Asus WL-120g V2 User Manual

Wireless local area for 802.11g and 802.11b wireless networks

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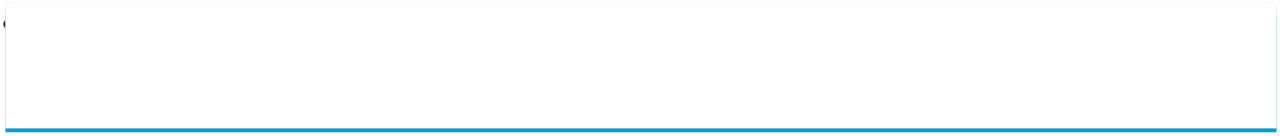

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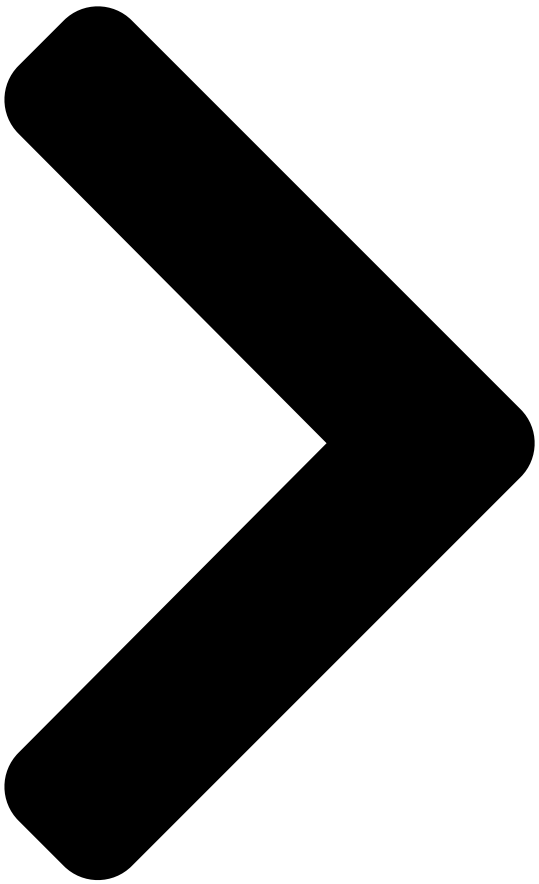

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Wireless Local Area Network Card

WL-120g V2

(For 802.11g and 802.11b Wireless Networks)

User's Manual

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Related Manuals for Asus WL-120g V2

Network Card Asus WL-127 Installation Manual

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Network Card Asus WL-120g User Manual

Wireless local area network card (72 pages)

Network Card Asus WL-120g V2A User Manual

Wireless local area for 802.11g and 802.11b wireless networks (71 pages)

Network Card Asus WL-106gM User Manual

Wireless local area network card for 240 mimo wireless network (39 pages)

Network Card Asus WL-160N User Manual

Wireless local area network adapter for 802.11n draft, 802.11g & 802.11b networks (39 pages)

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Network Card Asus WL-130N Quick Start Manual

Wireless local area network adapter (178 pages)

Network Card Asus WL-138g Quick Start Manual

Wireless local area network card (48 pages)

Network Card Asus WL-138g User Manual

Wireless local area network card (for 802.11g and 802.11b wireless networks) (72 pages)

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Network Card Asus WL-167g deluxe User Manual

Wireless local area network adapter for 802.11g & 802.11b wireless networks (44 pages)

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Network Card Asus WL-107 User Manual

Wireless local area for 802.11b wireless networks (72 pages)

Network Card Asus WL-107 Quick Start Manual

Wireless local area network card (6 pages)

Network Card Asus WL-103g User Manual

Wireless local area card for 802.11g and 802.11b wireless networks (74 pages)

Summary of Contents for Asus WL-120g V2

Page 1 ® Wireless Local Area Network Card WL-120g V2 (For 802.11g and 802.11b Wireless Networks) User's Manual...

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 Technical Support Support Fax: +1-502-933-8713 General Support: +1-502-995-0883 Notebook Support: +1-510-739-3777 x5110 Support Email: tsd@asus.com ASUS COMPUTER GmbH (Germany and Austria) Address: Harkortstr. 25, 40880 Ratingen, BRD, Germany General Email: sales@asuscom.de (for marketing requests only) General Fax: +49-2102-9599-31 Web Site: www.asuscom.de...

