

Azure Wave AW-GM100 Wireless LAN module

User Guide



Release History:

0.96 2005/8/29 First Release

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Section 1 Getting Start

1.1 Overview

This document describes how to install and use the AzureWave GM100 Mini-PCI adapter. So does the software command line interface to test the installed adapter. In section 1, we introduce you the basic instruction manual for GM100. In section 2, we represent the software installation for GM100. In section 3, we introduce the command line interface as test reference.

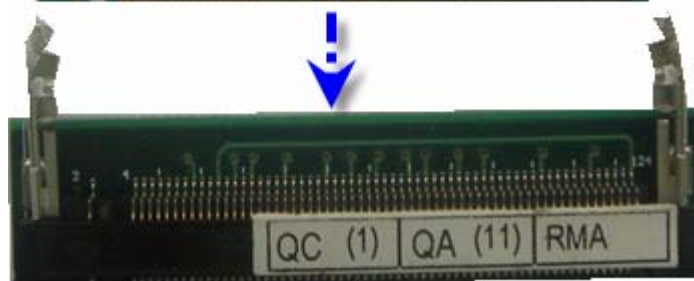
1.2 Equipment

1.2.1 Standard Mini-PCI Adapter

AzureWave GM100 is a standard Mini-PCI interface adapter that designs in a wireless LAN module for wireless network connection.

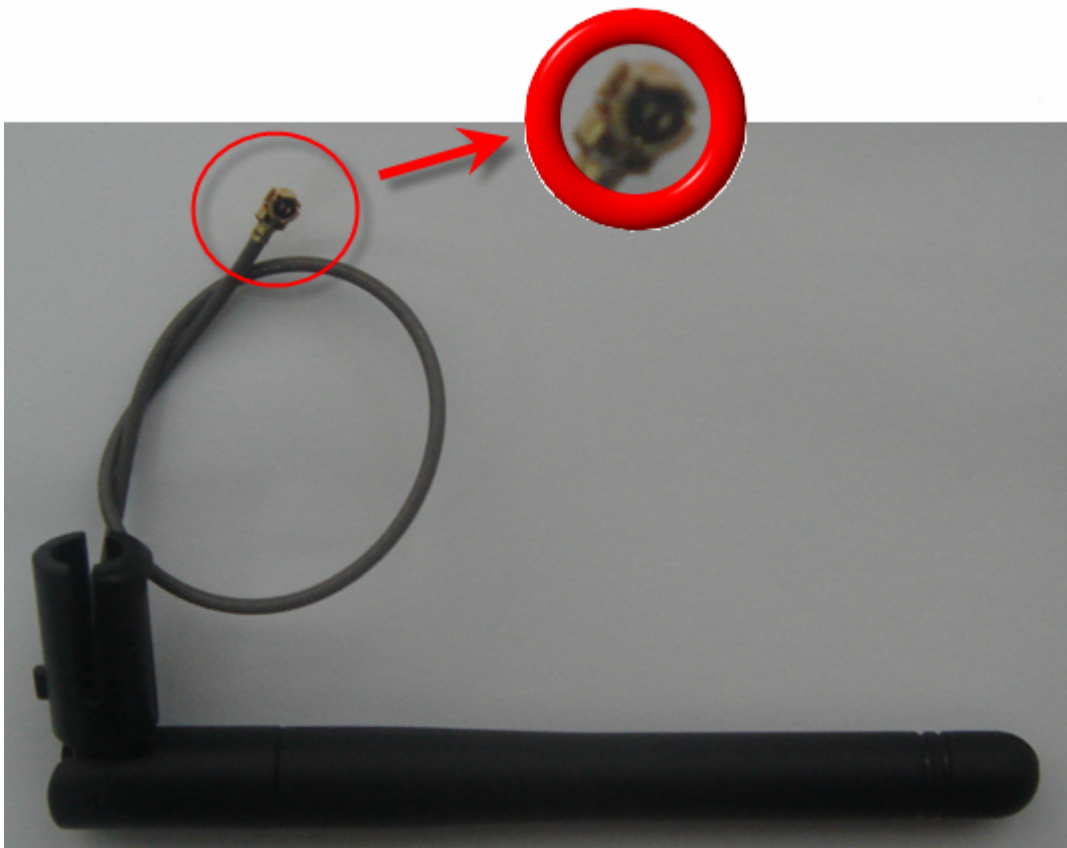
The system would install GM100 should provide Mini-PCI interface to be adapter connection.

