

NetComm[®]

Wireless N Hotspot



Quick Start Guide

Preface

Revision History

Document Revision	Change List
1.0—May 2011	Initial Document Release

The feature-rich NetComm Wireless N Hotspot HS1100N enables any business or office environment to set up a hotspot location offering a wireless Internet connection for up to 100 users at a time.

Package Contents

The following items should be included in your HS1100N package.

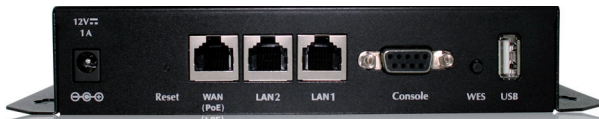
1. 1 x HS1100N
2. 1 x Quick Start Guide
3. 1 x Console cable
4. 1 x Ethernet cable
5. 1 x DC power adapter
6. 2 x WiFi antennas
7. 1 x Wall mounting kit
8. 1 x Ground cable

If any of the above items are missing, please contact NetComm immediately.

Please note: It is recommended to keep the original packaging materials in case repair or maintenance is necessary. This will protect the HS1100N from damage during transport.

System Overview

Front Panel



Item	Description
Power Socket (12VDC / 1.5A)	For connecting to an external power supply.
Reset	Press once to restart the system.
WAN (PoE)	For connecting to a wired external network. (The WAN port supports powering the HS1100N via PoE)
LAN1 / LAN2	For connecting to a wired internal network. LAN1 – Maps to the “Private Zone” and requires authentication. LAN2 – Maps to the “Public Zone” and requires authentication.
Console	For connecting an RS-232 console cable to perform system management.
WES	Press to start the WES (WDS Easy Setup) process.
USB	Reserved for future use.

Rear Panel



Item	Description
Antenna Connectors	Attach the included WiFi antennas here. (The HS1100N offers 1 WiFi interface with 2 SMA connectors)

Top Panel

The following indicator lights (LEDs) provide a quick way to check the current status of the HS1100N.



Icon	Item	Description		
	Power	LED on – Power is being supplied to the HS1100N LED off – The HS1100N is not powered on		
	WAN	LED on – The HS1100N is connected via the WAN port LED flashing – Data is being transmitted through the WAN port LED off – The HS1100N has no connection via the WAN port		
	LAN1 / LAN2	LED on – The HS1100N is connected via the LAN port LED flashing – Data is being transmitted through the LAN port LED off – The HS1100N has no connection via the LAN port		
	WLAN	LED on – The HS1100N is broadcasting wirelessly LED off – The HS1100N is not broadcasting wirelessly		
	Internet	LED on – The HS1100N is currently able to access the Internet LED off – The HS1100N is not able to access the Internet (The detection interval is 1 minute. Therefore this reflects the connection status within the last minute) Indicates the current WES (WDS Easy Setup) status during WES setup:		
	WES			
		Master	Slave	
		WES Start	LED Blinks Slowly	LED blinks quickly
		WES Negotiate	LED Blinks Slowly	LED blinks quickly
	WES Fail (Negotiate Timeout)	LED off	LED off	
	WES Success	LED on for over 5 seconds	LED on for over 5 seconds (after master displays "WES Success")	
	USB	Reserved for future use.		

Hardware Installation

Please follow the steps mentioned below to install the HS1100N.

1. Place the HS1100N in the best location possible.

The best location for the HS1100N is usually at the centre of your wireless network. This ensures it is able to get a clear wireless signal.

2. Connect the HS1100N to your outbound network device.

Connect one end of the supplied Ethernet cable to the WAN port on the front of the HS1100N.

Connect the other end of the Ethernet cable to the device in use that will be used to provide access to the Internet. This may be an ADSL Router, a cable modem or a switch/hub. The WAN LED should light up to indicate a proper connection.

3. Connect the HS1100N to your network device.

Connect one end of an Ethernet cable to the LAN1 port on the front of the HS1100N. Connect the other end of the cable to the Ethernet port on the computer being used to configure the HS1100N.

The LAN1 LED should light up to indicate a proper connection has been made.

Please note: The HS1100N has two virtual 'zones' (Private and Public). These zones are mapped to LAN1 (192.168.110.1) and LAN2 (192.168.11.254) respectively.

