Quick Install Guide

Compex Wireless Mini PCI Adapter

WLM54G

Version 1.1



networks@work

Figure 1 CompexWLM54G



This mini PCI adapter, Compex WLM54G contains a dual-mode single chip MAC/BB/Radio for IEEE 802.11b/g Wireless LAN. Based on the latest industry standard Wi-Fi Certified IEEE 802.11g specification, the Compex WLM54G offers maximum channel speeds of up to 108 Mbps. The Compex WLM54G maintains interoperability within the 2.4 GHz frequency band, offering full compatibility with 802.11b networks. It supports key security features like Wi-Fi Protected Access (WPA), WPA2, WEP and 802.1x.

WLM54G has two variants in its family :

- WLM54G 1A: This mini PCI adapter's "G" chipset offers maximum channel speeds of up to 54Mbps
- WLM54G 18: This mini PCI adapter's "Super-G" chipset offers maximum channel speeds of up to108Mbps

You can find this adapter that is seated inside the wireless products such as the NetPassage 28G. WLM54G can be removed from or inserted on the PCBA of the NetPassage 28G.

4. Packaging Contents

The Compex NetPassage 28G retail package contains the following items to start you off:

- 1x Compex NetPassage 28G
- 1x External Power Adapter
- 1x Quick Install Guide with Warranty Registration Form
 1x Product CD (containing User's Manual, Firmware Recovery Tool & Utilities)
- 1x Wall-MountingTemplate
- 1 x UTP MDI RJ45 Ethernet Straight Cable

5. Network Infrastructure

Only a few simple steps are required to set up the NetPassage 28G to begin your broadbandInternet sharing as part of your wired and wireless network infrastructure.



Figure 2 Setting up Compex NetPassage 28G

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 of 20cm between the radiator & your body.

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

6. Hardware Installation







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SSE Charactel Minuters S 3. The first page of Setup Wizard is an overview of the basic setup.

Internet Connection

This functionality lets you specify the type of Internet Connection you want to use.

Wireless Setup

This functionality lets you configure the settings of the gateway to suit your wireless network.

USB Device

This functionality gives you a quick glimpse of the summary on the USB devices that are connected to the gateway

 NetPassage Settings
This functionality lets you identify the gateway and create a workgroup for the gateway. It also lets you set up the time zone of the locale.

NOTE NOTE

For more details, please refer to User's Manual. Alternatively, refer to Help on the right side of the main page here.

To setup your WAN connection, 4. select the following types of Internet Connection such as:

Static IP

For configuring **Static IP**, you need to manually enter IP Address, Network Mask and Gateway IP Address that are provided by your ISP

Dynamic IP (used as an . example in this guide)

PPPoE

For configuring **PPPoE**, you have to enter Username and Password that are provided by your ISP

PPTP

For configuring PPTP , you have to enter Username, Password, Network Mask and VPN Server that are provided by your ISP. Take note that VPN Server is the IP of your ISP PPTP server.

To proceed, click on the Next button

5. configure To the followina parameters:

SSID

The default SSID is 'compex'. Click on the **Change** button to enter your preferred SSID name.

Remember to change your wireless clients' settings illustrated in Section 5 after NetPassage 28G has rebooted and the new SSID has taken effect.

Channel

Click on the down-arrow button next to Channel. From the list, select your preferred wireless network channel.

Security Mode

You may choose to disable, enable WEP or enable WPA-PSK to secure the wireless connection.

If WEP is enabled, select Hex or Ascii for the key string type to be used. Then key in the transmission key

If WPA-PSK is enabled, select Hex or Ascii for the key string type to be used. The default **WPA-PSK** is '111111111'. The default **GTK** update is '600'.

To proceed, click on the Next button.