The overall hardware setup of GM100 is shown in right figure. It shows the installation of standard Mini-PCI adapter.



1.2.2 Antenna

There are total two antenna connectors on the GM100. The minimal installation is one antenna. Two antenna installation is applied to enhance data receive. The antenna should satisfy the connector on the adapter. Please reference the following figure.



1.3 System Requirement

The only requirement of system is to provide Mini-PCI slot and support PCI device. AzureWave GM100 represents as a standard PCI device in system platform that satisfies Plug-And-Play specification. Standard PCI device access could detect GM100 without problem. Then you could follow the software installation, descript in later sections.

1.4 Specification Summary

Host system connections

Interface	<ul style="list-style-type: none"> • Mini-PCI
Date transfer rate	<ul style="list-style-type: none"> • 33Mhz with 64-bit data length

Wireless LAN (WLAN) environment connections

WLAN Interface	<ul style="list-style-type: none"> • Multimode features • Fully complies with IEEE 802.11 b/g specifications
WLAN transfer rate	<ul style="list-style-type: none"> • IEEE 802.11 data rates of 1 and 2 Mbps

	<ul style="list-style-type: none"> • IEEE 802.11b data rates of 5.5 and 11 Mbps • IEEE 802.11g data rates of 6, 9, 12, 18, 24, 36, 48, and 54 Mbps for multimedia content transmission • IEEE 802.11a data rates of 6, 9, 12, 18, 24, 36, 48, and 54 Mbps for multimedia content transmission • Proprietary data rate of 22 Mbps (802.11b)
WLAN Frequency band	<ul style="list-style-type: none"> • 2.4 ~ 2.497 GHz ((Industrial Scientific Medical Band)
Operation Channel	<ul style="list-style-type: none"> • Channel 1 ~ 11 for Tiawan ,USA, CANADA
Compatibility	<ul style="list-style-type: none"> • Fully compatible to IEEE 802.11 b/g devices
Security	<ul style="list-style-type: none"> • WEP 64- and 128-bit encryption • WPA (Wi-Fi Protected Access) • AES hardware implementation as part of 802.11i security standard
Antenna	<p>At most two antennas</p> <ul style="list-style-type: none"> • Supports Ad Hoc and Infrastructure modes • Supports Contention Free (CF)-Poll and CF-ACK for operation under Point Coordination Function (PCF) • Supports Request to Send (RTS)/Clear to Send (CTS) for operation under Distributed Coordination Function (DCF) • Hardware filtering of 64 multicast and 96 unicast addresses and additional software options • Support for 802.11e Quality of Service (QoS), On-chip Tx and Rx FIFOs for maximum throughput • Supports Open System and Shared Key Authentication services • Supports long and short preamble

Section 2 Windows Driver Installation

The supported Windows® platforms are Windows 98®, Windows Millennium®, Windows 2000®, Windows XP® and Windows 2003®.

In the software package, there are two folders, Utils and Inf, each represents specifically for utility and windows installation file. Under Utils folder, the Mrv8000x.exe leads you to install AzureWave GM100 utility step-by-step. In INF folder, we place the necessary file for manually device driver installation on each Windows® platform at specific folder.

2.1 Utility

Under Utils folder, you have to double click Mrv8000x.exe to start the utility installation. In the following sections, we introduce you the step to finish the easy installation.

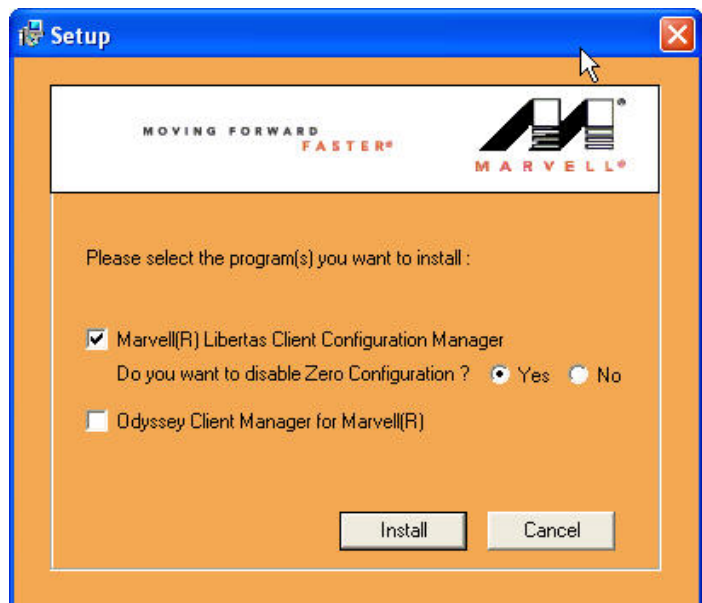
2.1.1 Production Options

Marvell Liberates Client Configuration Manger

Select to install Marvel Liberates Client Configuration Manager in later steps. You could choose to apply Windows Zero Configuration for wireless LAN network that Windows XP and above version platform provide the new feature.