4. There are two ways to supply power to the HS1100N.

a) Connect the DC power adapter to the power socket on the front panel of the HS1100N.

Please note: Only use the power adapter supplied with the HS1100N. Using a different power adapter may damage the system.

b) The HS1100N is capable of receiving DC current via the WAN PoE port. Connect an IEEE 802.3af-compliant PSE device (For example: A PoE-switch) to the WAN port of the HS1100N with an Ethernet cable.

Please note: To verify the wired connection between the HS1100N and the switch/hub/router, you can also check the LED status indicators of these network devices.

5. The hardware installation is now finished.

Getting Started

The HS1100N offers a web based configuration page. After completing the hardware installation above, the HS1100N can be configured through a computer by utilising a web browser with JavaScript enabled.

The default LAN IP addresses are:

1. LAN1: 192.168.110.1 – This is mapped to the Private Zone; User authentication is required to access network resources.
2. LAN2: 192.168.11.254 – This is mapped to the Public Zone; user authentication is required to access network resources.

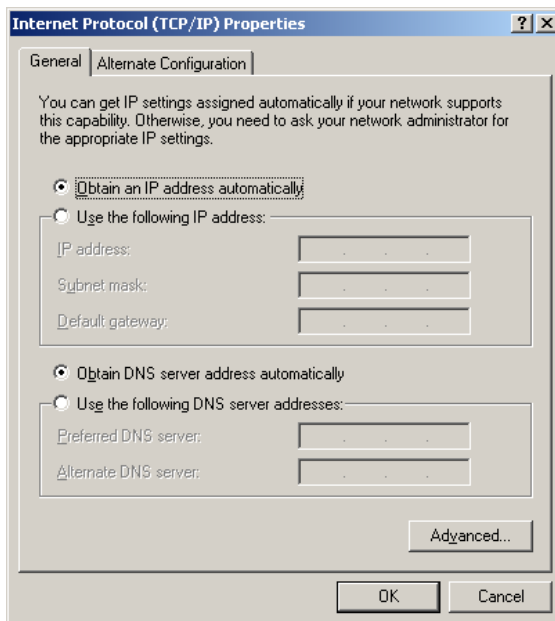
Please note: The following instructions utilise the administration computer connected to the LAN1 port.

Configuration Steps

1. Once the hardware installation steps are complete, please follow the appropriate setup steps for using DHCP in your operating system. The HS1100N will then be able to automatically assign an IP address to the computer or connected device.

Windows XP

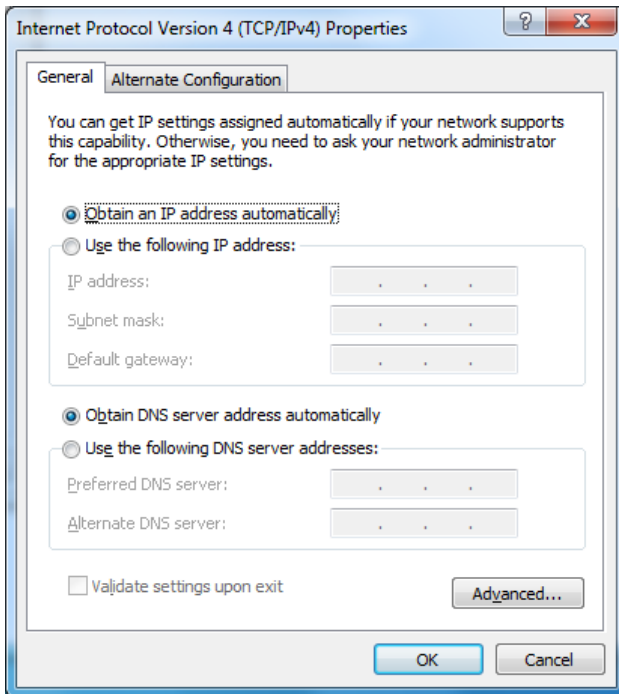
- Click on “Start” -> “Control Panel” (in Classic View). In the Control Panel; double click on “Network Connections”.
- Right click on “Local Area connection”, and then left click on “Properties”.
- Double left click on “Internet Protocol (TCP/IP)”.
- Check “Obtain an IP address automatically” and “Obtain DNS server address automatically” then click on “OK” to continue.



