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NOTICE TO THE USER:

*This device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

*When this unit is placed inside of your host device, you must attach a label stating the following: "This device contains FCC ID: R5Y-EZWFM-5-02" to the outside of the final product.

FCC RF EXPOSURE INFORMATION

WARNING! Read this information before using your phone



In August 1996 the Federal Communications Commission (FCC) of the United States with its action in Report and Order FCC 96-326 adopted an updated safety standard for human exposure to radio frequency electromagnetic energy emitted by FCC regulated transmitters. Those guidelines are consistent with the safety standard previously set by both U.S. and international standards bodies. The design of this phone complies with the FCC guidelines and these international standards.



Operating Requirements

The antennas 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 antennas or transmitters. Please maintain 20 cm separation distance from the antenna to meet FCC RF exposure compliance requirements.

Specifically:

In order to comply with FCC RF exposure requirements OEM integrators must install this mini PCI card in notebook PCs with the antenna mounted inside or on the LCD display 20 cm from the end user.

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Introduction

The Eazix EZWFM05-02 is a wireless LAN adapter with miniPCI interface for mobile computing. It conforms to the IEEE 802.11g protocol and is backward-compatible with any installed 802.11b WLAN access point. It operates at 2.4 GHz and provides data rates of up to 54 Mbps for today's high-bandwidth applications. The EZWFM05-02 Network Interface Card (NIC) is based on the Globespan Virata PRISM Javelin chipset.

Features:

- IEEE 802.11b/g compliant
- Mini PCI host interface
- Frequency range: 2412 MHz to 2484 MHz
- 64-, 128-bit WEP encryptions
- Data rates: 1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48 and 54 Mbps
- Modulation techniques: OFDM with BPSK, QPSK, 16QAM, 64QAM; DBPSK, DQPSK, CCK
- Driver support for Microsoft Windows 98SE/ME/NT4/2000/XP

1 Installation Procedure

- 1.1 Installing the card into the host computer
 - 1.1.1 Turn the host computer off, insert the WLAN card into the mini PCI slot, turn on the computer and start the Windows operating system (Windows XP preferred).
- 1.2 Installing the software drivers
 - 1.2.1 When Windows detects new hardware and asks for drivers, point to the directory where the Globespan Virata (GSV) driver is located (*SingleSource_Windows_Driver_Package_2.1.15.0*) and look for the appropriate driver.
 - 1.2.2 Run *setup.exe* within the *PRISM_Basic_Options_Package_1.0.9.83* folder to install the utility and settings window.
 - 1.2.3 Restart Windows.

2 Using the Settings window

2.1 The device should appear in the Device Manager list (Figure 2.1) when the card is inserted

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Figure 2.1 Device Manager

The GSV WLAN icon will appear in the system tray at the bottom right of the screen (Figure 2.2) 2.2



Figure 2.2 GSV icon

Notes:

Title:

The device name in the Device Manager list may not exactly appear as in Figure 2.1. The number after PRISM 802.11a/g Adapter (3886) # depends on the association of the driver with the device.

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The GSV icon may not immediately appear as in Figure 2.2. It may show up as colored red or with a red X over it, if the device and software are not yet properly configured.

Reminders:

The Network Connection icon will appear in the system tray at the bottom right of the screen if the "Show icon in notification area when connected" option is checked in the General tab of the Wireless Network Connection Properties window (Figure 2.3)

(Start -> Control Panel -> Network Connections -> Wireless Network Connection -> Properties -> General tab)

	🕹 Wireless Network Connection 17 Properties 🛛 🔃 🔀
	General Wireless Networks Authentication Advanced
	Connect using:
	PRISM 802.11a/g Adapter (3886) #6
	Configure
	This connection uses the following items:
	 Client for Microsoft Networks File and Printer Sharing for Microsoft Networks QoS Packet Scheduler Thternet Protocol (TCP/IP)
	Install Uninstall Properties
	Description
()	Allows your computer to access resources on a Microsoft network.
	Show icon in notification area when connected
	OK Cancel

Figure 2.3

The complete tabs of the GSV WLAN settings window will be shown if the "Use Windows to configure my wireless network settings" option is unchecked in the Wireless Networks tab of the Wireless Network Connection Properties window (Figure 2.4)

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(Network Connection icon -> Properties -> Wireless Networks tab)

	🕹 Wireless Network Connection 17 Properties 👘 🛜 🔀	
	General Wireless Networks Authentication Advanced	
	Use Windows to configure my wireless network settings	V
	Available networks:	
	To connect to an available network, click Configure.	Ψ.
	Peazix Refresh	
	Preferred networks: Automatically connect to available networks in the order listed	
	below:	
	Move down	
	Add Remove Properties	
	Learn about <u>setting up wireless network</u> <u>configuration.</u> Advanced	
	OK Cancel	
()	Figure 2.4	