Odyssey Client Manager for Marvel

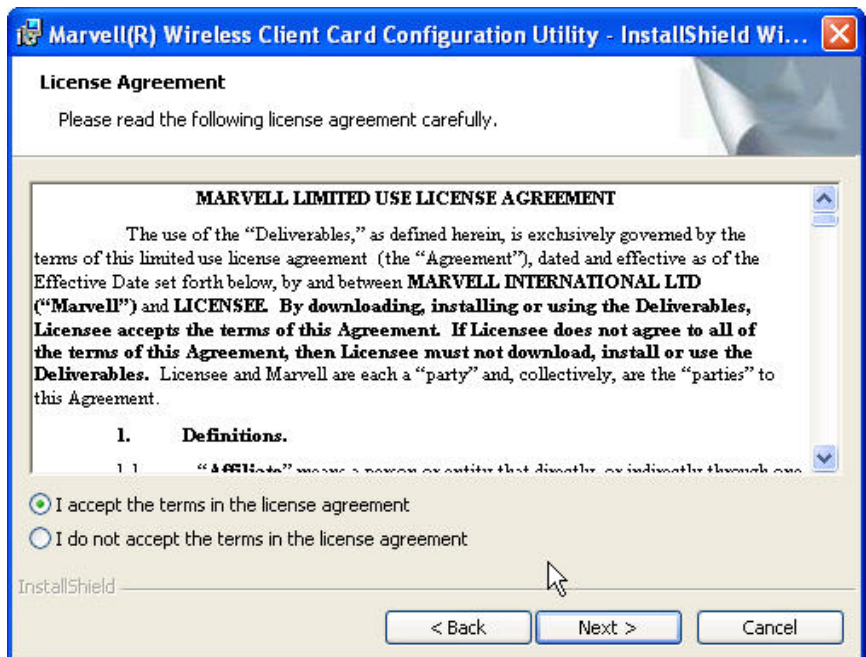
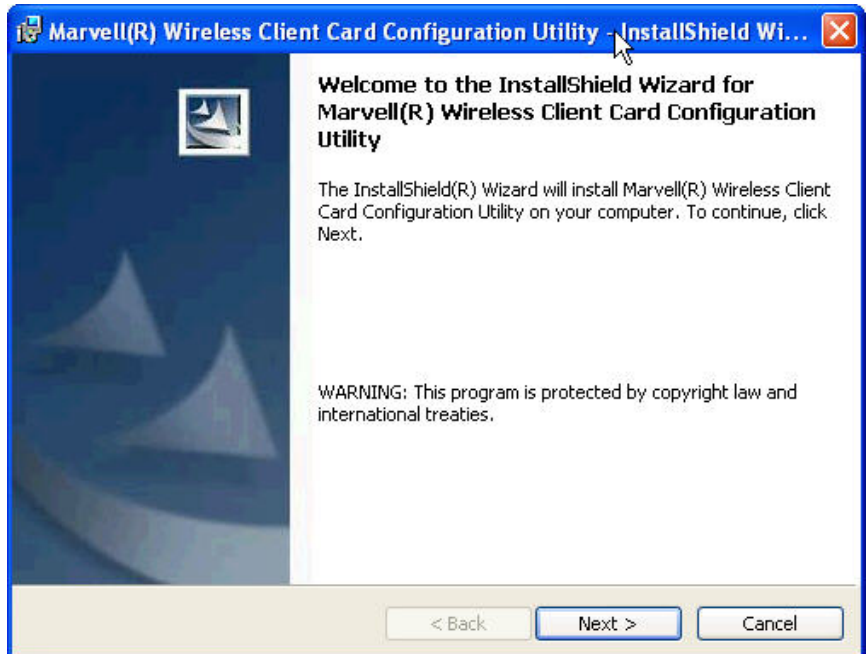
Select to install Odyssey Client Manager in later steps. Odyssey Client Manager is a network connection management utility to help you setup network configuration.