- Click “Show icon in notification area when connected” then click on “OK” to complete the network configuration procedure.

Windows Vista

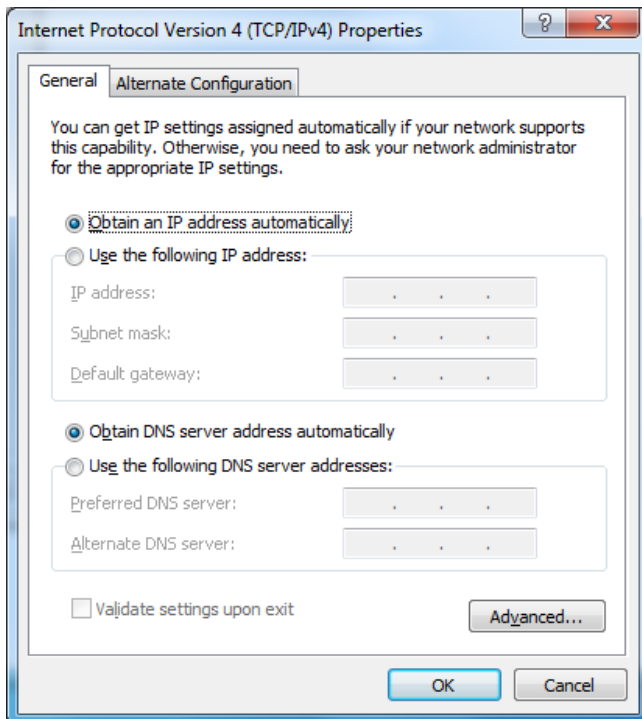
- Click on “Start” -> “Control Panel” (in Classic View) -> “Network and Sharing Center”.
- In the Manage network connections on the left hand side of the window, click on “Manage network connections” to continue.
- Right click on “Local Area connection”, and then left click on “Properties”.
- The screen will display the information “User Account Control”. Click “Continue” to continue.
- Double click on “Internet Protocol Version 4 (TCP/IPv4)”.
- Check “Obtain an IP address automatically” and “Obtain DNS server address automatically” then click on “OK” to continue.



- Click on “OK” to complete the network configuration procedure.

Windows 7

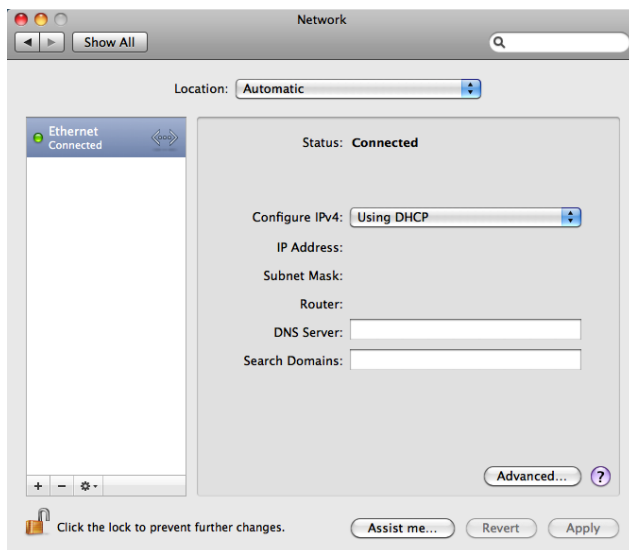
- Click on “Start” -> “Control Panel” (in Category View) -> “View network status and tasks”.
- In the Control Panel Home, click on “Change adapter settings” on the left hand side of the window to continue.
- Right click on “Local Area Connection”, and then left click on “Properties”.
- Double click on “Internet Protocol Version 4 (TCP/IPv4)”.
- Check “Obtain an IP address automatically” and “Obtain DNS server address automatically” then click on “OK” to continue.



- Click on “OK” to complete the setup procedure.

Mac OS X

- Click on the Apple menu and click on “System Preferences”.
- Click on the “Network” icon.
- Set “Location” to Automatic.
- Click on the “Ethernet” item in the list on the left hand side.