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System Requirements ..... 10 The Product Package ..... 10 2. Installation .....11 Installing the ASUS WLAN Card Driver .....11 Verifying Drivers .....12 Installing the ASUS WLAN Card Utilities .....13 ASUS WLAN Utility Quick Start .....15 Reading the ASUS WLAN Status Indicators .....

Page 5 Federal Communications Commission .....71 FCC Radio Frequency Interference Requirements ..... 72 FCC RF Exposure Guidelines (Access Points) .....72 FCC RF Exposure Guidelines (Wireless Cards) .....72 Canadian Department of Communications .....73 France Restricted Frequency Band ..... 74 ASUS WLAN Card...

Page 6 ASUS WLAN Card...

Page 7: Introduction

PCI compliant "wireless" network interface card (NIC) for any computer equipped with a PC Card slot (available mainly in Notebook PCs). The ASUS WLAN Card is designed to be fully compliant with both the IEEE 802.11g and IEE802.11b wireless local area network (Wireless LAN) standards.

Page 8: The Asus Wireless Lan Family

Chapter 1 - Introduction The ASUS Wireless LAN Family The ASUS Wireless LAN family contains a complete solution for wireless local area networks in the office or at home. The ASUS WLAN 802.11b Access Point (WL-300) creates a wireless network using the IEEE 802.11b...

Page 9 Chapter 1 - Introduction The ASUS WLAN 802.11b USB The ASUS WLAN 802.11b/a Router Client (WL-140) is an IEEE (WL-600) creates a wireless network 802.11b wireless USB LAN adapter using the IEEE 802.11b and 802.11a that connects to any computer's...

Page 10: System Requirements

Chapter 1 - Introduction System Requirements To begin using the ASUS WLAN Card, you must have the following minimum requirements: • Windows XP/2000/ME/98SE • Standard PCI Slot • 32MB system memory or larger • 300MHz processor or higher The Product Package...

Page 11: Installation

Chapter 2 - Installation 2. Installation Installing the ASUS WLAN Card Driver 1. Install the ASUS WLAN Card into a free PCI slot and replace your chassis door, panels, screws, and cables. 2. Turn ON your computer and enter Windows.

Page 12: Verifying Drivers

7. Wait while Windows XP creates a restore with Windows XP. Click Continue point for you system files in case you Anyway since ASUS has always tests its need to restore your current system. drivers before product shipment. 8. Click Finish when installation has complete.

Page 13: Installing The Asus Wlan Card Utilities

Chapter 2 - Installation Installing the ASUS WLAN Card Utilities After you have installed the ASUS WLAN Card driver, you can install the WLAN Adapter utilities. Refer to the User's Manual for the detailed information. 1. Insert the ASUS WLAN Card support CD and an autorun menu will appear.

Page 14 8. When the program is launched for the first exit the installation wizard. time, you will be asked which function to use. Select to use ASUS utilities for more functions. By default, the "ASUS WLAN Control Center" is set to launch with Windows.

Page 15: Asus Wlan Utility Quick Start

Chapter 2 - Installation ASUS WLAN Utility Quick Start After installing the ASUS WLAN driver and utility, you may need to make some settings before being able to use your wireless connection. Right-Click Menu 2. Set the Network Name (SSID) to the 1.

Page 16 Chapter 2 - Installation ASUS WLAN Utility Quick Start (Cont.) 6. You can also see the connection quality 5. Click Apply to save your settings and on the "Connection" page. Click OK to check the "Status" page to see the exit the utility.

Page 17: Software Reference

Troubleshooting - Troubleshooting will test your settings and connec- tion to try to pinpoint your problem and give you a solution. • Wireless Settings – Allows users to control the ASUS WLAN Card. Additional Reference • Windows XP Wireless Properties - Brief overview of the wireless settings provided in Windows XP.

Page 18: Windows Xp Wireless Options

Only use XP wireless function – Only use "Windows XP" wireless network settings to configure the ASUS WLAN Card. Only use ASUS utilities and disable XP wireless function – Only use "ASUS WLAN Card utilities" to configure the ASUS WLAN Card.

Page 19: Control Center Utility

Starting the Control Center manually • Select ASUS WLAN Control Center in Windows Start menu. • Double click the ASUS WLAN Control Center icon on the desktop. Windows Start Menu Using the Control Center Taskbar The Control Center Taskbar menu display the following information: •...

