.1: All components included in the ALFA AWUS036NHA retail package.

3. FEATURES

The ALFA AWUS036NHA USB Adaptor offers a range of features designed for enhanced wireless connectivity:

- Compatible with any 802.11b, 802.11g, or 802.11n router operating on the 2.4 GHz wavelength.
- Includes a 4-inch 5 dBi screw-on swivel rubber antenna, which is removable and upgradeable up to 9 dBi for further range extension.
- Supports robust security protocols: 64/128-bit WEP, WPA, WPA2, TKIP, and AES.
- High transmitter power of 28 dBm for long-range and high-gain Wi-Fi performance.

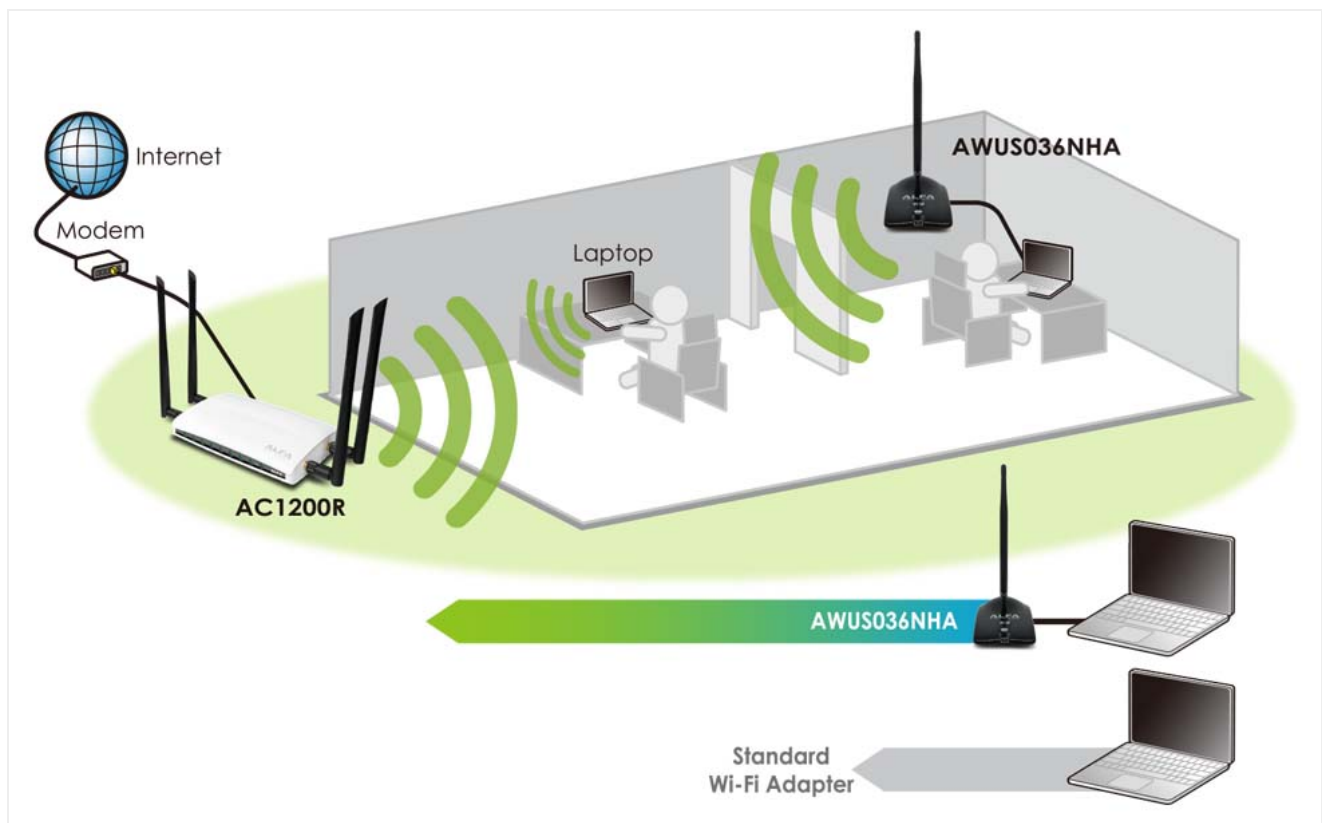


Image 3.1: The AWUS036NHA provides significantly extended Wi-Fi range compared to standard adapters.