- In the “Configure IPv4” section, choose “Using DHCP”
- Click on “Apply”.

Wireless N Hotspot – HS1100N

- Open your web browser and type `http://192.168.110.1` into the address bar at the top of the page. The following Login page should then be displayed. Type “Admin” into both the username and password fields and click the “Login” button.

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Wireless N Hotspot *NetComm*

Username:

Password:

[Login](#)

- The “Home Page” should then be displayed.

Please note: To logout, click the “Logout” link in the upper right-hand side of Home Page to return to the Login page.



Common Settings

Setup Wizard

The HS1100N provides a “Setup Wizard” for quick and easy configuration. Click on the “Setup Wizard” button to start the configuration process.



Step 1: General

Step 1 of the setup wizard enables you to configure your Administrator password, System Time settings and the web page address connected computers are redirected to.

The screenshot shows the 'Setup Wizard' for a NetComm Wireless N Hotspot. The title bar includes 'NETCOMM VELOCITY™ SERIES', 'Wireless N Hotspot', and 'NetComm' logo. Navigation links for 'Home' and 'Logout' are in the top right. The main heading is 'Setup Wizard'. On the left, there are four steps: 'Step 1' (highlighted in orange), 'Step 2', 'Step 3', and 'Step 4', along with an 'Exit' button. A note under 'Step 1' reads: 'It is recommended to change administrator's password, and select an appropriate time zone and NTP server for the system.' The 'Step 1. General' section contains: 'Administrator's Password' with 'New Password' and 'Verify Password' fields (both masked with dots and marked with an asterisk); 'Time' section with a 'Time Zone' dropdown menu (set to '(GMT+10:00)Canberra,Melbourne,Sydney') and an 'NTP Server' text field (set to '0.netcomm.pool.ntp.org*(e.g. tock.usno.navy.mil)'); and 'Portal URL' section with a 'Status' radio button (set to 'Enable') and a 'URL' text field (set to 'http://www.netcomm.cc*'). A 'Next' button is located at the bottom right of the form.

1. Enter a new administrator password in the “New Password” field and then re-enter the same new password in the “Verify Password” field.

Please note: A maximum of 20 characters (with no spaces) is allowed.

It is strongly recommended to change the administrator password from the default setting.

2. Select the appropriate time zone from the “Time Zone” drop-down list and enter the URL of a valid NTP server to setup the system time. Ensure the NTP server is active and contactable.

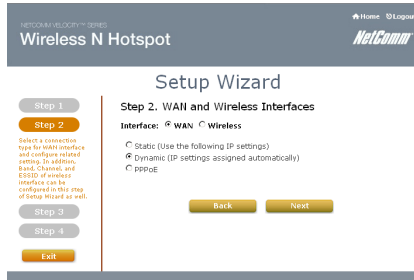
For example: 0.netcomm.pool.ntp.org

3. A connected computers browser will be redirected after successfully logging into the system. The page this is redirected to can be set instead of utilising the default homepage set on the computer by entering an address in the “URL” field.

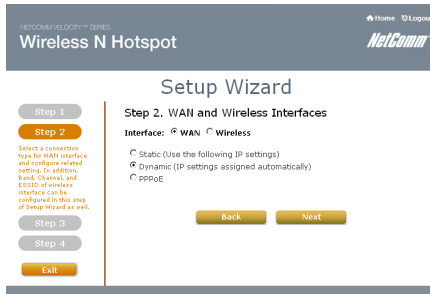
Click “Next” to continue.

Step 2: WAN and Wireless Interfaces

Step 2 of the setup wizard enables you to configure your WAN and Wireless network settings.



1. Click on the “WAN” interface radio button and select the appropriate type of WAN connection.



- a. Static:

Enter the appropriate IP address, subnet mask, default gateway and DNS server information for your WAN device (such as an ADSL modem or 3G router).

- b. Dynamic:

Network configuration information is automatically obtained via DHCP from your WAN device (such as an ADSL modem or 3G router).

- c. PPPoE:

Enter the username and password required to connect to your WAN service.

Wireless N Hotspot – HS1100N

- Click on the “Wireless” interface radio button.

