## WIRELESS NETWORKING

## MEDIALINK

# **Users** Guide



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#### FCC STATEMENT

FC

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 or more 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.
- 2) This device must accept any interference received, including interference that may cause undesired operation.

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

#### FCC RF Radiation Exposure Statement

This device has been tested for compliance with FCC RF Exposure (SAR) limits in the typical laptop computer configuration and this device can be used in desktop or laptop computers with side mounted PCMCIA slots. This device cannot be used with handheld PDAs (personal digital assistants). This device and its antenna must not be co-located or operated in conjunction with any other antenna or transmitter.

#### CE Mark Warning

## €€1588①

This is a class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.



### Wireless N USB Adapter - User Guide

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### Introduction

Your Medialink MWN-USB150N utilizes the latest standard in wireless networking technology, 802.11n (Draft 2.0). This state of the art standard increases transmission range, increases throughput and reduces "dead spots".

This adapter was carefully designed to make installation as simple as possible. In most cases, even the most novice user will complete installation within just a few minutes.

WPS (Wi-Fi Protected Setup) simplifies password entry and frees you from having to remember long passwords.

Support for PSP, NDS and WII connections with Xlink Kai allows for a rich on-line gaming experience.

The Medialink MWN-USB150N is a high performance Wireless N USB Adapter with improved range, faster throughput and state of the art security.



#### **Product Features**

- EZ Install Simplified Installation via Graphical User Interface.
- Microsoft WHQL Certification ensures compatibility with Windows OS.
- Supports Windows 2000, XP, Vista 32-Bit, Vista 64-bit, Linux & MAC.
- Complies with 802.11n (Draft 2.0), 802.11g and 802.11b standards.
- High Speed USB 2.0 port, backward compatible with USB1.0.
- 150Mbps maximum send/receive throughput.
- Supports 20MHz/40MHz frequency bandwidth.
- Auto-detects network transmission rate.
- Provides Both Infrastructure and Ad-Hoc mode.
- Supports Soft AP to Quickly Establish Wireless LAN Networking.
- Supports PSP, WII, NDS with Xlink Kai for on-line gaming.
- Supports 64/128-bit WEP, WPA, WPA2 encryption methods and 802.1x security authentication standard.
- Supports WPS (Wi-Fi Protected Setup) encryption method to eliminate the need to remember long passwords.
- Supports WMM to make voice and video as smooth as possible.

#### **Package Contents**

Unpack the contents of your USB Adapter, and locate the following items:

- Wireless USB Adapter
- USB Seat
- Installation CD
- Quick Installation Guide



#### Installation Guide

\*IMPORTANT NOTE\* - DO NOT INSERT YOUR MEDIALINK WIRELESS USB ADAPTER INTO YOUR COMPUTER USB PORT UNTIL AFTER THE SOFTWARE IS INSTALLED.

Please follow the simple steps in this Guide to get your computer quickly connected to your wireless network.

Before you begin, please be sure you have the following:

- PC with an available USB slot
- Minimum 300MHz processor and 32MB memory
- Windows 2000, XP, Vista 32-bit, Vista 64-bit (For Linux or MAC instructions, please refer to "USER MANUAL" on the installation CD).
- An 802.11n, 802.11g or 802.11b Access Point or Router



#### **Install Software**



**STEP 1.** Insert CD into an available CD-ROM drive.

**NOTE:** The following Screen shots illustrating the installation procedure are from a Windows XP installation. Other operating systems may show slightly different dialogue boxes but the installation procedures will be the same.

STEP 2. Click Install Software

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**STEP 3.** Click **Next** to start installation.



STEP 4. Click Next to continue.(Installation may take a few minutes. Please wait.)

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Or

**STEP 5.** Click **Finish** to complete the software installation.

**STEP 6.** Insert the USB Adapter into an available USB slot.





Please wait while hardware drivers are installed.

(For Windows 2000 & Windows Vista you will be prompted to restart your computer)



#### *STEP 7.* Connect to your network

You will see a tray icon **I** appear in your system tray at the bottom of the screen after the software and hardware installation are completed successfully.

