Connecting the LAN-Cell 3 to a MiFi or Wi-Fi Access Point

Technote LCTN3012

Proxicast, LLC
312 Sunnyfield Drive
Suite 200
Glenshaw, PA 15116

1-877-77PROXI
1-877-777-7694
1-412-213-2477

Fax:
1-412-492-9386

E-Mail:
support@proxicast.com

Internet:
www.proxicast.com

This Technote applies to LAN-Cell models:

LAN-Cell 3:
　　　LC3-52U

Document Revision History:

Date	Comments
May 6, 2012	First release

Introduction

The Proxicast LAN-Cell 3 has the ability to function as a Wi-Fi "client" and connect to any existing Wi-Fi access point and use that connection as one of its wide-area network (WAN) interfaces.

This feature is useful in situations where there is an existing Wi-Fi network available at a location, when the LAN-Cell is temporarily moved to a Wi-Fi-enabled area, or for connecting to devices such as MiFi's, JetPack's, or other 802.11 compatible mobile hotspot equipment. The Wi-Fi WAN connection is fully supported by the LAN-Cell's load-balancing and fail-over features. It is also available even if the LAN-Cell is functioning as Wi-Fi Access Point to other wireless devices.

This Technote documents how to configure the Wi-Fi WAN Client feature on the LAN-Cell 3. Please consult the *LAN-Cell 3 User's Guide* for more information. This Technote is for illustration purposes only.
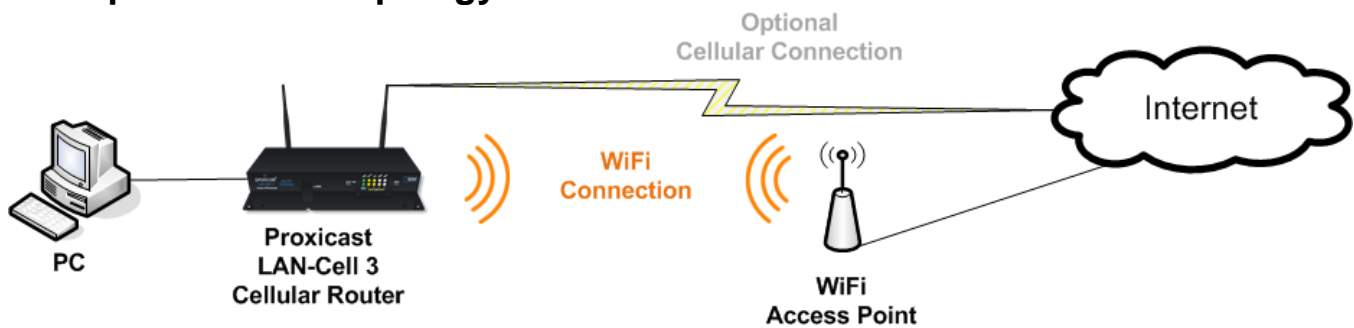
Example Network Topology

Figure 1: Example Network Topology

Usage Notes

- Some MiFi devices (such as the MiFi 2200, JetPack 4620L and JetPack 5510L) can be directly tethered to the LAN-Cell 3's USB port and used as a cellular modem. See the *LAN-Cell 3 Firmware Release Notes* and our online knowledgebase for more information on compatible models.

- The LAN-Cell 3's Access Point will use the same Wi-Fi channel as the Wi-Fi WAN connection.

- To enable inbound initiated (remote access) connections to the LAN-Cell, the external Wi-Fi access point and any upstream networks must be configured to permit inbound traffic. Some MiFi devices cannot be configured to allow inbound initiated traffic.

- The LAN-Cell 3 supports 802.11 b/g/n connections.

- This example was created using the Proxicast LAN-Cell 3 firmware version 5.2.0.

LAN-Cell Configuration

Many Wi-Fi access points default to use the 192.168.1.x subnet that is also the default for the LAN-Cell 3. You may need to change the LAN-Cell's IP address to a different subnet in order to use an existing Wi-Fi AP's subnet.

Change the LAN-Cell's LAN IP on the **Setup > LAN** screen (Figure 2). After changing the LAN IP, the LAN-Cell will reboot and the DHCP server will automatically be adjusted to the new subnet.

Figure 2: Changing the LAN-Cell 3's IP Address

To enable the Wi-Fi WAN Client feature, the LAN-Cell 3's Wi-Fi radio must first be enabled. To reach this screen, select **Wireless > Basic** from the menu (Figure 3).

Figure 3: Enabling the LAN-Cell 3's Wi-Fi Radio

Select **Enable** to activate the LAN-Cell's Wi-Fi radio. You must also enable SSID1. If you do not wish to allow other Wi-Fi clients to access the LAN-Cell, disable SSID broadcasting and enable security on SSID1.