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Wireless N Hotspot

Home Logout
NetComm

Setup Wizard

Step 1
Step 2
Step 3
Step 4
Exit

Select a connection type for WAN interface and configure related settings. In addition, Band, Channel, and ESSID of wireless interface can be configured in this step of Setup Wizard as well.

Step 2. WAN and Wireless Interfaces

Interface: WAN Wireless

Band: 802.11g+n

Channel: 6

ESSID (Public): NetComm_HS1100N

Back Next

- Band:

Using the drop-down menu, select to offer an 802.11b, 802.11g, 802.11b+g or 802.11g+n type of wireless network. The default setting of 802.11g+n should be suitable in most cases.

- Channel:

Using the drop-down menu, select to operate the wireless network on a specific channel if necessary.

Please note: There may be other wireless networks nearby using channel 6, in which case try using channel 1 or channel 13.

- ESSID (Public):

Enter your chosen wireless network name here.

Please note: A maximum of 32 characters is allowed for the ESSID.

Please note: The HS1100N supports two Virtual Access Points (VAP), one under a Public zone (Default Setting: NetComm_HS1100N) and one under a Private zone (Default Setting: NetComm_HS1100N_2). The ESSID for the Private zone is not broadcast.

Detailed configuration options for the VAPs can be found by clicking the “Home” link at the top of the page, followed by the System Overview button and then the appropriate VAP link.

- Click “Next” to continue.

Step 3: Authentication Settings for the Public Zone

Step 3 of the setup wizard enables you to configure the authentication settings for the public wireless network zone.



1. By default, authentication is enabled for the Public zone. This means clients will need to login to the network in order to access network resources. To disable authentication, click the “Disable” radio button.

Please note: When authentication is enabled, a default authentication server must be selected. The HS1100N supports 4 types of authentication server – Local, Radius (x 2) and On Demand. By default, On-demand is selected.

For more information regarding authentication server settings, postfixes, policies and billing plan configuration, please refer to the HS1100N User guide.

a. Server 1 (LOCAL):

When specifying a Local authentication server, select the appropriate security policy to apply to the user account and enter the selected username and password.

b. Server 2 (RADIUS):

When specifying a Radius authentication server, select the appropriate security policy to apply to the user account and enter the Radius server address, the Radius authentication port, the Radius accounting port and the Radius secret key. You can then select to enable or disable Radius accounting and select the appropriate authentication protocol as provided by your Radius server administrator.

c. Server 3 (RADIUS):

When specifying a Radius authentication server, select the appropriate security policy to apply to the user account and enter the Radius server address, the Radius authentication port, the Radius accounting port as provided by your Radius server administrator.

d. Ondemand (ONDEMAND):

Select the appropriate security policy to apply to the user account and then create an On-Demand account by clicking on the “Create” button.

Please note: If On-demand accounts are not required click “Next” to skip this step, however it is recommended to create at least one On-demand account in order to test the system configuration upon completion of this wizard.

The following page will be displayed:

Creating an On-demand Account	
Plan : Account Type	1 : Duration-time
Username/Password Creation	<input type="text" value="System created"/>
Activation Time	From account creation time
Elapsed Time	4 hour(s)
Total Price	0
Reference	<input type="text"/> Add a reference related to this account (for example, the customer's name)
External ID	<input type="text"/> Enter an external ID such as Library ID No.
Please confirm the information and press Create button to create an account.	
<div style="display: flex; justify-content: space-around; margin-top: 10px;"> Create Cancel </div>	

1. Select to either manually create a username and password or have the system generate the username and password.
2. Enter a Reference name or number for the user
(For example: A room number or the customers name)
3. Enter an External ID for the user.
4. Click “Create”

5. You should then see the following page:

Welcome!

Username	testuser@ondemand
Password	e598e3mt
Plan : Account Type	1 : Duration-time
Elapsed Time	Valid for 4 hour(s) elapsed time
Total Price	0
Reference	
External ID	
ESSID : NetComm_HS1100N	
Shared Wireless Key: None (Open System)	
Your account is activated at 2011/06/01 16:28	
Your first time login must be done before 2011/06/01 20:28	
The account will be expired in 4 hours after account activation.	

Thank You!