Page 20 Excellent link quality but not connected to Internet (Infrastructure) Good link quality but not connected to Internet (Infrastructure) Fair link quality but not connected to Internet (Infrastructure) Poor link quality but not connected to Internet (Infrastructure) Not linked and not connected to Internet (Infrastructure) ASUS WLAN Card...

Page 21 Access Points within range. • Wireless Option (Windows XP only) – Sets your Windows XP wire- less networking environment. Taskbar Icon - Launch Wireless Settings Double-clicking the taskbar icon: • Launches the Wireless Settings application. ASUS WLAN Card...

Page 22: Site Monitor Utility

Windows Start Menu Starting Site Monitor • Click the Windows Start button, select Programs | ASUS Utility | WLAN Card | Site Monitor. • Right-click the Control Center icon on the Windows taskbar and then click Site Monitor.

Page 23 During the test, the Start button toggles to Stop. You can click Start button to begin the link test and click Stop button at any time to terminate the test. ASUS WLAN Card...

Page 24: Wireless Settings Utility

Wireless Settings. Right-Click Menu Windows Start Menu If you have more than one ASUS WLAN device, you will be given a device selection window when you launch the "Wireless Settings" utility. Select the appropriate model if you face this situation.

Page 25: Status - Status Tab

Chapter 3 - Reference Status - Status Tab You can view the information about the ASUS WLAN Card from the general menu. These fields are blank if the ASUS WLAN Card does not exist. Scanning Connected You can turn OFF the ASUS WLAN Card by clicking the “Disable Radio”...

Page 26 Displays the radio channel that the card is currently tuned. This number changes as the radio scans the available channels. Current Data Rate Displays the current transmit data rate in megabits per second (Mbps). See Chapter 5 - Glossary ASUS WLAN Card...

Page 27 When you travel from work to home, for example, choose a “home” profile that contains all your settings for home use. When you travel back to work, choose an “office” profile. ASUS WLAN Card...

Page 28 You can uncheck it if you have many access points and do not want to constantly switch to different networks. If you want to use a particular profile. You can also check it here. Taskbar Right-Click ASUS WLAN Card...

Page 29: Status - Connection Tab

Chapter 3 - Reference Status - Connection Tab You can view the current link statistics about the ASUS WLAN Card. These statistics are updated once per second and are valid only if the ASUS WLAN Card exists. Connected Scanning Frame Sent/Received Transmitted - The number of frames that were transmitted.

Page 30: Status - Ip Config Tab

IP Renew - Clicking this button will attempt to renew the DHCP IP address for the ASUS WLAN Card in case you want to obtain a new IP address. NOTE: The IP Release and IP Renew buttons can only be used on the ASUS WLAN Card that is configured with DHCP.

Page 31: Config - Basic Tab

Network Name (SSID) Use the SSID field to configure the SSID for the ASUS WLAN Card. You can enter a new SSID or select one from the drop-down list box. SSID stands for “Service Set Identifier”, which is a string used to identify a wireless LAN.

Page 32 Chapter 3 - Reference Channel Use the Channel field to select the radio channel for ASUS WLAN Card. In an "infrastructure" network, your ASUS WLAN Card will automatically select the correct frequency channel required to communicate with an Access Point, this parameter will be fixed in "Auto"...

Page 33: Config - Encryption Tab

Chapter 3 - Reference Config - Encryption Tab Lets you configure the ASUS WLAN Card encryption settings. For data confidentiality in a wireless environment, IEEE 802.11 specifies a Wired Equivalent Privacy (WEP) algorithm to offer transmission privacy similar to wired network. The WEP uses keys to encrypt transmit data packets and decrypt received data packets.

Page 34 You then click the Apply button to create your encryption keys. After you click the Apply button, the Wireless Settings Utility uses asterisks to mask your keys. NOTE: Click the Apply or OK button to save the encryption set- tings. The keys you entered will be masked by asterisks. ASUS WLAN Card...

Page 35 “Initialization Vector” (not under user control). This together makes 64 bits (40 + 24). Some vendors refer to this level of WEP as 40 bits and others refer to this as 64 bits. ASUS WLAN products use the term 64 bits when referring to this lower level of encryption.

Page 36: Survey - Site Survey Tab

Survey - Site Survey Tab Use the Site Survey tab to view statistics on the wireless networks available to the ASUS WLAN Card. The Site Survey tab is read-only with no user configurable data fields. Use the Site Survey tab to view the following network parameters.