- **STEP 8.** Double-click the tray icon **I** to launch the configuration utility.
- **STEP 9.** Click on the SITE SURVEY tab.
- **STEP 10.** Select your network and click CONNECT.

**Note** - If your router has security enabled, please insert your router password and wait for your router authentication.

MERIOHN	K Sta	tion Mode	AP Mode	www.medialinkproducts.com
Status	Site Survey	Profile	Statistics	WPS Setting
Site Survey is use button; to get cer entry and to conr	ed to scan available rtain wireless netwo nect the selected wi	e wireless networ ork's relevant info reless network, o	rk around. To update th ormation, click the SSII click the "Connect" bu	ne list, click the "Refresh" O in the corresponding tton.
SSID	Si	gnal	Detail Ir	nformation
. Network /	A 37% B 89%		SSID	W311R_TW
MY NETV	C 83% NORK 94%		Network Type	Infrastructure
			Encryption Type	AES
			Channel	6 <> 2437 MHz
			Physical Address	00-B0-0C-1A-8D-98
			Connect	Refresh
MWN-USB150N Wireless USB Add	apter/Soft AP			

The tray icon will turn green to indicate communication with the router. CONGRATULATIONS! You're Medialink adapter is now successfully connected to your wireless network.



### **Chapter 3 Client Utility Interface**

The Medialink configuration utility is used for management of the Medialink MWN-USB150N Wireless USB Adapter. To access it's features, double-click the tray icon III to launch the configuration utility. If the tray icon is not present, Click "Start", "All Programs" "Medialink" and finally "MWN-USB150N"; or click the Medialink shortcut on your PC's desktop.

#### ⚠ Note:

With Windows XP, users can select either the Medialink Client Utility Interface or the Windows XP internal wireless application to configure and manage the Medialink MWN-USB150N wireless adapter.

There are two client utility applications available from the Medialink Client Utility Interface: Station mode and AP mode.

#### *▲ Note:*

Station Mode is the default mode and is the best mode to use when connecting to a wireless router.

#### **Station Mode**



**Station Mode Topology** 

In Station Mode, the MWN-USB150N serves as a wireless client to receive wireless signals from a wireless router in order to access the Internet.



### Station Mode - "Status" Tab

When the "STATUS" tab is selected, the wireless network status, SSID, Authentication type, Encryption Type, IP address, subnet mask and gateway are displayed.

MERIOLINK	Station Mode	AP Mode	www.medialinkproducts.com
Status Site S	urvey Profile	Statistics	WPS Setting
	Wireless Network	Current Status	
Status	Connected	IP Address	192.168.2.136
SSID	rjv	Subnet Mask	255.255.255.0
Authentication Type	WPA-PSK	Gateway	192.168.2.1
Encryption Type	TKIP	Speed	1.0 Mbps
Network Type	Infrastructure	Rx Throughput	7.920 Kbps
Physical Address	00-0D-3A-2C-DE-AF	Tx Throughput	0.000 Kbps
MWN-USB150N Wireless USB A danter/Soft	Signal Strength 💽		Quality

#### Station Mode - "Site Survey" Tab

The "SITE SURVEY" tab is used to scan and display the available wireless networks. The signal strength of the available networks along with the encryption type will also be displayed.

MERIALINK	Stat	ion Mode	AP Mode	$\otimes$
			,	www.medialinkproducts.com
Status	Site Survey	Profile	Statistics	WPS Setting
Site Survey is used button; to get cert entry and to conn	d to scan available ain wireless netwo ect the selected wir	wireless network rk's relevant inforr reless network, cliv	around. To update th nation, click the SSII ck the "Connect" but	ne list, click the "Refresh" ) in the corresponding tton.
SSID	SI	gnal	Detail Ii	nformation
. hpsetup	0%		SSID	ŋv
			Network Type	Infrastructure
			Encryption Type	TKIP
			Channel	6 <> 2437 MHz
			Physical Address	00-0D-3A-2C-DE-AF
-			Connect	Refresh
MWN-USB150N		_		
Wireless USB Adap	pter/Soft AP			

**Click Connect:** to select and connect to the desired network. **Click Refresh:** to rescan for available wireless networks.