2.3 Double-click the GSV icon to open the WLAN settings window (Figure 2.5)

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ïtle:	EZWFM05-02 User Manual	Page #: 6 of 18
	OK Cancel Apply Status Configuration WEP Security Bands Domain About State: Associated - 00:0C:41:14:02:EB GlobespanWirata Current Tx Rate: 36 Mbits/sec Mbits/sec Current Channel: 1 Disable Radio Rescan Throughput (bytes/sec): Tx: 0 Rx: 0 Link Quality: Good (60%) Image: Concel Apply	

2.4 Click on the Status tab to display the connection status: State, Current Tx Rate, Current Channel, Tx and Rx Throughput, Link Quality and Signal Strength (Figure 2.5)

- 2.5 Click on the Configuration tab and place the required settings (Figure 2.6)
 - 2.5.1 Type the Network Name

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Figure 2.5 WLAN Settings window



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- 2.5.2 Select the Network Type: Access Point or Peer-to-Peer
- 2.5.3 Save the Profile for later use

2.5.3	Save the	Profile for later	use	
	1	eazix - PRISM V	Vireless Settings	×
		Status Configur	ation WEP Security Bands Domain About	
		Profile:	eazix GlobespanVira	ta
			Save As Delete PRISM	
		Network Name:		
		Network Type:	Access Point	
			Peer-to-Peer	
			Defaul	is
			OK Cancel Ag	ylqc
			Figure 2.6 Configuration tab	

Click on the WEP tab and fill out with the necessary settings (Figure 2.7) 2.6

2.6.1 Select the required Encryption (WEP security) type: Disabled, 64 bit, 128 bit

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- 2.6.2 Create encryption Keys, if needed
- 2.6.3 Select which WEP Key to use when trying to connect

2.6.3 Select w	which WEP Key to use when trying to connect	
	eazix - PRISM Wireless Settings	\sim
	Status Configuration WEP Security Bands Domain About Encryption (WEP security): 64 bit Image: Configuration GlobespanVirata O Create Keys Manually: 64 bit Image: Configuration Image: Configuration O Alphanumeric: 5 characters Image: Configuration Image: Configuration O Hexadecimal: 10 digits (0·9, A·F) Image: Configuration Image: Configuration Key 1: Image: Configuration Image: Configuration Image: Configuration Key 2: Image: Configuration Image: Configuration Image: Configuration Key 3: Image: Configuration Image: Configuration Image: Configuration Key 4: Image: Configuration Image: Configuration Image: Configuration C Create Keys with Passphrase Pagsphrase: Image: Configuration Image: Configuration	
-	OK Cancel <u>Apply</u>	
	Figure 2.7 WEP tab	•

- Click on the Security tab (Figure 2.8) 2.7
 - 2.7.1 Select the Authentication Type



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- 2.7.2 Select the Authentication Mode: Open, Shared, AutoSwitch
- 2.7.3 Tick Allow Mixed Cells, as needed



2.8 Click on the Bands tab (Figure 2.9)

2.8.1 Select the Band: Any, 2.4 GHz only, 5 GHz only

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- 2.8.2 Select the Band Preference: Any, 2.4 GHz over 5, 5 GHz over 2.4
- 2.8.3 Select the IBSS Channel: Channels 1-11 (2.4 GHz), 36-165 (5 GHz)

eazix - PRISM Wireless Settings
Status Configuration WEP Security Bands Domain About Band Selection • Auto 2.4 GHz Only 5 GHz Only Band Preference • Any 2.4 GHz over 5 • 5 GHz over 2.4 IBSS Channel Selection CH 1 (2.412 GHz) Defaults
OK Cancel <u>A</u> pply
Figure 2.9 Bands tab

2.9 Click on the Domain tab (Figure 2.10)

2.9.1 Select the 802.11d support: None, Strict, Flexible

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2.9.2 Choose the Countries/Domains

	eazix - PRISM Win	eless Settings			
	Status Configuration 802.11d Support - © <u>N</u> one Countries/Domain Unspecified	n WEP Security B O <u>S</u> trict O <u>E</u> le s	ands Domain Globe	About spanVirata	
				<u>D</u> efaults	
		OK	Cancel	Apply	
		Figure 2.10 Dom	ain tab		_
6					

2.10 Click on the About tab to display the details of the Network Driver, Configuration Utility and NIC Firmware (Figure 2.11)

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	eazix - PRISM Wireless Settings	1
	Status Configuration WEP Security Bands Domain About	
	(CD) GlobespanVirata, Inc. GlobespanVirata	
	Copyright © 2003 GlobespanVirata, Inc.	· ·
	Version: 2.01.15.0000 Date: Dec 29 2003	
	Configuration Utility Version: 1.00.06 Date: Nov 20 2003	
	NIC Firmware Version: 2.04.03.06 Address: 00.30.B4.01.36.DD	
	OK Cancel <u>A</u> pply]
4	Figure 2.11 About tab	-