Once you made decision of desired utilities, press "Install" button to activate following steps.

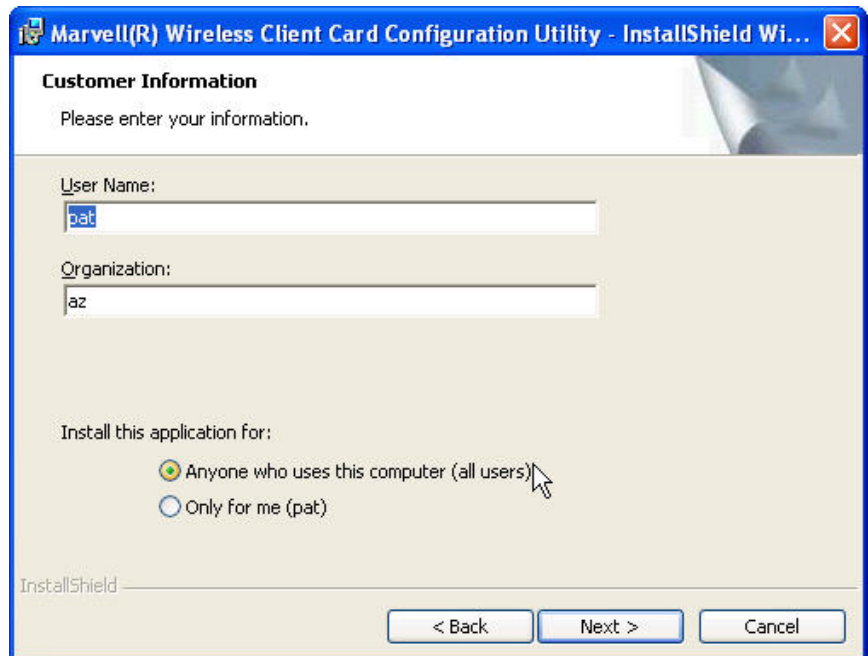
2.1.2 Welcome

The next step is the welcome scene and then the license dialogs. Only if you agree the license then you could go to next step. Please read the contents of license agreement before going to next step.



2.1.3 Customer Information

Enter your information to the two edit-boxes by following the instruction above them. You could decide to open the use right of configuration utility to either everyone whom could login this system or the current user for system management purpose.

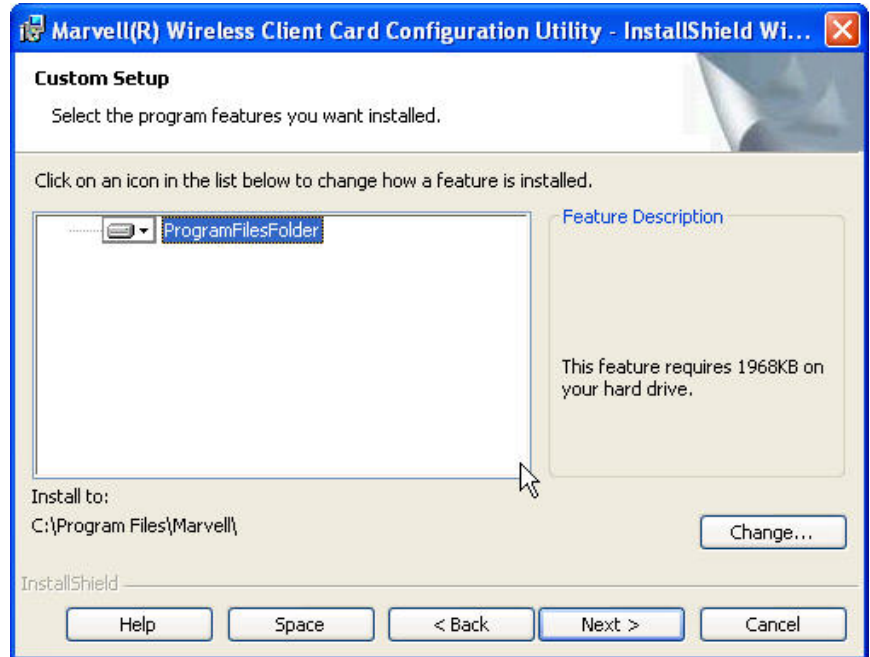


2.1.4 Setup Type

In this step, you could select either "Complete" or "Custom" as the installation type. The complete type will directly lead you to section 2.1.5. In this type, program location is fixed to install on the "program files\marvell" folder of boot disk. Instead, you could choose custom type to decide the location you desire to install the program.