Page 37: About - Version Info Tab

Chapter 3 - Reference About - Version Info Tab Uses the Version Info tab to view program and ASUS WLAN Card version information. The program version information field includes the

Copyright and utility version. The version information includes the ndis version, driver name, and driver version.

Page 38: Link State

Chapter 3 - Reference Link State ASUS WLAN Card “Link State” icon appears on the left side of the ASUS WLAN Card Settings. Use the icon to view the current signal status. Excellent Link Quality (Infrastructure) Good Link Quality (Infrastructure)

Page 39: Mobile Manager Utility

Windows Start Menu your location. Starting Mobile Manager • Click the Windows Start button, select Programs | ASUS Utility | WLAN Card | Mobile Manager. • Right-click the Control Center icon on the Windows taskbar and then click Mobile Manager.

Page 40 INI File. The INI file can be placed on a floppy diskette and then imported by other computers using Mobile Manager. This can also be used as a backup feature for yourself. Exit - Close the Mobile Manager utility. ASUS WLAN Card...

Page 41 Small Icons - Displays small icons for each configuration. List - Shows the configuration names in a list. Details - The Detailed view expands this list to include information about the configurations. The information includes configuration name, type, and description. ASUS WLAN Card...

Page 42 Contents - Displays the WinHelp contents window (the one you are reading now) for online Help. About Mobile Manager - Displays the version number and copy- right information for Mobile Manager. Click on the logo to connect to ASUS’ website. ASUS WLAN Card...

Page 43: New Configuration Wizard

ASUS WLAN Card installed in your PC. • Wired Local Area Network Configuration: You must have a NIC (LAN card) (other than ASUS WLAN Card) installed in your PC. • Dialup Networking Configuration: You must have a modem in- stalled in your PC.

Page 44: Edit Configuration

Double-click one existing configuration on the Main window. Then the Edit Configuration dialog starts. The Edit Configuration dialog contains various settings, which you select by clicking the buttons at the left of the window. Each setting is described below. ASUS WLAN Card...

Page 45 Network logon options – Specify how Windows 9x clients try to logon. Select Quick logon to wait until the shared network drives is actually used to attempt the login. Select Logon and restore network connections to logon to all shared network drives when the user logs into Windows. ASUS WLAN Card...

Page 46 Access Point. SSID Using the SSID filed to configure the SSID setting for the ASUS WLAN Card. SSID stands for Service Set Identifier, which is a string used to identify a wireless LAN. You will only be able to connect with an Access Point, which has the same SSID.

Page 47 Magic Word column, then it will auto- matically generate WEP Keys. Manual Assignment - Manual type WEP keys which valid values include numbers, a~f, and A~F. Default Key Determines which entry in the default key table to use for transmitted packets. ASUS WLAN Card...

Page 48 Domain – Enter the TCP/IP domain name for your network.The full domain name consists of one or more names that are separated by dots, for example, “asus.com”. DNS Server Search Order – Specify the DNS Servers in the desired order to search for DNS information.

Page 49 Select Enable software compression checkbox to specify whether incoming or outgoing information is compressed before it is sent. This is useful to speed up the transfer of information. Compression occurs only if both computers are using compatible compression. ASUS WLAN Card...

Page 50 Use IP header compression – Specifies whether Dial-Up Networking uses IP header compression for this connection. IP header compression optimizes data transfer between

computers. Use default gateway on remote network – Specifies whether IP traf- fic is routed to the WAN connection by default. ASUS WLAN Card...

Page 51 Edit Configuration dialog box. Click Cancel button to close the Edit Configuration dialog box without saving any changes you have made. Click Close button to close the Edit Configuration dialog box and save any changes that you have made. ASUS WLAN Card...

Page 52: Troubleshooting Utility

“Configure your AP to allow Broadcast SSID to associate.” or “Change your location by a few feet and try again.” The main point here is that your ASUS WLAN Card’s SSID and WEP security settings must match that of a nearby access point.

Page 53 Chapter 3 - Reference ASUS WLAN Access Point ASUS WLAN Card Network Name (SSID) Setting Network Name (SSID) Setting Make sure that the SSID are the same. SSID Broadcasting on the Access Point is not necessary and may be disabled for increased security. You may enable SSID Broadcasting during troubleshooting if necessary.