Send to POS

Printout

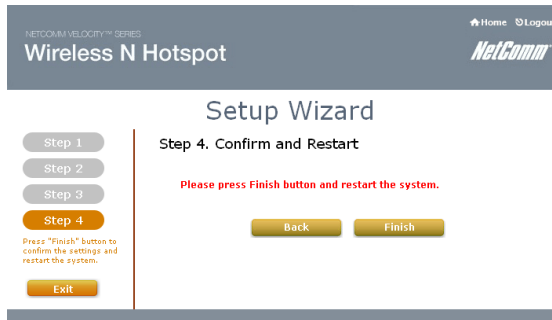
Close

Note: To make a better print-out ticket, you may need to configure the browser settings (for example, Page Setup) as well as the printer settings (for example, Preferences) before printing out the page.

After you have printed out the ticket generated or noted down the username and password, close the “On-demand User Receipt” window and click the “Next” button.

Step 4: Confirm and Restart

Step 4 of the setup wizard enables you to save the configuration entered or go back and adjust previous settings.



1. To save the current configuration and restart the HS1100N, click the “Finish” button. A dialog box will then appear asking you to confirm that the system will restart.

Please note: A restart is required to apply the new configuration.

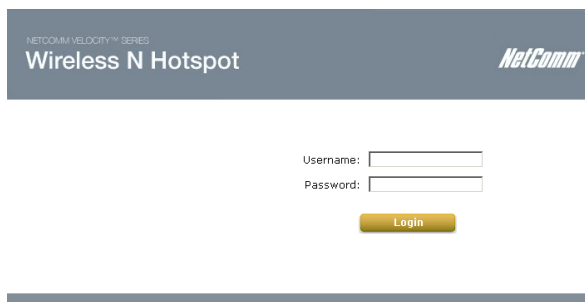
If you would like to change any previously configured settings, click the “Back” button until you reach the configuration option you would like to change and then click the “Next” button to continue back to the “Confirm and Restart” page.

2. A “Confirm and Restart” message will show on the page while the HS1100N is restarting.

Do not unplug the system during this process.

Please note: The HS1100N is attempting to contact your chosen DNS server during this period. A longer start up time may occur if the chosen DNS cannot be contacted.

The restart process has completed when the following page is displayed:



User Login

To verify whether the configuration of the new On-demand account created via the Setup Wizard was completed successfully, you can perform the following test:

1. Connect a client device (For example: A laptop computer) to the Public zone wireless network. Simply scan for the Public zone ESSID and connect to it. The client device should automatically obtain an IP address via DHCP.
2. Open a web browser on the client device and attempt to load a web page. The following User Login page will be shown:

The screenshot shows the 'User Login Page' for a NetComm Velocity Wireless N Hotspot. The page has a dark header with the NetComm logo and the text 'NETCOMM VELOCITY™ SERIES Wireless N Hotspot User Login Page'. Below the header, it says 'Welcome To User Login Page' and 'Please Enter Your Name and Password to Sign In'. There are two input fields: 'Username:' and 'Password:'. Below these is a checkbox for 'Remember Me'. At the bottom of the form are three buttons: 'Submit', 'Clear', and 'Credit Balance'. A footer contains the text 'Copyright ©' and a link 'Click here to purchase by Credit Card Online.'

Enter the username and password of the On-demand account created during the setup wizard and then click "Submit".

The Login Success page should then be displayed as per the screen shot below.

The screenshot shows the 'Login Success Page' for a NetComm Velocity Wireless N Hotspot. The page has a dark header with the NetComm logo and the text 'NETCOMM VELOCITY™ SERIES Wireless N Hotspot Login Success Page'. Below the header, it says 'Welcome, testuser@ondemand'. Underneath, it displays 'Credit Balance:' followed by '3:58:40'. There is a 'Change Password' button. Below that, it shows 'Login Time: 2011-6-1 16:29:17'. At the bottom are three buttons: 'Logout', 'Redeem', and 'Update'.

This indicates the client has logged in successfully and that the HS1100N has been correctly configured.

Please note: The format of a full (valid) username is `userid@postfix`, where "userid" is the username of the account created and "postfix" is the type of authentication server selected for the account (For example: `testuser@ondemand`).