Asus E3060 WiFi-AP Solo User Manual

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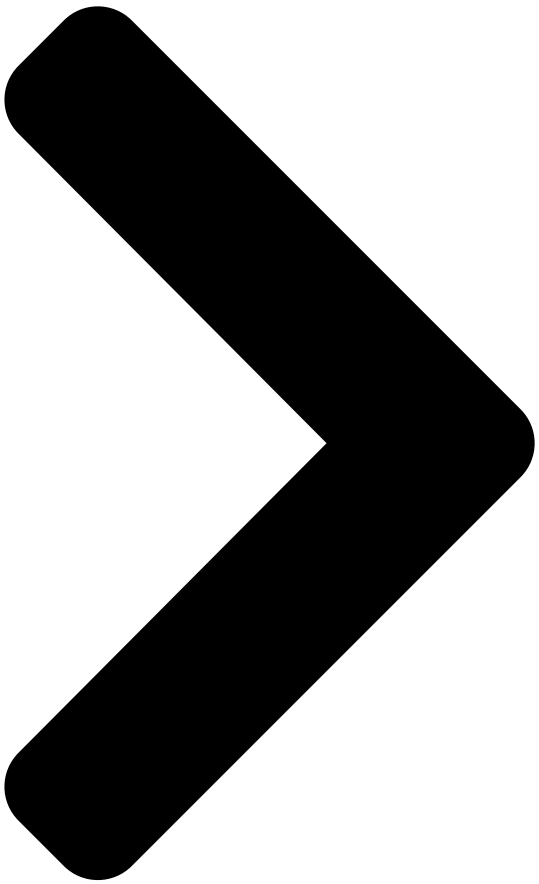

E3060

®

User Guide

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Related Manuals for Asus E3060 WiFi-AP Solo

Wireless Access Point Asus EA-N66 Setup Manual

3-in-1 dual-band wireless-n900 gigabit access point / wi-fi bridge / range extender (26 pages)

Wireless Access Point Asus EA-AC87 Quick Start Manual

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Wireless Access Point Asus EA-AC87 Quick Start Manual

Wireless-ac 1800 gigabit access point/media bridge (45 pages)

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Tri-band wi-fi system (70 pages)

Wireless Access Point Asus WL-330G User Manual

54mbps pocket wireless access point (60 pages)

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Enhanced 802.11g portable wireless 4-in-1 router (10 pages)

Wireless Access Point Asus WL-330GE - Wireless Access Point User Manual

Enhanced 802.11g pocket wireless access point (72 pages)

Summary of Contents for Asus E3060 WiFi-AP Solo

Page 1: User Guide

E3060 ® User Guide...

Page 2

Product warranty or service will not be extended if: (1) the product is repaired, modified or altered, unless such repair, modification of alteration is authorized in writing by ASUS; or (2) the serial number of the product is defaced or missing.

Page 3: Table Of Contents

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Page 5: About This Guide

How this guide is organized This guide contains the following parts: • Chapter 1: Product introduction This chapter describes the general features of the ASUS WiFi-AP Solo wireless solution. The chapter also presents the LED indications, and recommended WiFi-AP Solo network settings. •...

Page 6: Wifi-Ap Solo Specifications Summary

Fully compatible with IEEE802.11b/g standard products ASUS special features Supports 64 stations connection Supports ASUS EZ WiFi mode: Running wireless network in sleep mode (only on ASUS Digital Home motherboards except for P5LD2-VM DH and N4L-VM DH) Software support ASUS WiFi-AP Solo Wizard...

Page 7: Chapter 1: Product Introduction

Chapter 1 This chapter describes the general features of the ASUS WiFi-AP Solo wireless solution. The chapter also presents the LED indications, and recommended WiFi-AP Solo network settings. Product introduction...

Page 8: Welcome

To provide efficient security to your wireless communication, WiFi-AP Solo employs both 64-bit/128-bit Wired Equivalent Privacy (WEP) and Wi-Fi Protected Access (WPA/WPA2) encryptions. With these and many more, ASUS WiFi-AP Solo is sure to keep you ahead in the world of wireless computing. 1.2 Features...

Page 9 54Mbps speed advantage With data transmission rate up to five times faster than IEEE 802.11b standards, the WiFi-AP Solo breaks the wireless data transmission speed barrier to give you faster Internet connection and file sharing capabilities. Easy integration The WiFi-AP Solo is compatible with all IEEE 802.11b devices so you can still use your IEEE 802.11b devices in the WiFi-AP Solo network.

Page 10: Led And Antenna Port

1.3 LED and antenna port The WiFi-AP Solo comes with a green data transmission LED (AIR) and an antenna port located at the motherboard rear panel. Antenna port AIR LED • The location of the WiFi-AP Solo data transmission LED and antenna port may vary on motherboard models.