3 Connecting the WLAN Card to the Access Point

3.1 GSV Utility

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3.1.1 Click on the Network Connection icon in the system tray at the bottom right of the screen (Figure 3.1)



Figure 3.1 Network Connection icon

- 3.1.2 Click on the Properties button
- 3.1.3 Click on the Wireless Networks tab
- 3.1.4 Uncheck the "Use Windows to configure my wireless network settings" option (Figure 3.2)
- 3.1.5 Click OK
- 3.1.6 Double-click on the GSV icon in the system tray
- 3.1.7 Click on the Configuration tab
- 3.1.8 Fill out the Network Name
- 3.1.9 Select Access Point on the Network Type
- 3.1.10 Click on the WEP tab if the network requires authentication. Select the Encryption type. Type in the WEP key(s). Choose which key to use.
- 3.1.11 Click Apply or OK

Notes: The GSV icon is colored green if there is a proper wireless connection between the card and the Access Point.

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If the GSV icon is colored green with a red X over it (Figure 3.3), then a connection exists but there is a problem in authentication (wrong WEP key, if it is required).



If the GSV icon is colored red (Figure 3.4), then a link cannot be established between the WLAN card and the Access Point.



3.2 Windows Utility

- 3.2.1 Click on the Network Connection icon in the system tray
- 3.2.2 Click on the Properties button.
- 3.2.3 Click on the the Wireless Networks tab
- 3.2.4 Check the "Use Windows to configure my wireless network settings" option
- 3.2.5 Click on the Advanced button.
- 3.2.6 Choose the "Any available network (access point preferred)" or the "Access Point (infrastructure) networks only" option (Figure 3.5).
- 3.2.7 Press Close

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	Advanced Networks to access Image: Any available network (access point preferred) Access point (infrastructure) networks only Image: Access point (infrastructure) networks only Image: Computer-to-computer (ad hoc) networks only Image: Automatically connect to non-preferred networks Image: Close	

Figure 3.5 Advanced options

- 3.2.8 Add an Access Point to the Preferred networks. Select from the Available Networks list
- 3.2.9 Fill out the Network Name (SSID) and check the appropriate options (Figure 3.6). Type the Network Key, if required
- 3.2.10 Click OK
- 3.2.11 Add as many Access Points as applicable

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	Wireless Network Properties	? 🗙	
	Network name (SSID): eazix Wireless network key (WEP) This network requires a key for the following: Data encryption (WEP enabled) Network Authentication (Shared mode) Network key: Key format: ASCII characters Key length: 104 bits (13 characters) Key index (advanced): 0 The key is provided for me automatically This is a computer-to-computer (ad hoc) network access points are not used OK Ca	; wireless	

- Figure 3.6 Wireless Network Properties
- 3.2.12 Move the items in the Preferred Networks list up or down. Automatic connection will be made in top-to-bottom order
- 3.2.13 Click OK
- 3.2.14 Right-click on the Network Connection icon in the system tray. Select the "View Available Networks" option
- 3.2.15 Choose an Access Point from the Available Networks list (Figure 3.7)
- 3.2.16 Type the Network Key, if necessary
- 3.2.17 Press Connect

Note: Click on the Advanced button to go to the Wireless Networks tab directly.

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	Connect to Wireless Network The following network(s) are available. To access a network it from the list, and then click Connect. Available networks: Image: I	ork, select	
	Advanced Connect C	Cancel	

Figure 3.7 List of available networks

Notes:

The Network Connection icon is blinking (flashing, Figure 3.8) if there is a proper wireless connection between the card and the Access Point.



Figure 3.8

If the Network Connection icon is not blinking (Figure 3.9), then a connection exists but there is a problem in authentication (wrong WEP key, if it is required).



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If the Network Connection icon has a red X beside it (Figure 3.10), then a link cannot be established between the WLAN card and the Access Point.



Figure 3.10

4 **Technical Specifications**

Radio Technology	IEEE 802.11g Turbo (DSSS and OFDM)
Operating Frequency	2412 – 2484 MHz (under ISM band)
Modulation Schemes	DSSS: DQPSK, DBPSK, CCK
	OFDM: 16QAM, 64QAM
RF Channel Availability	United States: 11 channels (2412 MHz to 2462 MHz)
	Europe: 13 channels (2412 MHz to 2472 MHz)
	Japan: 13 channels (2412 MHz to 2472 MHz); channel 14 (2484 MHz)
	only available in DSSS mode (11 Mbps max)
Data Rate	OFDM: 54, 48, 36, 24, 18, 12, 9 and 6 Mbps
	CCK: 11 and 5.5 Mbps
	QPSK: 2 Mbps
	BPSK: 1 Mbps
Media Access Protocol	CSMA/CA with ACK
Transmitter RF Output Power	< 20.0 dBm EIRP (typical) including antenna gain
Operating Voltage	3.3 Vdc (mini PCI slot of host computer)
Interface	PC Card mini PCI
Device Driver Support	Microsoft Windows 98SE/ME/NT4/2000/XP

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