

Document #:

R.EZWFDI01.HW13.01

Page #:

Title:

EZWFDI01 User Manual

1 of 18

Introduction

The EAZIX EZWFDI01 is a wireless LAN adapter with PCI interface for Desktop computers. 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 EZWFDI01 Network Interface Card (NIC) is based on the Globespan Virata PRISM Lance chipset.

Features:

- IEEE 802.11b/g compliant
- 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 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

COMPANY CONFIDENTIAL INFORMATION



Document #:

Page #:

Title:

EZWFDI01 User Manual

2 of 18

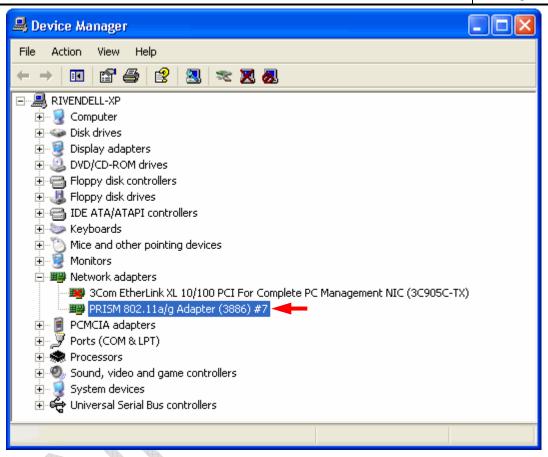


Figure 2.1 Device Manager

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



Figure 2.2 GSV icon

Notes:

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.

COMPANY CONFIDENTIAL INFORMATION



Document #:

R.EZWFDI01.HW13.01

Page #:

Title:

EZWFDI01 User Manual

3 of 18

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 Internet Protocol (TCP/IP)
Install Uninstall Properties
Description Allows your computer to access resources on a Microsoft network.
Sow 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)

COMPANY CONFIDENTIAL INFORMATION



Document #:

R.EZWFDI01.HW13.01

Page #:

Title:

EZWFDI01 User Manual

4 of 18

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

上 Wireless Network Connection 17 Properties 👘 🛜 🔀	
General Wireless Networks Authentication Advanced	
Use Windows to configure my wireless network settings	
Available networks:	
To connect to an available network, click Configure.	Y
Peazix Refresh	
Preferred networks: Automatically connect to available networks in the order listed	
below: Move up	
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:	EZWFDI01 User Manual	Page #: 5 of 18
	OK Cancel Active Configuration WEP Security Bands Domain About Status Configuration WEP Security Bands Domain About State: Associated - 00:0C:41:14:02:EB GlobespanVirata Current Tx Rate: 36 Mbits/sec Moits/sec Current Channel: 1 Disable Radio Rescan Throughput (bytes/sec): Tx: 0 Rx: 0 Link Quality: Good (60%) Image: Cancel App	

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)

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Figure 2.5 WLAN Settings window



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Document #:

R.EZWFDI01.HW13.01

Page #:

EZWFDI01 User Manual

6 of 18

- 2.5 Click on the Configuration tab and place the required settings (Figure 2.6)
 - 2.5.1 Type the Network Name
 - 2.5.2 Select the Network Type: Access Point or Peer-to-Peer
 - 2.5.3 Save the Profile for later use

	Status Configu	ration WEP Security Bands Domain About
	Profile:	eazix GlobespanVirata
		Save As Delete
	Network Name:	eazix 🔹
	Network Type:	Access Point
		Access Point Peer-to-Peer
		Defaults
		OK Cancel Apply
N		
		Figure 2.6 Configuration tab

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R.EZWFDI01.HW13.01

Page #:

EZWFDI01 User Manual

- 2.6 Click on the WEP tab and fill out with the necessary settings (Figure 2.7)
 - 2.6.1 Select the required Encryption (WEP security) type: Disabled, 64 bit, 128 bit
 - 2.6.2 Create encryption Keys, if needed
 - 2.6.3 Select which WEP Key to use when trying to connect

eazix - PRISM Wireless Settings
Status Configuration WEP Security Bands Domain About
Encryption (WEP security): 64 bit GlobespanVirata
C Alphanumeric: 5 characters ™
Hexadecimal: 10 digits (0-9, A-F) Key 1:
Key <u>2</u> :
Key <u>3</u> :
Key <u>4</u> :
C Create Keys with <u>Passphrase</u> Pa <u>s</u> sphrase:
OK Cancel <u>Apply</u>
Figure 2.7 WEP tab

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Document #:

R.EZWFDI01.HW13.01

Page #:

EZWFDI01 User Manual

8 of 18

- 2.7 Click on the Security tab (Figure 2.8)
 - 2.7.1 Select the Authentication Type
 - 2.7.2 Select the Authentication Mode: Open, Shared, AutoSwitch
 - 2.7.3 Tick Allow Mixed Cells, as needed

ngs 🛛 🔀
Security Bands Domain About
 GlobespanVirata
PRISM
IM
C Allow Mixed Cells
Authentication Mode
Open
Open
Shared AutoSwitch
OK Cancel <u>Apply</u>
2.8 Security tab

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Document #:

R.EZWFDI01.HW13.01

Page #:

EZWFDI01 User Manual

9 of 18

- 2.8 Click on the Bands tab (Figure 2.9)
 - 2.8.1 Select the Band: Any, 2.4 GHz only, 5 GHz only
 - 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)

e	azix - PRISM Wireless Settings 🛛 🔀
	Status Configuration WEP Security Bands Domain About Band Selection GlobespanVirata Image: Auto 2.4 GHz Only 5 GHz Only
	Band Preference • Any C 2.4 GHz over 5 C 5 GHz over 2.4
	□BSS Channel Selection CH 1 (2.412 GHz)
	<u>D</u> efaults
4	
	OK Cancel <u>Apply</u>
\sim	Figure 2.9 Bands tab

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Document #:

R.EZWFDI01.HW13.01

Page #:

EZWFDI01 User Manual

10 of 18

- 2.9 Click on the Domain tab (Figure 2.10)
 - 2.9.1 Select the 802.11d support: None, Strict, Flexible
 - 2.9.2 Choose the Countries/Domains

2.0.1		
2.9.2	Choose the Countries/Domains	
	eazix - PRISM Wireless Settings	Þ
	Status Configuration WEP Security Bands Domain About 802.11d Support Strict Elexible ClobespanVirata Countries/Domains Inspecified Image: Strict Elexible Defaults	
	OK Cancel Apply	
(Figure 2.10 Domain tab	

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Document #:

R.EZWFDI01.HW13.01

金

Page #: 11 of 18

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

EZWFDI01 User Manual

Configuration WEP Security Bands Domain About Status Configuration WEP Security Bands Domain About C(1) GlobespanVirata, Inc. PRISM Wireless LAN GlobespanVirata Copyright © 2003 GlobespanVirata, Inc. Free Security Network Driver 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 DK Cancel Apply					
GlobespanVirata, Inc. GlobespanVirata PRISM Wireless LAN Exercise 1 Copyright © 2003 GlobespanVirata, Inc. Exercise 1 Network Driver 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	eazix - PRISM Wireless Se	ttings			\mathbf{X}
 PRISM Wireless LAN Copyright © 2003 GlobespanVirata, Inc. Network Driver 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 	Status Configuration WEP	Security Bands	Domain A	bout	
Copyright © 2003 GlobespanVirata, Inc. Network Driver 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			Globesp	anVirata	
Network Driver TM 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			00	ICM	
Version: 2.01.15.0000 Date: Dec 29 2003 Configuration Utility		Virata, Inc.	T T T	SIV	м
Version: 1.00.06 Date: Nov 20 2003 NIC Firmware Version: 2.04.03.06 Address: 00.30.84.01.36.DD		Date:	Dec 29 200)3	
NIC Firmware Version: 2.04.03.06 Address: 00.30.B4.01.36.DD					
Version: 2.04.03.06 Address: 00.30.B4.01.36.DD		Date:	Nov 20 200)3	
		Address:	00.30.84.0	1.36.DD	
OK Cancel Apply					·
OK Cancel Apply					
OK Cancel Apply					
OK Cancel <u>A</u> pply					
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COMPANY CONFIDENTIAL INFORMATION



Document #:

R.EZWFDI01.HW13.01

Page #:

Title:

EZWFDI01 User Manual

12 of 18

3 Connecting the WLAN Card to the Access Point

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

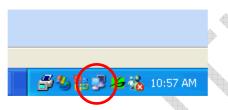


Figure 3.1 Network Connection icon

- 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

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Document #:

R.EZWFDI01.HW13.01

Page #:

EZWFDI01 User Manual

13 of 18

Notes:

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

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

COMPANY CONFIDENTIAL INFORMATION

	Eazix, Inc. Init 301 Plaz@ B, 6530 Northgate Avenue, Filinvest Corporate City, Iabang, Muntinlupa City, Philippines 1700	Document #: R.EZWFDI01.HW13.0	1
Title:	EZWFDI01 User Manual	Page #: 14 of 18	3
	Advanced Networks to access Image: Any available network (access point preferred) Image: 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

COMPANY CONFIDENTIAL INFORMATION

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Title: EZWFDI01 User Manual		Page #: 15 of 18
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: I Key format: ASCII characters Key length: 104 bits (13 characters) Key index (advanced): I The key is provided for me automatically This is a computer-to-computer (ad hoc) network; wir access points are not used	ireless	

- 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.

COMPANY CONFIDENTIAL INFORMATION

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Title:	EZWFDI01 User Manual		Page #: 16 of 18
	Connect to Wireless Network	? 🔀	
	The following network(s) are available. To access a netwit from the list, and then click Connect. Available networks:	o access	

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).



COMPANY CONFIDENTIAL INFORMATION



Document #:

R.EZWFDI01.HW13.01

Page #:

Title:

EZWFDI01 User Manual

17 of 18

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
Antenna Type	1 dBi rated gain
Operating Voltage	3.3 Vdc (PCI slot of host computer)
Interface	PCI-32
Device Driver Support	Microsoft Windows 98SE/ME/NT4/2000/XP

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Title:	EZWFDI01 User Manual	Page #: 18 of 18	

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.

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.

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