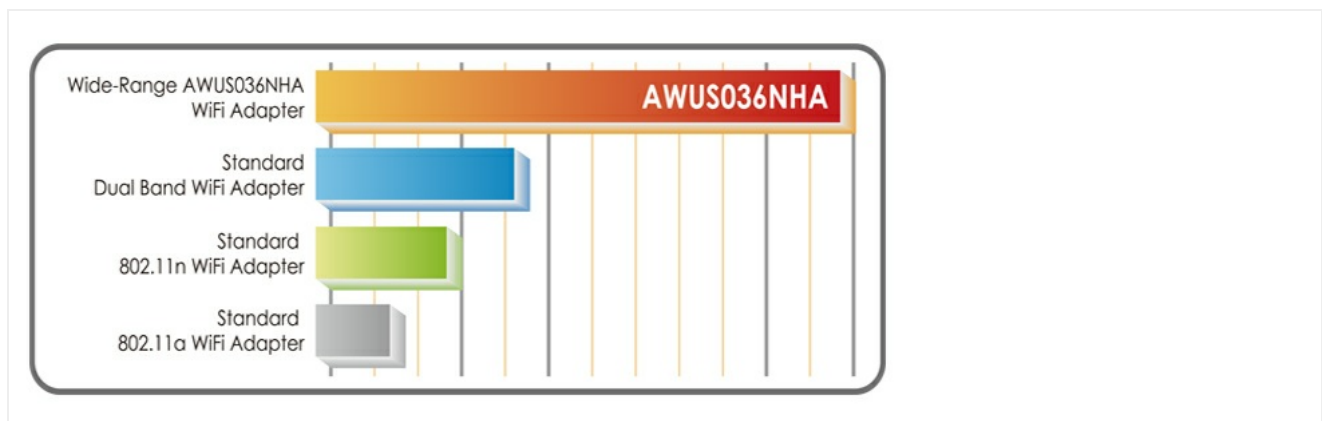


Image 3.2: Comparative chart showing the superior range of the AWUS036NHA.

4. SYSTEM REQUIREMENTS

To ensure proper functionality of the ALFA AWUS036NHA, your computer system must meet the following requirements:

- **Operating System:** Windows 2000, Windows XP (32/64-bit), Windows Vista (32/64-bit), Windows 7.
Note: No official driver support for Mac OS versions beyond 10.15, nor for M1/M2 chipsets. Linux compatibility is widely reported by users.
- **Hardware Interface:** Available USB port (USB 2.0 mini USB recommended).
- **Compatible Devices:** Desktop or Laptop computer.



Image 4.1: The back of the product box indicating supported operating systems.

5. SETUP

Follow these steps to set up your ALFA AWUS036NHA Wireless USB Adaptor:

1. **Uninstall Previous Drivers (If Applicable):** If you have previously installed other wireless USB adapter drivers, it is highly recommended to uninstall them before proceeding to avoid conflicts. Refer to your operating system's control panel or settings for driver uninstallation.



Image 5.1: Important notice regarding uninstallation of prior wireless drivers.

2. **Install Drivers:** Insert the included Driver CD into your computer's optical drive. Follow the on-screen instructions to install the necessary drivers for the AWUS036NHA. If your computer does not have an optical drive, drivers may be available for download from the official ALFA Network website.
3. **Attach Antenna:** Carefully screw the 5 dBi detachable antenna onto the RP-SMA connector on the ALFA AWUS036NHA adaptor. Ensure it is securely fastened but do not overtighten.
4. **Connect Adaptor:** Plug the ALFA AWUS036NHA USB Adaptor into an available USB port on your computer using the provided USB cable. Your operating system should detect the new hardware and complete the driver installation process.

6. OPERATING INSTRUCTIONS

Once the drivers are installed and the adaptor is connected, you can begin using your ALFA AWUS036NHA to connect to wireless networks:

1. **Access Wireless Networks:** Open your computer's wireless network utility (e.g., Windows Wireless Network Connection).
2. **Scan for Networks:** The utility will display a list of available wireless networks in your vicinity.
3. **Connect to a Network:** Select your desired network from the list. If the network is secured, you will be

prompted to enter the network's security key (WPA/WPA2 password).

4. **Confirm Connection:** Once the correct key is entered, your computer should connect to the wireless network. The adaptor's LED indicator will typically show activity when connected and transmitting data.

The 2.4 GHz frequency band supported by this adaptor is suitable for various online activities:



Image 6.1: The 2.4 GHz band supports activities such as internet browsing, email, file transfers, online music, video streaming, and gaming.