#### Station Mode - "Profile Management" Tab

The "PROFILE" tab allows you to save multiple profiles for quick connection to various networks.

			WW	v medialink products $c$
Status	Site Survey	Profile	Statistics	WPS Setting
Profile Managemen display the selected or connection later Profile Ma	t allows you to dis 1 profile's detailed i 1, click "New" butto 1994	play and save pro nformation. To c on in the right-do	ofiles. Clicking one entry reate a new profile and a wn bar. Datail Info	y in the list table can save it in the profile list remation
Frogue 194	me 3311		Denai Ingo	maaton
PROF1	SBC1066		Network Type	Infrastructure
PROF2	rjv			
			Aumentication Type	WFA-F5K
			Encryption Type	TKIP
			Channel	Auto
			Power Saved Mode	CAM
			Connect	
TID	DOWN		COLLICCT	

Click UP/DOWN: To change a profile's sequence in the list.

**Click Connect:** To activate an existing profile.

Click New: To create a new profile and configure the site status and security setting.

Click Modify: To modify an existing profile.

Click Delete: To delete an existing profile.

### Station Mode - "Statistics" Tab

The "STATISTICS" tab is used to display Rx and Tx data packets, including the success and error packet amount.

MERIOHINK	Station Mode	AP Mode	$\otimes$
		w	ww.medialinkproducts.com
Status Site Su	rvey Profile	Statistics	WPS Setting
Statistics is used to summar amount. To renew the statis	ze Rx and Tx data pack tic, click the "Clear" bu	ets, including the succes tton.	s and error packet
Send		Re	ceive
Tx success packets	496	Rx success packets	70
Repeat packets	16	CRC success packets	145
Retry error	0	Packet loss	0
RTS correction	0	Repeat packets	0
TRS error	0		J
	J	Clase	
		Citear	
MWN-USB150N Wireless USB Adapter/Soft A	ΔP		

Click Clear: to refresh the statistics.

### Station Mode - "WPS Setting" Tab

The WPS is available only when used with WPS-compliant routers.

Status	Site Survey	Profile	Statistics	WPS Setting
PS setting is nplete auto-	enabled only on WPS check and connections	-compliant device s between wireless	s. In WPS PBC mod s adapter and other	le, click the "PBC" to wireless device. But in ti
'S PIN mod	e, you need to enter the	e Pin code first and	d click the "PIN" bu	tton.
_	WPS AP		WP	'S Profile
			Pin Code	PIN

**PIN :** Enter the Pin code and click "PIN" to automatically connect the wireless adapter to available networks.

**PBC :** Click "PBC" to auto-check available connections.

**Refresh**: To update the Pin code.

Rescan: To rescan for available WPS-compliant wireless networks.

**Connect**: To connect the WPS wireless network.

**Disconnect:** To disconnect from the current connected wireless network.

### AP Mode – General Info

In cases where wireless access to an Ethernet network is desired, the Medialink MWN-USB150N can serve as an access point to transmit wireless signals and to allow other wireless clients to access the network.

*▲ Note:* AP Mode does not take the place of a router or modem which is required for internet access.



**AP Mode Topology** 

### **AP Mode - Basic Setting**

This window is used to configure the AP's basic parameters, including SSID, Wireless Mode and Channel.

MERIVHINK	Station Mos	AP Mode	.medialinkproducts.com
Basic Setting	Security Setting	Access Control	About
	Basic Paramet	ters for Soft AP	
SSID	medialink-SoftAP		
Wireless Mode	802.11 B/G/N Mixed	Channel 1	•
		Restore Default	Apply
MWN-USB150N			
Wireless USB Adapte	r/Soft AP		

**SSID:** Here you can give your AP a Wireless Network ID name (SSID).

Wireless Mode: Here you can set the AP to operate at 802.11b, 802.11g, or 802.11b/g/n mixed.

Channel: 1~11 channels provided.