Page 11: Choosing An Appropriate Wireless Network

1.4 Choosing an appropriate wireless network You can use the ASUS WiFi-AP Solo in various wireless network configurations. It is recommended that you select the most appropriate configuration for your home or office network before setting up the WiFi-AP Solo.

Page 12: Access Point Mode (Ap Mode)

1.4.1 Access Point Mode (AP Mode) If you wish to share the Internet access with the wireless stations in your environment, you can configure the WiFi-AP Solo in an access point mode (AP Mode). In this mode, the WiFi-AP Solo becomes the wireless access point that provides local area network and Internet access for your wireless stations.

Page 13: Infrastructure Mode

1.4.2 Infrastructure mode An Infrastructure wireless network is ADSL or Cable centered on a wireless access point Internet Access Point Modem (if any) (AP) that provides Internet access ″

and LAN communication for the wireless stations. In Infrastructure mode, the wireless LAN stations communicate with each other via the wireless AP.

Page 14: Chapter 2: Installation

Chapter 2 This chapter provides step by step instructions on installing the WiFi- AP Solo drivers and utilities to your computer. This part also provides information on installing the antenna. Installation...

Page 15: Installation

2.1 Installation 2.1.1 System requirements Before installing the WiFi-AP Solo drivers and utilities, make sure that your system meets the following requirements. • ASUS motherboard with WiFi-AP Solo onboard solution ® • Intel Pentium™ 4 • Minimum 128MB system memory ®...

Page 16: Signal Range

2.1.3 Signal range The signal range of WiFi-AP Solo depends on the operating environment. Obstacles such as walls and metal barriers could reflect or absorb radio signals. Devices such as microwave stove can also greatly interfere with the wireless network. Signal range: 802.11g: Indoor 80ft (30m), outdoor (LOS, Light-Of-Sight) 200ft (60m) 802.11b: Indoor 130ft (40m), outdoor (LOS, Light-Of-Sight) 1000ft (310m)

Page 17: Driver And Utilities Installation

2.2 Driver and utilities installation • The contents of the motherboard support CD are subject to change without notice. Visit the ASUS website for driver/utilities updates. ® • If you use a Windows operating system, your computer auto-detects the WiFi-AP Solo when system boots and displays an Add New Hardware Wizard window.

Page 18: Chapter 3: Setting Up

Chapter 3 This chapter provides information on how to set up the WiFi-AP Solo in your home or office network. Setting up...

Page 19: About The Setup Utilities

3.1 About the setup utilities After you have installed the WiFi-AP Solo drivers and utilities to your system, you are now ready to setup the WiFi-AP Solo in your network. Make sure that you have selected the most appropriate configuration for your wireless network before you proceed.

Page 20: Setting Up With Wifi-Ap Solo Wizard

3.2 Setting up with WiFi-AP Solo Wizard You can create your own wireless local area network (WLAN) in your home using the WiFi-AP Solo Access Point Mode (AP Mode) feature. Create your own WLAN if: 1. your computer is connected to the Internet; and ®...

Page 21

3.2.1 Setting up the AP Mode 1. To launch the WiFi-AP Solo setup WiFi-AP Solo setup wizard, right-click the system tray icon and select WiFi-AP Solo Wizard. 2. Select Access Point and click Next. 3. The system automatically generates an SSID for the AP mode.

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128-bit encryption. Click Next to continue. 6. Select your Internet connection and click Next. 7. The AP mode configuration is complete. Record the setup information on your note and click Finish to quit the ASUS WiFi-AP Solo wizard.

Page 23

8. The default IP address of WiFi-AP Solo is 192.168.0.1. To modify the IP settings, double-click the wireless network icon in the system tray -> click Properties -> double-click Internet Protocol (TCP/IP). As Internet sharing capability is supported via Microsoft ICS (Internet Connection Sharing), the WiFi-AP Solo will only function as a standard access point without Internet sharing capability, once its default network configuration has been altered under the software access mode.

Page 24: Setting Up Infrastructure Of The Station Mode

3.2.2 Setting up infrastructure of the station mode In the Infrastructure mode, you can connect to the LAN or Internet, or both, through a wireless AP. 1. To launch the WiFi-AP Solo setup WiFi-AP Solo setup wizard, right-click the system tray icon and select WiFi-AP Solo Wizard.

Page 25 5. Configure the security settings (if have) in the Wireless Network Property page. Select the key type, key length and input the keys. Click Finish to apply the settings and return to the setup wizard. Ask your network administrator for the wireless AP settings. The WiFi-AP Solo settings must be identical with the wireless AP it connects to.

Page 26: Setting Up Ad-Hoc Of The Station Mode

3.2.3 Setting up ad-hoc of the station mode If there is no wireless access point in your environment, you can switch your WiFi-AP Solo to the Ad-hoc mode to connect and communicate with other wireless-enabled computers. Refer to section 1.4.3 for network topology. 1.