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The NetPassage Se	tup Wizard		Help
		This section lets y Internet connection	ou select the type of n you are using.
using?	ction are you	Note: The term B	P refers to your
Select the type of internet connect are using and dick on Next to pro-	ction you	Internet Service P	rovider.
		Static IP	
Dynamic IP (No further config.	uration	This type of conne same exact IP ad	ction lets you have fress every single tir
 needed) O PPPoE (Need setup info from) 	15P)	you connect to th	e Internet.
@ PPTP		If you select this of key in the fixed IP by your ISP.	ption, you will need information provide
6	9 📼 😡	Dynamic IP	
		Using this type of address is assigned	connection, a new I d to your computer
		each time you acr commonly used b	ess the Internet It is y most Gable ISPs.
		If you select this o	otion, no further
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IP Address	203.1	20.12.240	
IP Address Network Mask	203.1 255.2	20.12.240 55.255.0	
IP Address Network Mask Gateway IP	203.1 255.2 203.1	20.12.240	Char
IP Address Network Mask Gateway IP Address	203.1 255.2 203.1	20.12.240 55.255.0 20.12.2	Char
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IP Address Network Mask Gateway IP Address For configuring Pl Usemame Password	203.1 255.2 203.1 PPOE Jest PTP	20.12.240 55.255.0 20.12.2	0.
IP Address Network Mask Gateway IP Address For configuring Pl Username Password Username Username	203.1 255.2 203.1 PPOE Jest	20.12.240 55.255.0 20.12.2	
IP Address Network Mask Gateway IP Address Or configuring Pi Password Username Password Username	203.1 255.2 203.1 PPOE Jest	20.12,240 55.255.0 20.12.2	
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The NetPassage Setup Wizard

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USB Device This section shaws the USB devices (Storage disk, Webcam and/or Printer), which are attached to the Number of the USB

tPassage Settings

Set a name to identify
 Set the workgroup of t
 Adjust the time Zone

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🕎 • 🖉 • Oustonea	Seach + . attempting to re	trave buttons from Yahoot
The Net	Passage Setup Wizard	Note: This SSID must be the same for the NetPassage as well as for all the wireless clients in the network.
() + () - Custom	ising WLAN Setup -	
Select the type - proceed.	of when connection and click on Next to	Choose an appropriate Channel for the NetPassage to operate is.
SSID		
Channel	Chernel 3.2.42280Hz	Security mode
Security Mode	WEP 💌	Select the type of wreless security mod- to use:





((•)) -- WEP key --

Input key and dick on Next to proceed Key String Type: ◎ Hex (0~9, a~f, A~F) Length 10 or 26 ○ Ascii (0~9, a~z, A~Z) Length 5 or 13 Transmission key: 9111911122

(() - WPA-PSK key --

Input key and click on Next to proceed. Key String Type: ..., sumg type: O Hex (0~9, avf, A~F) Length 64 Ø Ascii (0~9, av, A~Z) Length 8~63 WPA-PSK: 11111111 GTK update(seconds): 600 (60~9999) 6. Then the Wizard will detect if any of the USB devices such as printer, storage disk or webcam are connected to NetPassage 28G.

more details on setting up USB For devices, refer to User's Manual

If you want to allow access to your storage disk via Internet, click Yes. Then

you will be prompted to enter the

• System Name The default name is 'ROUTER' so

you may change it if you wish. So

create a better name to identify

The default name is 'router' so you may change it if you wish. This name for NetPassage 28G will

appear when you browse the MS Windows Network Neighbourhood.

The default name is 'mygroup'. If you wish, create an appropriate

name for the workgroup of your

Set up the time zone of this locale.

NetBios Name

Workgroup

Time Zone

To proceed, click on the Next button.

following data:

your gateway.

gateway

O The NetPassage Setup Wizard Ŷ ... USB device setup ... The wizard will automatically detect any supported USB printer, storage disk or webcam that is connected to your NetPassage 28G. Click on Next to continue. 8 Do you want to allow access to your storage disk through Internet? Yes
 No Manap O The NetPassage Setup Wizard C: -- Setting the identity --System Name VetBIOS Name Workgroup Selecting the appropriate time zone --Choose your relevant time zone from the selection below and click on Next to go on. Proposed Time 11/22/200411:11:13 Time Zone GMT-07:00 (Mountain Time (US & Canada), ...) ¥ Back Next Ex

7. You will see the summary of NetPassage 28G setup appear for your viewing. Check if the settings such as WAN IP Address, etc are correct.

8. Click on the Finish button to save the settings and reboot NetPassage 28G.

File Edit	View	Favorites	Tools	Help									1
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9. You will be returned to the Login page after 30 seconds. Alternatively, you can repeatStep 1.

Further Information References

If you have other Windows operating systems or broadband Internet accounts, please refer to the User's Manualin the accompanying Product CD.