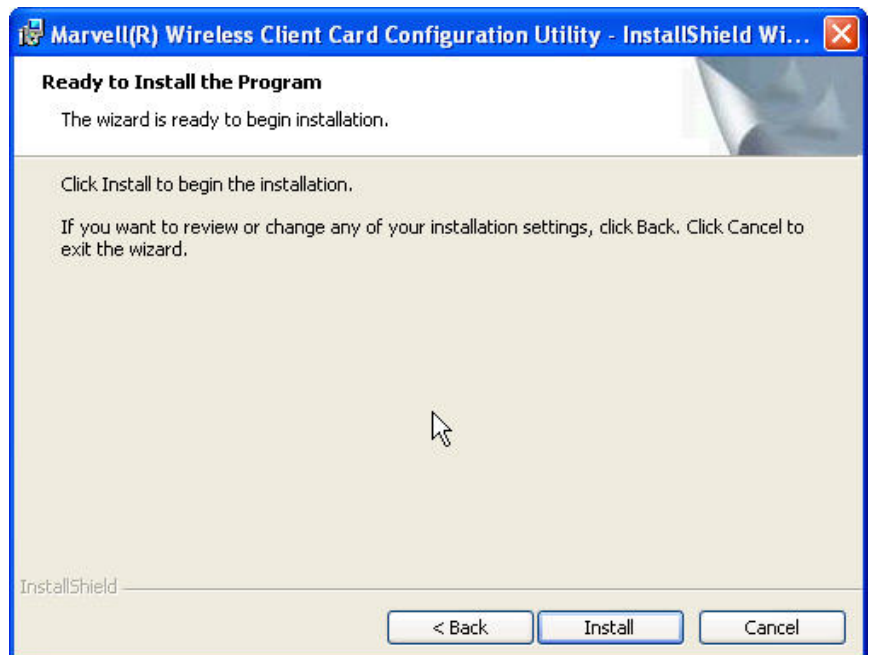


In this step, you could decide the location to install the program. Press “Change” button to browse the folder and location you prefer.



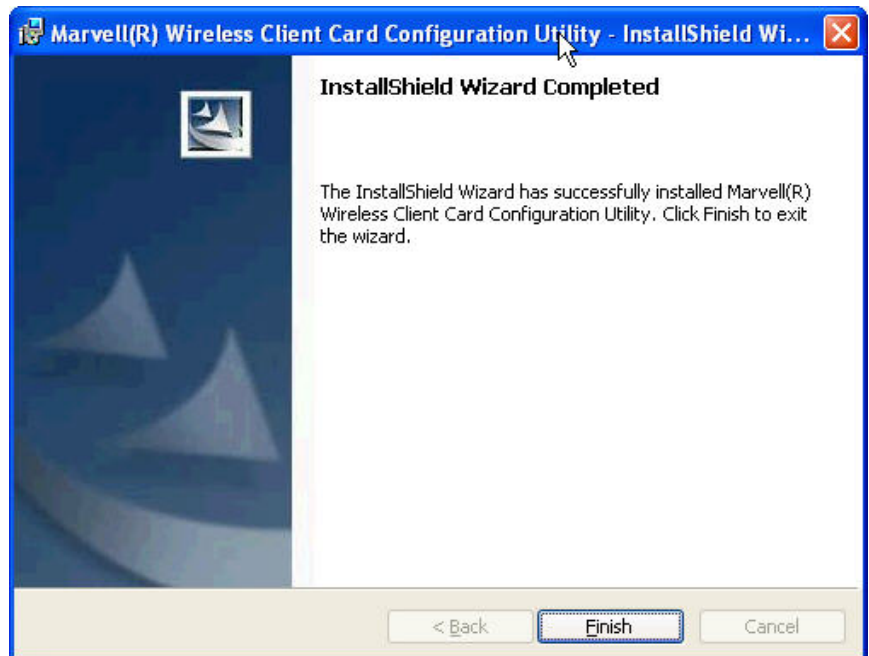
2.1.5 Read Install

This step is the last chance you could roll back to previous step before starting installation. As you decide to install configuration utility, press “Install” button to start program installation.