Page 54 SSID broadcasts not detected: “Change your settings and try again.” The main point here is that your ASUS WLAN Card’s MAC address must be allowed and not prohibited from joining the access point. Clicking the last box will send you to the Wireless Settings utility.

Page 55 Chapter 3 - Reference 4. After configuration is successful, you will get a current status of: “You have a connection with an Access Point.” You can close the TroubleShooting utility and begin using your wireless network. ASUS WLAN Card...

Page 56: Windows Xp Wireless Properties

Chapter 3 - Reference Windows XP Wireless Properties 1. Double-click System icon in the Control Panel. 2. Double-click ASUS WLAN ... 3. The “General” page will show status, dura- 4. The “Wireless Networks” page will show tion, speed, and signal strength. Signal Available networks and Preferred networks.

Page 57 Windows XP Wireless Properties (Cont.) 5. The “Authentication” page allows you to add 6. The “Advanced” page allows you to set fire- security settings. Read Windows help for wall and sharing. Read Windows help for more information. more information. ASUS WLAN Card...

Page 58: Troubleshooting

Follow the procedure below to configure your ASUS WLAN Card. a. Verify that the “Network Type” is in “Infrastructure” mode. b. Verify that the “SSID” of your ASUS WLAN Card is set to the same “SSID” of an Access Point.

Page 59 Follow the procedure below to configure your ASUS WLAN Card. a. Verify that the “Network Type” is in “Ad Hoc” mode. b. Verify that the “SSID” of your ASUS WLAN Card is set to the same “SSID” of the other station (or another ASUS WLAN Card).

Page 60: Glossary

DSL Modem (Digital Subscriber Line) A DSL modem uses your existing phone lines to transmit data at high speeds. Direct-Sequence Spread Spectrum See next few pages for detailed explanation. Encryption This provides wireless data transmissions with a level of security. ASUS WLAN Card...

Page 61 Infrastructure A wireless network centered about an access point. In this environment, the access point not only provides communication with the wired network but also mediates wireless network traffic in the immediate neighborhood. ASUS WLAN Card...

Page 62 Packet A basic message unit for communication across a network. A packet usually includes routing information, data, and sometimes error detection information. (Personal Computer Memory Card International Association) The Personal Computer Memory Card International Association (PCI), develops ASUS WLAN Card...

Page 63 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. ASUS WLAN Card...

Page 64 WLAN (Wireless Local Area Network) This is a group of computers and other devices connected wirelessly in a small area. A wireless network is referred to as LAN or WLAN. ASUS WLAN Card...

Page 65: Ieee 802.11B (11Mbits/Sec)

See the Appendix to determine the center frequency used by each Channel. If operating multiple 802.11b Wireless ASUS WLAN Cards in the same vicinity, the distance between the center frequencies must be at least 25 MHz to avoid interference.

Page 66: Direct-Sequence Spread Spectrum (For 802.11B)

A low spreading ratio increases the bandwidth available to the user. The Wireless ASUS WLAN Card uses a constant chip rate of 11Mchips/s for all data rates, but uses different modulation schemes to encode more bits per chip at the higher data rates.

Page 67: Ieee 802.11A (54Mbits/Sec)

The laws of information theory tie frequency, radiated power and distance together in an inverse relationship. Thus, moving up to the 5-GHz spectrum from 2.4 GHz will lead to shorter distances, given the same radiated power and encoding scheme. ASUS WLAN Card...

Page 68: Cofdm (For 802.11A/G)

(hertz) that are encoded, the more susceptible the signal will be to interference and fading, and ultimately, the shorter the range, unless power output is increased. Note: This ASUS WLAN device only supports 802.11g and 802.11b. 802.11a is supported in other ASUS WLAN products. ASUS WLAN Card...

Page 69: Safety Information

Reprinted from the Code of Federal Regulations #47, part 15.193, 1993. Washington DC: Office of the Federal Register, National Archives and Records Administration, U.S. Government Printing Office. ASUS WLAN Card...

Page 70: Fcc Radio Frequency Interference Requirements

The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co- located or operating in conjunction with any other antenna or transmitter. ASUS WLAN Card...

Page 71: Canadian Department Of Communications

20sm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. ASUS WLAN Card...

Page 72: France Restricted Frequency Band

This requirement is likely to change over time, allowing you to use your wireless LAN card in more areas within France. Please check with ART for the latest information (www.art-telecom.fr) NOTE: Your ASUS WLAN Card transmits less than 100mW, but more than 10mW. ASUS WLAN Card...