This document may become superseded, in which case you may find its latest version at: http://www.compex.com.sg/prodspec.asp?f=Manual&s=1

10. Schematic Overview of the NetPassage 28G



Back View



Label	Name		Description			
0	LAN Link/ActLED 1,2 3	Steady GREEN	LAN connection is on.			
		Flashing GREEN	Data transmission at LAN connection.			
0	WAN LED	Steady GREEN	WAN connection is on.			
€	Wireless LAN Link/Act LED	Steady GREEN	At least one wireless client is present.			
		Flashing GREEN	Activity is detected in the wireless network.			
4	WAN Link/ActLED	Flashing GREEN	Data transmission at WAN connection.			
6	USB LEDs 1,2,3,4	Steady GREEN	USB device is detected.			
		Flashing GREEN	Data transmission at respective USB ports.			
6	Power LED	Steady BLUE	The device has powered up.			
Ø	Diagnostic LED	Flashing GREEN	It indicates that the firmware is corrupted.			
8	External Antennas	Foldable, no	on-detachable antennas			
Ø	Reset	Push button	To reboot, press once.			
			To reset password, press and hold the button for 5 seconds before releasing it.			
			To restore factory default settings, press and hold the button for 8 seconds before releasing it.			
Ø	5 VDC	Power Input	t e			
(j)	WAN (RJ45 Port)	WAN port c	onnects to Cable/ADSL modem			
Ŀ	LAN RJ45 Ports 1,2,3	IntegratedL	AN Switch Ports			
æ	USB Ports 1, 2,3,4	IntegratedUSB2.0 Ports				

9. Specification

Technical Specification						
Industrial Standards	Wired:					
	•	IEEE 802.3 10Base-T				
	•	IEEE 802.3u 100Base-Tx				
	•	IEEE 802.3x Flow Control				
	Wireless:					
	•	IEEE 802.11b				
	•	IEEE 802.11g				

WAN Interface	1x Auto MDI/MDI-X RJ45 Ethernet Port for external Cable/ADSL modem
WAN Type	Static IP
	Dynamic IP
	PPP over Ethernet (PPPoE)
	Point to Point Tunneling Protocol (PPTP)
	5 ,
LAN/WLAN Interface	Wired:
	Integrated 3x Auto MDI/MDI-X RJ45 Ethernet Port for 10/100Mbps Switch
	Wireless:
	 Operating channels, frequency of:
	 11 Channels 2.400~2.4835, US,
	Canada
	o 13 Channels, 2.400~2.4970,
	A Channels 2 400~2 4835 France
	0 4 Chamles 2.400~2.4033, Hance
	 Direct Sequence Spread Spectrum
	modulation, Orthogonal Frequency Division
	Multiplexing modulation
	 Data rates: 108Mbps, 54Mbps, 48Mbps, 24Mbps, 24Mbps, 19Mbps, 12Mbps
	3010005, 2410005, 1810005, 1210005, 111005, 00005, 60005, 550005, 20005
	1 Mbps, 900bps, 000bps, 5.500bps, 200bps, 1Mbps
	Security:
	 64-bit/128-bit WEP
	 WPA, WPA-PSK
	Wireless Pseudo VLAN
USB2.0 Ports	A megicied 03B poils supporting:
	Print Server
	Storage disk drive
IP Addressing	All Classful/Classless subnets
Built-in DHCP Server	Yes
DHCP Reservation	Yes
NAT Firewall	Yes
Stateful Packet Inspection	Yes
(SPI) Firewall	Develled Development
Load-Balancing/Fall-Over Redundancy	Parallel Broadband
Virtual Server	IP and Port Forwarding. De-Militarized Zone hosting
IP Packet Filtering	Time-based, TCP Port, Source IP Filtering
URL Filtering	Yes
IP Routing	Static Routing Entry
VPN Client Pass-Through	PPTP, IPSec
Profile Backup and	
Restore	
Firmware Upgradeable	Yes
Physical and Environment	Temperature:
	Operating: 0°C to 40°C Storage : 20°C to 70°C
	• Storage : -20 C to 70 C
	Humidity:
	 Operating: 10% to 80% RH
	 Storage : 5% to 90% rh
Physical Dimension	1/4mm x 104mm x 40 mm
L	
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improvements and/or changes to the pro-	erchantability and fitness for a particular purpose. Compex, Inc. may make induct and/or specifications of the product described in this guide, without prior
notice. Compex, Inc. will not be liable for a periodically made to the information co	iny technical inaccuracies or typographical errors found in this guide. Changes are ntained herein and will be incorporated into later versions of the guide. The
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Inc. All other brand and product names are	e trademarks or registered trademarks of their respective owners.
permission of Compex, Inc. is prohibited, e	inc. Air rights reserved, Reproduction, adaptation, or translation without prior except as allowed under the copyright laws.
Manual Revision by Ann Tay Manual Number: M-0431-V11C Version	n 1.1. November 2004
FCC NOTICE: This device has been tested	and found to comply with the limits for a Class B digital device, pursuant to Part
residential installation. This device generation	e designed to provide reasonable protection against harmful interference in a ates, uses and can radiate radio frequency energy. If not installed and used in
accordance with the instructions, may cau	ise harmful interference to radio communications. However, there is no guarantee
a sentenciere will not occur in a patileu	ing the PC off and on, the user is encouraged to try to correct the interference by