Page 27 5. Select the profile from the list and click Next. 6. Setting up the TCP/IP for your computer. In an Ad-hoc network, n an Ad-hoc network, you must manually specify IP address for the WiFi-AP Solo. Make sure that the IP address of the WiFi-AP Solo is within the same subnet as that of the other ad-hoc node (e.g.

Page 28: Setting Up Via Setup Utility

3.3 Setting up via setup utility 3.3.1 How to launch Wifi-AP Solo ® You can launch Wifi-AP Solo either from the Windows Program menu or the tray icon. The tray icon is an optional quick launch to be enabled by a user. ® Windows Program Menu It is the absolute way to launch the WiFi-AP Solo from the program folder.

Page 29 • Windows Zero Config When this item is checked, this will enable you to switch to Microsoft ® Windows XP Wireless network configuration service if you do not prefer RtWLAN as your wireless LAN manager. • Radio Off When this item is checked, the radio is turned off to save power.

Page 30: Status Page

Status page • Manufacturer: ASUS • NDIS Driver Version • Short Radio Header • Encryption: Current encryption mode. • Authenticate: authentication state • Channel Set: selected channel plan currently. Please reference Appendix-A with the detail comparisons. • MAC Address: MAC address of this adapter.

Page 31 • SSID (Network Name) The name of the network. • Signal Strength The average quality of signal of packets received from the wireless network. We recommend connecting the access point with over 70% signal strength. • Throughput diagram Transition (Tx) performance. •...

Page 32 Advanced page This page presents all the access points in the system. • Power Save • • None: without power save mode. • Min: wake-up every two time interval to receive packets. • Wireless node • 802.11b • 802.11b • 802.11g/b •...

Page 33: Setting Up Ap Mode

3.3.3 Setting up AP Mode Open the setup utility by double-clicking the utility icon on the desktop. The setup utility contains six buttons - Status, Config, Survey, Statistics, Advanced and ICS in the left column. The Survey button is greyed out in AP mode and the ICS button is disabled when in the station mode.

Page 34 4. You are directed to the Wireless Network Properties page to set up the AP mode. In this page, you can change the SSID, select the communication channel and specify the network security. When configuration is complete, click Finish to apply the settings and return to the setup wizard.

Page 35: Setting Up Infrastructure Of The Station Mode

3.3.4 Setting up infrastructure of the station mode Open the setup utility by double-clicking the utility icon on the desktop. You can setup the wireless card connection (Infrastructure) with a wireless AP and save the settings to a profile. 1. Open the setup utility. Click Survey button to search for available wireless networks.

Page 36 If DHCP server is disabled on the wireless AP in your network, refer to your network administrator for a valid IP address. 4. Click the Status button to view the information of the

WiFi-AP Solo. The connection setup is complete. 5.

Page 37: Setting Up Ad-Hoc Of The Station Mode

3.3.5 Setting up ad-hoc of the station mode This section describes how to set up WiFi-AP Solo as an Ad-hoc node and let other wireless station to connect, and how to connect an existing Ad-hoc node. Setting up WiFi-AP Solo as an Ad-hoc node 1.

Page 38 4. To connect WiFi-AP Solo from another wireless station, make sure make sure that the IP address of the station is within the same subnet as that of the WiFi-AP Solo. For example, if the IP address of the WiFi-AP Solo is 192.168.0.1, then the IP address of the station must be 192.168.0.X, where X = 2 ~ 254.

Page 39 2. Set up the operation channel and the wireless network security settings. The operation channel and security settings must be identical with the Ad- hoc nodes you want to connect. Click Finish to apply and return to the setup utility. Refer to Appendix for the available wireless LAN channels in your country or region.

Page 40: Setting Up Wireless Security

3.4 Setting up wireless security To protect your wireless network, you need to setup a security mechanism on your WiFi-AP Solo. Under AP mode, only Open, Shared, and WPA-PSK are supported. Under Station mode, all the security modes listed below are supported.

Page 41 Encryption Encryption is used to convert plain text data into unreadable codes with certain type of algorithm before capsulation for wireless transmission. WiFi-AP Solo supports the following encryption methods: WEP: WEP stands for Wired Equivalent Privacy. It uses 64 or 128-bit static keys.

Page 42: Windows Zero Configuration

3.5 Windows Zero Configuration The Windows Zero Configuration is a wireless LAN service provided in Microsoft Windows® XP. It provides basic and easy connection of the wireless network. In this chapter, we introduce you the steps to swap between the Windows Zero Configuration and the WiFi-AP Solo. If you prefer Windows Zero Configuration instead through the WiFi-AP Solo, then you should follow the steps in 3.5.1 to switch to Windows Zero Configuration.