Next, configure the LAN-Cell's WAN for Wi-Fi Client Mode. Select **Setup > WAN** from the menu and scroll to the bottom section labeled **WAN (Ethernet)** (Figure 4).
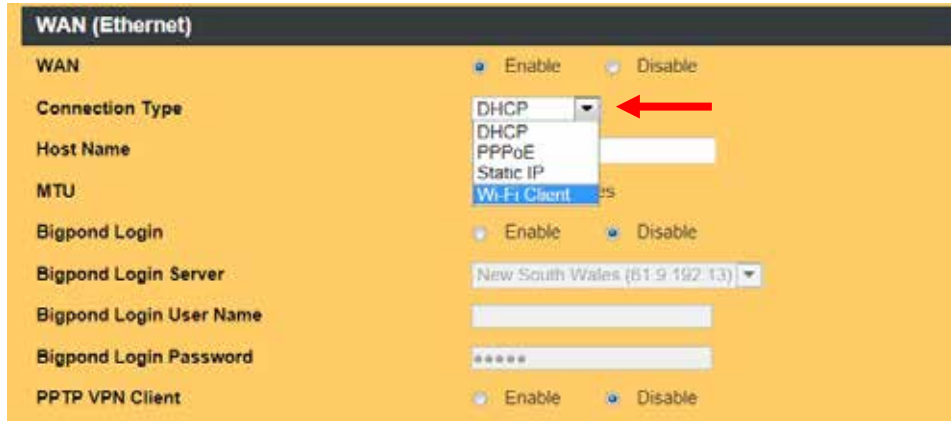

Figure 4: Wi-Fi WAN Client Mode

Select Wi-Fi Client Mode from the <u>Connection Type</u> drop-down list. Note that enabling Wi-Fi Client Mode will disable the Ethernet WAN interface on the LAN-Cell 3.

After selecting Wi-Fi Client Mode, the screen will update with additional fields as shown in Figure 5.
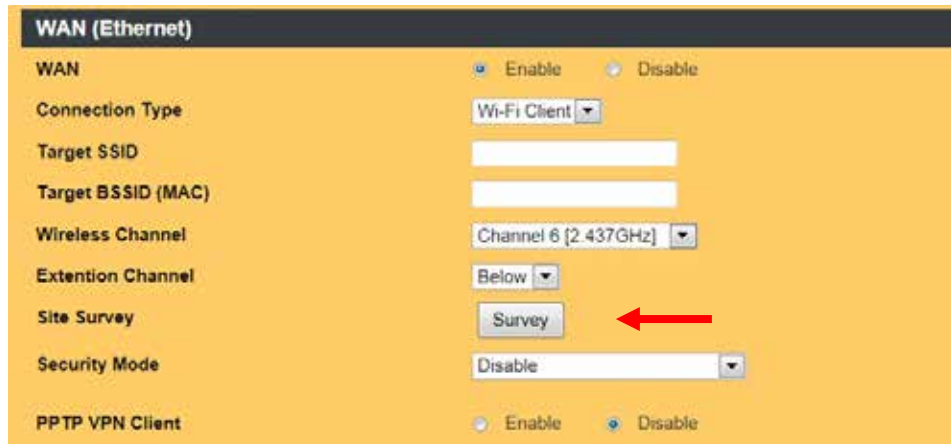

Figure 5: Wi-Fi WAN Client Mode Fields

The easiest way to configure the necessary Wi-Fi settings is to use the **Survey** button and allow the LAN-Cell to detect the target access point. Clicking the Survey button will open a screen showing all of the access points that the LAN-Cell can currently "hear" (Figure 6). If the Site Survey results window is empty, click **Refresh** to rescan for available access points.

Figure 6: Site Survey Results Window

Highlight the desired target access point and click the **Select** button. This will populate the LAN-Cell's Wi-Fi WAN screen with the correct parameters for connecting to the desired AP (Figure 7). If the target AP is password protected, you must enter the required password in the Key field on the Wi-Fi WAN screen.

Figure 7: Completed Wi-Fi WAN Client Settings

> **NOTE:** If the target access point is not available when configuring the LAN-Cell, you may enter the required parameters manually. Consult with your AP's documentation or Information Technology Department for the required settings.

When completed, click the **Save Settings** button at the bottom of the screen. After several seconds, the LAN-Cell will begin to search for the target access point. Once discovered, it will associate to the AP and make a connection. You can observe the progress on the right-side status column (Figure 8) and in the LAN-Cell 3 log.
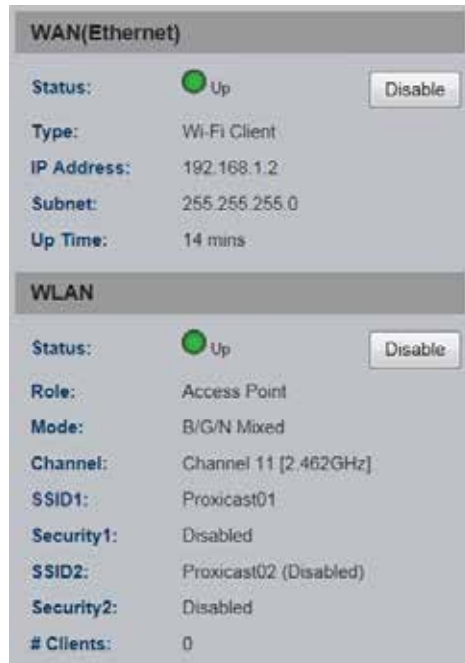
Figure 8: Successful Wi-Fi WAN Connection

At this point, the Wi-Fi WAN connection will function just like a wired Ethernet WAN connection. You may configure load balancing, fail-over and connectivity monitoring on the **Setup > WAN Advanced** screen.

# # #