- Compartment of the following measures:
 Reorient or relocate the receiving antenna
 Connect the computer into an outlet on a circuit
 different from that to which the receiver is
 connected.
 Consult the dealer or an experienced radio/TV
 technicianfor help.
 Congrate the equipment.
 FCC Complement: This device comples with Part 15 of the FCC Rules. Operation is subject to the following two
 conditions:
 Consult the dealer or an experienced radio/TV
 technicanfor help.
 Consult the user's authority
 to operate the equipment.
 FCC Complement: This device comples with Part 15 of the FCC Rules. Operation is subject to the following two
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ICES 003 Statement						
This Class B digital apparatus complies with Canadian ICES-003.						
DECLARATION OF CONFORMITY: Compex, Inc. declares that t	he product:					
Product Name: Compex Wireless-G Multimedia Gateway						
Model No .: NetPassage 28G conforms to the following Product S	itandards:					
Radiated Emission Standards: EN55022A, FCC Part 15 Class	В					
Conducted Emission Standards: EN60555Pt2 conducted emission	sion; EN55022A conductedemission, FCC Part 15 Class B					
Immunity Standards: IEC 801-2; IEC 801-3; IEC 801-4						
Therefore, this product is in conformity with the following regio	nal standards: FCC Class B — following the provisions of					
FCC Part 15 directive; CE Mark - following the provisions of the	EC directive.					
Manufacturer's Name Compex, Inc.	Technical Support					
Address 4051 E. La Palma Ave. ReadyLINK Network Technology GmbH						
Anaheim, CA 92807, USA Albert Einstein Straße 34/M21.						
European Contact	D-63322 Rödermark, Germany					
ReadyLINK Network Technology GmbH	Fax +49 6074-4-9 0668					

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WARRANTY	WARRANTY REGISTRATION CARD				
You can register via Internet at:	http://www.cpx.com or http://www.c	compex.com.sg			

Or E-mail: support@compex.com.sg with the following information: To activate the warranty, please complete this card and return to Compex within ninety (90) days of purchase date.									
Product:		Purcha	ase Date:		Model:			Serial N	No:
Name:			Titl	e:	-	E-m	ail:		
Address:									
Postal/Zip Coo	Postal/Zip Code: Country:								
Phone: ()								
How did you learn about Compex?		ork 🛛 f	riend	□ Inter	net 🗖 Dea	aler	M	agazine	Exhibition

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Note:

For purchases within U.S.A and Canada, please fax to Compex, Inc. at (714) 630-6521

For purchases outside U.S.A and Canada, please fax to Compex Systems Pte Ltd at $~(65)~6280\text{-}9947_{\text{sp}}$

This device complies with Part15 of the FCC Rules.

Operation is subject to the following two conditions:

 This device may not cause harmful interference, and
 This device must accept any interference received, including. Interference that may cause undesired operation.

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 (for example: This module will be bundling into Broadband product such as Wireless Modem/ Notebook with antenna mounted around LCD panel). The final end product must be labeled in a visible area with the following: Contains TX FCC ID: MK8CPX-05-WLM54G.

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 $l_{j\pm}$ 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.