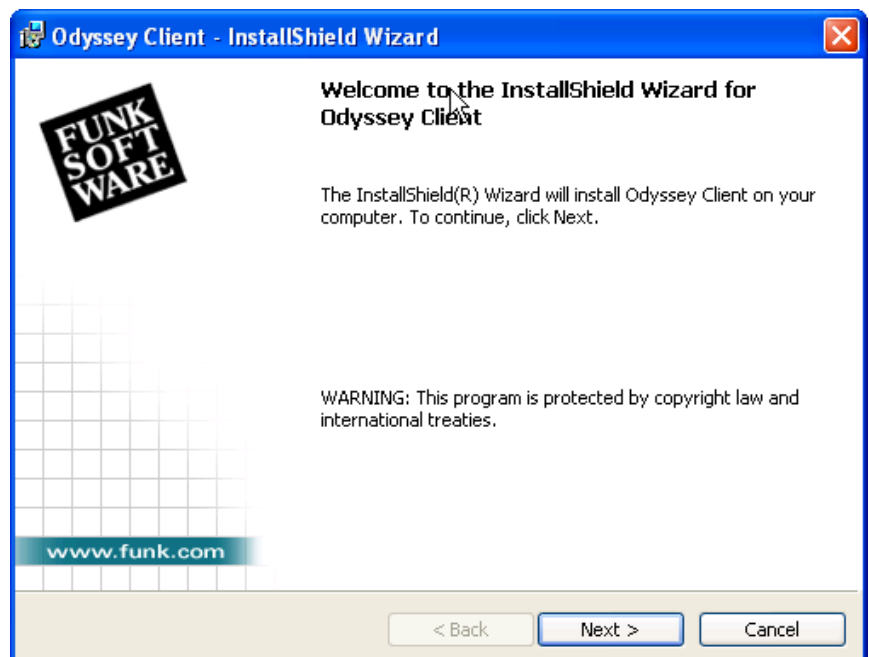
2.1.6 Finish

After a while with progress dialog running, shows up the latest step, finish dialog, to inform you all the program had been installed completely. Press **“Finish”** button to close setup program.



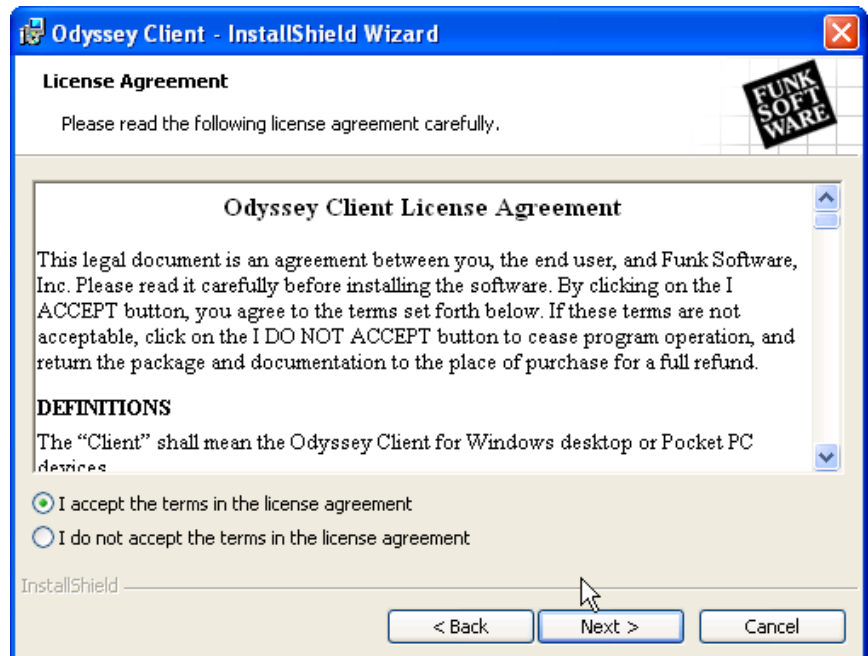
2.1.7 Odyssey ~ Welcome

This step starts the installation of Odyssey client management utility.