**Restore Default:** to restore the set parameters to default factory default settings.

**Apply**: to make the changes made take effect.

### **AP Mode - Security Setting**

This window is used to configure the wireless network's security authentication, providing WEP, WPA-PSK, WPA2-PSK, and WPA-PSK/WPA2-PSK encryption methods.

	itation Mode	AP Mode	.medialinkproducts.com
Basic Setting Secu	rity Setting	Access Control	About
N	etwork Security	Configuration	
Authentication Type	Open		V
Encryption Type	Not Use	Sho	w Key Content
WPA-PSK Key			
💿 Key 1 🛛 Key Type	Hex	Key	
Key 2 Key Type	Hex 💌	Key	
Key 3 Key Type	Hex 💌	Key	
Key 4 Key Type	Hex 💌	Key	
MWN-USB150N			Apply
Wireless USB Adapter/Soft AP			11.5

WEP : 10/26 bits Hex or 5/13 ASCII support.

**WPA-PSK** : 8~32 bits ASCII support.

WPA2-PSK : 8~32 bits ASCII support.

WPA-PSK/WPA2-PSK : 8~32 bits ASCII support.

▲ Note:

- 1. The Hex characters include  $0 \sim 9$  numbers and  $a \sim f$  letters.
- 2. ASCII characters include any numbers/letters and characters.

### **AP Mode - Access Control**

Access Control uses client MAC addresses to allow or disallow access to the network.

MERIOHNK	Station Mode	AP Mode	medialinkoroducts.com
Basic Setting	Security Setting	Access Control	About
_	Access Control (	Configuration	
Filter Policy	Disable		•
10			
Physical Address		Add Delete	Remove All
MWN-USB150N Wireless USB Adapter/So	ft AP		Apply

Filter Policy:

**Disabled**: Disables the filter function.

All Permitted: Permits all clients in the list to access the wireless network.

All Blocked: Blocks all clients in the list from access to the wireless network.

MAC Address : Input the client's MAC address to implement the corresponding filter policy.

Add: Adds the entered MAC address into the list.

**Delete**: Deletes one selected MAC address in the list.

**Remove All**: Deletes all listed client MAC addresses.

Apply: Makes the changes take effect.



### AP Mode - About TAB

This window displays details about the software version and wireless adapter.

		AP Mode	www.medialink	The second s
sic Setting So	ecurity Setting	Access Cor	ntrol Abo	out
Ab	out Version and	Network Informa	ttion	
(c) Copyright 20	08-2020, MEDIALI	NK Technology, Inc. I	All rights reserved.	
Configuration Version	1.0.0.3	Configuration Date	08-21-2009	
Boot Version	1.4.1.0	Boot Date	03-04-2009	
EEPROM	0.1	Firmware Version	0.14	
IP Address	169.254.115.182	Physical Address	00-B0-8C-01-04-20	
Subnet Mask	255.255.0.0	Default Gateway		
				_
ISB150M	_	_	_	



#### Appendix One: Acronyms and Terms

WLAN	Wireless Local Area Network			
802.11	A family of specifications developed by the IEEE for WLAN technology.			
802.11a	An extension to 802.11 WLAN standard that provides up to 54 Mbps transmis- sion in the 5 GHz			
	UNI radio band.			
802.11b	An extension to 802.11 WLAN standard that provides up to 11 Mbps transmission in the 2.4 GHz $$			
	ISM radio band. 802.11b uses DSSS modulation.			
802.11g	An extension to 802.11 WLAN standard that provides up to 54 Mbps transmission in the 2.4 GHz $$			
	ISM radio band. 802.11b uses OFDM modulation and is backwards compatible with 802.11b.			
Ad-Hoc	A group of computers each with wireless adapters, connected as an independent WLAN.			
AES	Advanced Encryption Standard			
BSSID	Basic Service Set ID			
DHCP	Dynamic Host Configuration Protocol			
DSSS	Direct Sequence Spread Spectrum. DSSS is one of two types of spread spectrum radio. The other			
	is frequency-hopping spread spectrum (FHSS).			
QoS	Quality of Service			
OFDM	Orthogonal Frequency Division Multiplexing			
RADIUS	Remote Authentication Dial In User Service			
RTS	Request to Send			
SSID	Service Set Identifier. A 32-character unique identifier attached to the header of packets sent over			
	a WLAN that acts as a password when a mobile device tries to connect to the BSS.			
TCP/IP	Transmission Control Protocol/Internet Protocol			
ΤΚΙΡ	Temporal Key Integrity Protocol			
WDS	Wireless Distribution System			
WEP	Wired Equivalent Privacy. A security protocol for			
	WLANs defined in the IEEE 802.11 standard.			
WPA	Wi-Fi Protected Access			
WPA2	Wi-Fi Protected Access 2. The next generation of			
	Wi-Fi security, based on the 802.11i standard.			
WPA2-PSK	Wi-Fi Protected Access 2-Pre-shared Keys			
WPA-PSK	Wi-Fi Protected Access-Pre-shared Keys			