Page 43: Rollback From Windows Zero Configuration To Wifi-Ap Solo

3.5.2 Rollback from Windows Zero Configuration to WiFi-AP Solo If you prefer the WiFi-AP Solo instead of Microsoft® Windows Zero Config, please follow the steps to rollback. Open WiFi-AP Solo, uncheck the “Windows Zero Config” item on the global control bar After a while, the property area starts to display network connection.

Page 44: Glossary

Glossary...

Page 45 Access Point (AP) An networking device that seamlessly connects wired and wireless networks. Access Points combined with a distributed system support the creation of multiple radio cells that enable roaming throughout a facility. Ad Hoc A wireless network composed solely of stations within mutual communication range of each other (no Access Point).

Page 46 Each subchannel in the COFDM implementation is about 300 KHz wide. At the low end of the speed gradient, BPSK (binary phase shift keying) is used to encode 125 Kbps of data per channel, resulting in a 6,000-Kbps, or 6 Mbps, data rate. Using quadrature phase shift keying, you can double the amount of data encoded to 250 Kbps per channel, yielding a 12-Mbps data rate.

Page 47 Direct-sequence systems communicate by continuously transmitting a redundant pattern of bits called a chipping sequence. Each bit of transmitted data is mapped into chips and rearranged into a pseudorandom spreading code to form the chipping sequence. The chipping sequence is combined with a transmitted data stream to produce the output signal.

Page 48 Ethernet The most widely used LAN access method, which is defined by the IEEE 802.3 standard. Ethernet is normally a shared media LAN meaning all devices on the network

segment share total bandwidth. Ethernet networks operate at 10Mbps using CSMA/CD to run over 10-BaseT cables. Firewall A firewall determines which information passes in and out of a network.

Page 49 The 802.11b spectrum is plagued by saturation from wireless phones, microwave ovens and other emerging wireless technologies, such as Bluetooth. In contrast, 802.11a spectrum is relatively free of interference. The 802.11a standard gains some of its performance from the higher frequencies at which it operates.

Page 50 IP (Internet Protocol) The TCP/IP standard protocol that defines the IP datagram as the unit of information passed across an Internet and provides the basis for connectionless packet delivery service. IP includes the ICMP control and error message protocol as an integral part. It provides the functional equivalent of ISO OSI Network Services.

Page 51 Packet A basic message unit for communication across a network. A packet usually includes routing information, data, and sometimes error detection information. Pass Phrase The Wireless Settings utility uses an algorithm to generate four WEP keys based on the typed combination. PPP (Point-to-Point Protocol) PPP is a protocol for communication between computers using a serial interface, typically a personal computer connected by phone line to a server.

Page 52 TCP (Transmission Control Protocol) The standard transport level protocol that provides the full duplex, stream service on which many application protocols depend. TCP allows a process or one machine to send a stream of data to a process on another. Software implementing TCP usually resides in the operating system and uses the IP to transmit information across the network.

Page 53 4-10...

Page 54: Appendices

Appendices The Appendices list the wireless LAN channels available for use in your country or location, and safety warning statements...

Page 55: Wireless Lan Channels

Wireless LAN channels The IEEE 802.11b/g standard for wireless LAN allocated the 2.4 GHz frequency band into 13 overlapping operating channels. Each channel corresponds to a different set of frequencies. The table below shows the center frequencies of each channel. Channel Center Channel...

Page 56 Country/Region (Regulating Body) Available Channels Hungary (RTT&E/EMC/LVD) Channels 1 to 13 Iceland (RTT&E/EMC/LVD) Channels 1 to 13 Ireland (RTT&E/EMC/LVD) Channels 1 to 13 Italy (RTT&E/EMC/LVD) Channels 1 to 13 Japan (TELEC) Channels 1 to 14 Luxembourg (RTT&E/EMC/LVD) Channels 1 to 13 Malaysia (SIRIM/CMC) Channels 1 to 13 Mexico...

Page 57: Safety Statements

Safety statements Federal Communications Commission Statement This device complies with FCC Rules Part 15. Operation is subject to the following two conditions: • This device may not cause harmful interference, and • This device must accept any interference received, including interference that may cause undesired operation.

Page 58: Regulatory Information/Disclaimers

Regulatory Information/Disclaimers Installation and use of this Wireless LAN device must be in strict accordance with the instructions included in the user documentation provided with the product. Any changes or modifications (including the antennas) made to this device that are not expressly approved by the manufacturer may void the user’s authority to operate the equipment.

Page 59: Caution Statement Of The Fcc

Caution Statement of the FCC Radio Frequency Exposure This Wireless LAN radio device has been evaluated under FCC Bulletin OET 65C and found compliant to the requirements as set forth in CFR 47 Sections 2.1091 and 15.247(b)(5) addressing RF Exposure from radio frequency

devices.