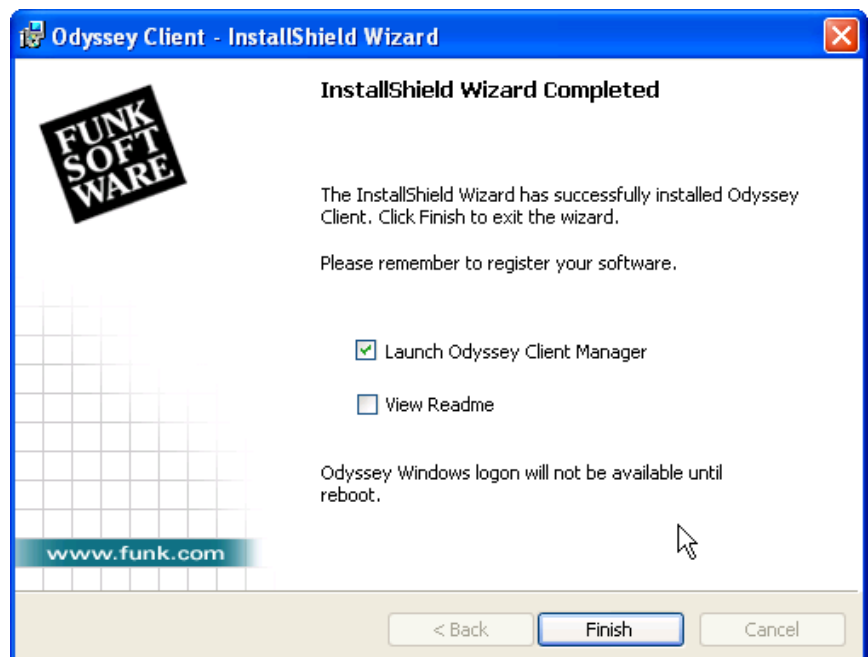
2.1.8 Odyssey ~ License Agreement

You should agree the license agreement before going to next step.



2.1.9 Odyssey ~ Finish

When you see this step, all Odyssey components are installed. Press "Finish" button to close setup.





2.2 Device Driver

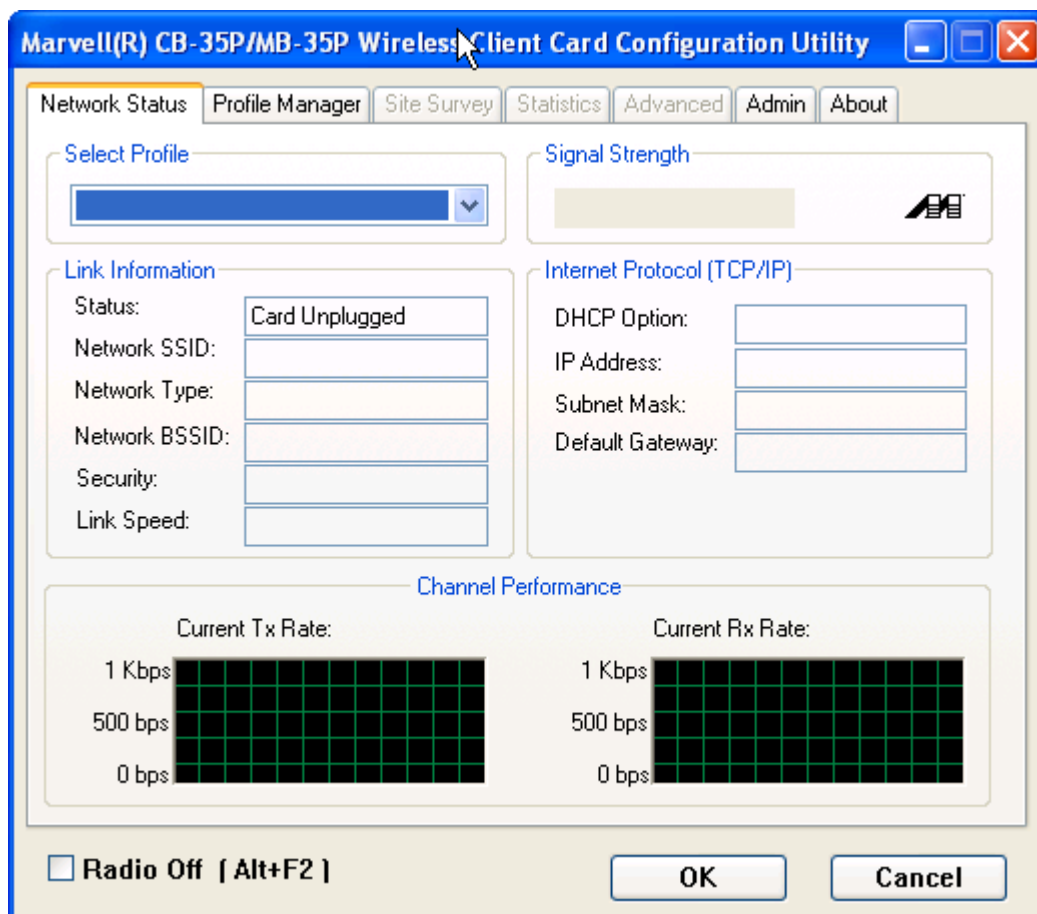
Installation of the driver allows access to the hardware memory space. The following files are required:

- MWLAN.inf
- windrvr.sys

To install the driver, boot-up with a Mini PCI installed. Follow the prompts of the Wizard and point to the MLAN.inf file for installation.