7. MAINTENANCE

To ensure the longevity and optimal performance of your ALFA AWUS036NHA USB Adaptor, consider the following maintenance tips:

- Keep the adaptor and antenna clean and free from dust. Use a soft, dry cloth for cleaning.
- Avoid exposing the device to extreme temperatures, direct sunlight, or high humidity.
- Do not drop or subject the adaptor to strong impacts.
- Ensure the antenna is securely attached but do not force it or overtighten.
- When not in use for extended periods, it is advisable to disconnect the adaptor from your computer.

8. TROUBLESHOOTING

If you encounter issues with your ALFA AWUS036NHA, try the following troubleshooting steps:

- **No Wireless Networks Detected:**
 - Ensure the adaptor is properly plugged into a working USB port.
 - Verify that the antenna is securely attached.
 - Check if the wireless function is enabled on your computer.
 - Reinstall the drivers from the provided CD or the ALFA Network website.
- **Slow Connection Speed or Frequent Disconnections:**
 - Move closer to your wireless router or access point.
 - Check for sources of interference (e.g., cordless phones, microwave ovens, Bluetooth devices).
 - Ensure your router's firmware is up to date.
 - Try changing the wireless channel on your router.
 - Consider upgrading the antenna to a higher gain model (e.g., 9 dBi) if range is a persistent issue.

- **Adaptor Not Recognized by Computer:**

- Try plugging the adaptor into a different USB port.
- Restart your computer.
- Ensure all previous wireless drivers have been uninstalled before installing the ALFA drivers.
- Check Device Manager (Windows) to see if the device is listed without errors.

9. SPECIFICATIONS

Detailed technical specifications for the ALFA AWUS036NHA Wireless USB Adaptor:

Feature	Description
Wireless Type	802.11b, 802.11g, 802.11n
Data Transfer Rate	Up to 150 Mbps
Frequency Range	2.412 ~ 2.484 GHz
Antenna Type	5 dBi 2.4GHz Antenna (RP-SMA connector)
Chipset	Atheros AR9271
Interface	USB 2.0 mini USB
Security	WEP 64/128, 802.1X support, Wi-Fi Protected Access (WPA), WPA-PSK, WPA II-PSK, Cisco CCX support, WAPI-PSK, WAPI-CERT
Output Power	802.11b: 28dBm±2, 802.11g: 26dBm±2, 802.11n (HT20): 26dBm±2, 802.11n (HT40): 26dBm±2
Operating Temperature	0°C ~ 50°C
Storage Temperature	-10°C ~ 65°C
Humidity	5% ~ 98% non-condensing
Dimensions (LxWxH)	3.54 x 2.36 x 0.39 inches (90 x 60 x 10 mm)
Weight	5.6 ounces (158.7 grams)
Power	Voltage: 5V±5%

AWUS036NHA

802.11b/g/n Long-Rang USB Adapter

Specification:

Standards	Wireless: IEEE 802.11b/g/n		Output Power	802.11b	28dBm±2	
Data Rate	802.11b: UP to 11Mbps			802.11g	26dBm±2	
	802.11g: UP to 54Mbps			802.11n (HT20)	26dBm±2	
	802.11n: UP to 150Mbps			802.11n (HT40)	28dBm±2	
OS Supported	Windows 2000, XP, Vista, 7		Sensitivity	11b: -96dBm @ 1Mbps		
Interface	USB 2.0 mini USB			11g: -91dBm @ 6Mbps		
Antenna Type	1 x 2.4Ghz RP-SMA connector			11n: -91dBm@HT20 MCS7		
Chipset	Atheros AR9271		Data Modulation T	-87dBm@HT40 MCS7		
Antenna	5dBi 2.4GHz Antenna			BPSK,QPSK, CCK and OFDM		
Frequency Range	2.412 ~ 2.483 GHz			Power	Voltage: 5V±5%	
Channels	1~11 channels (North America)		Security	WEP 64/128, 802.1X support, Wi-Fi Protected Access (WPA), WPA-PSK, WPA II-PSK, Cisco CCX support, WAPI-PSK, WAPI-CERT		
	1~13 channels (General Europe)			Operating Temp	0℃ ~ 50℃	
	1~14 channels (Japan)				Storage	-10℃ ~ 65℃
Output Power	802.11b	28dBm±2	Humidity		5% ~ 98% non-condensing	
	802.11g	26dBm±2				
	802.11n (HT20)	26dBm±2				
	802.11n (HT40)	28dBm±2				

Image 9.1: Comprehensive technical specifications of the AWUS036NHA.

10. WARRANTY AND SUPPORT

ALFA Network products typically come with a manufacturer's warranty. For specific warranty terms and conditions, please refer to the documentation included with your product or visit the official ALFA Network website.

For technical support, driver updates, or further inquiries, please visit the official ALFA Network website:

www.alfa.com.tw