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#### Appendix Two: Product Specification

Standard	IEEE802.11g, IEEE802.11b,		
	IEEE802.11n		
Port	USB2.0		
Frequency Range	2.4GHz		
Transmission Rate	130Mbps, 117Mbps, 104Mbps, 78Mbps, 52Mbps, 39Mbps, 26Mbps, 13Mbps, 65Mbps, 58.5Mbps, 52Mbps, 39Mbps, 26Mbps, 19.5Mbps, 13Mbps, 6.5Mbps, 54 Mbps, 13Mbps, 36 Mbps, 24 Mbps, 18 Mbps, 12 Mbps, 9 Mbps, 6 Mbps, 11 Mbps, 5 5 Mbps, 2 Mbps, 1 Mbps,		
Transmission Power	Max. 15dbm		
Modulation Method	OFDM, CCK		
Working Temper.	0°C ~ 40°C		
Storage Temper.	-40°C ~ 70°C		
Working Humidity	10%~90%RH non-condensing		

#### Appendix Three: How to connect with PSP

1. Topology of PSP connecting with MWN-USB56N



- 2. To configure PSP with Ad-Hoc mode
  - 2.1 Select Network Settings



2.2 Select Ad-Hoc mode





2.3 Select Channel

3. In MWN-USB56N Utility Interface scan PSP and double-click to connect the wireless network.

MERIOHNIK	Statio	on Mode	AP Mode	$\otimes$			
				www.medialinkproducts.com			
Status Sit	te Survey	Profile	Statistics	WPS Setting			
Site Survey is used to scan available wireless network around. To update the list, click the "Refresh" button; to get certain wireless network's relevant information, click the SSID in the corresponding entry and to connect the selected wireless network, click the "Connect" button.							
SSID	Sign	nal	Detail Ii	nformation			
, Network A	37% 89%		SSID	W311R_TW			
MY NETWOR	83% K 94%		Network Type	Infrastructure			
			Encryption Type	AES			
			Channel	6 <> 2437 MHz			
			Physical Address	00-B0-0C-1A-8D-98			
MUN USDISON			Conneci	Refresh			
Wireless USB Adapter/	Soft AP	HINH					

4. Check "enable PSP connection mode" box.

#### 5. To configure Xlink Kai

Select "Start"  $\rightarrow$  "All programs"  $\rightarrow$  "Xlink Kai Evolution VII"  $\rightarrow$  "Start Kai Config" to configure the user name, password and other parameters as follows.

UI Default Java	Default Profiles Select a profile, the template will be applied over your settings. Select a profile		
Configuration Items	Network Adapter		
30000 Kai Deep Port 30000 ✓ Enable PAT ✓ Launch UI ✓ Launch Engine KBox Homebrew ✓ Follow PSP SSID	Tenda W311U Wireless USB Ac ▼ ✓ Show dangerous NICs Default XTag (Username) Default Password ✓ Auto Login Close Engine After		
	Loss of UI Accept UI Connections From Local IP Only Help Wireless OK		

#### 6. Login Xlink Kai

Select "Start"  $\rightarrow$  "All programmers"  $\rightarrow$  "Xlink Kai Evolution VII"  $\rightarrow$  "Start Kai". PSP will connect with Xlink Kai automatically. The following window will indicate the connection is established.





**Thank you** for purchasing this Medialink product! Please contact us if you need any assistance with installation. We'll be happy to help!

#### Medialink Products, LLC

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