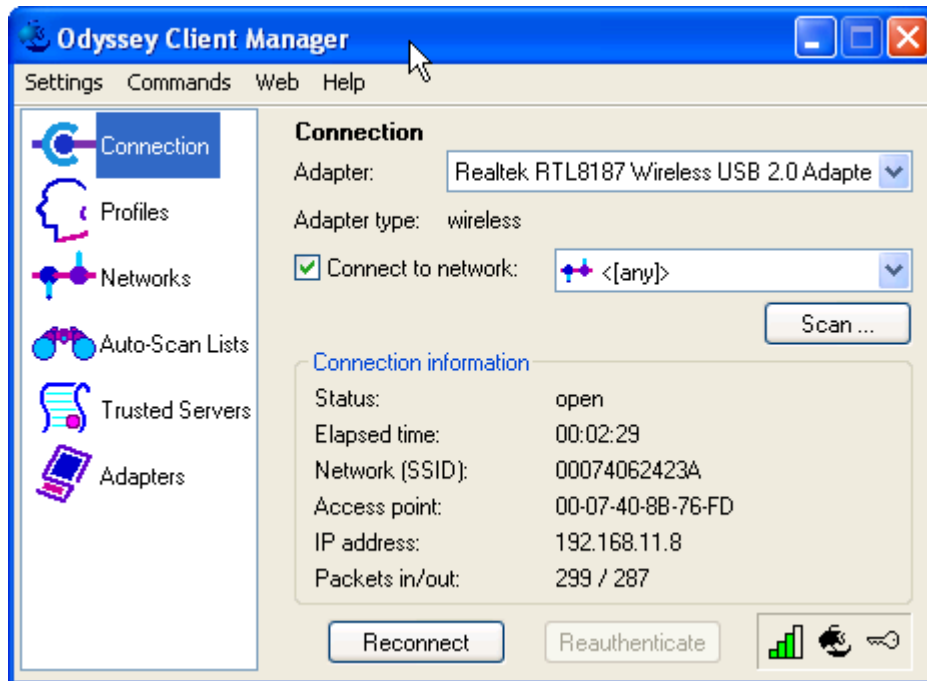
Section 3 Network Management Software

3.1 Marvell Client Configuration



You could get device status and network throughput analysis of Marvell 35P from this utility as above figure.

3.2 Odyssey Client Management



Odyssey provides easy use user interface to help you configure network connection. You could select the candidate wireless LAN adapter to build up desired configuration.

- **Connection**

You could setup network connections in this page.

- **Profiles**

You could create and manage profiles of access point that this station would become.

- **Networks**

You could create and manage profiles of connected access point.

- **Auto-Scan Lists**

This page periodically scans the wireless node inside the validate range.

- **Trusted Servers**

You could add and manage trusted network nodes

- **Adapters**



You could review network adapter on this system.

Appendix A: Release History

0.96	2005/8/29	First Release
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Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

IMPORTANT NOTE:

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

IEEE 802.11b or 802.11g operation of this product in the U.S.A. is firmware-limited to channels 1 through 11.

This device is intended only for OEM integrators under the following conditions:

The antenna must be installed such that 20 cm is maintained between the antenna and users, and

The transmitter module may not be co-located with any other transmitter or antenna.

As long as 2 conditions above are met, further transmitter test will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed (for example, digital device emissions, PC peripheral requirements, etc.).

IMPORTANT NOTE: In the event that these conditions can not be met (for example certain laptop configurations or co-location with another transmitter), then the FCC authorization is no longer considered valid and the FCC ID can not be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate FCC authorization.

End Product Labeling

This transmitter module is authorized only for use in device where the antenna may be installed such that 20 cm may be maintained between the antenna and users. The final end product must be labeled in a visible area with the following: "Contains TX FCC ID: **TLZ-GM100**".

Manual Information That Must be Included

The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF module in the users manual of the end product which integrate this module.

The users manual for OEM integrators must include the following information in a prominent location " **IMPORTANT NOTE:** To comply with FCC RF exposure compliance requirements, the antenna 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.