Proxicast

LAN-Cell 3

Firmware Release Notes

Release 5.4.0

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Date: May 1, 2014

Version:

ProxiOS Version: 5.4.0

Supported Hardware Platforms:

Proxicast LAN-Cell 3 (LC3-52U)

Upgrading Firmware:

* * * * * * * * **WARNING** * * * * * * * *

ProxiOS version 5.4.0 represents a significant change in how the LAN-Cell 3's configuration settings are stored. Please note these important restrictions:

- LAN-Cell 3 units updated to firmware v5.4.0 (or later) cannot be downgraded to firmware releases prior to v5.4.0.

- Before upgrading a LAN-Cell 3 to v5.4.0 (or later), perform a hardware reset to clear any saved configuration settings.

- After upgrading a LAN-Cell 3 to v5.4.0 (or later), a hardware reset <u>must</u> be performed before configuring the device.

- Configuration files saved by a firmware version prior to v5.4.0 <u>cannot</u> be loaded into a LAN-Cell 3 running v5.4.0 (or later).

- Configuration file saved by v5.4.0 (or later) <u>cannot</u> be loaded into a LAN-Cell 3 running a firmware version prior to v5.4.0.

- Configuration files saved by a LAN-Cell 3 running v5.4.0 (or later) <u>can</u> be loaded into another LAN-Cell 3 running firmware version v5.4.0 (or later).

The recommended method for upgrading firmware is to use the LAN-Cell's built-in Web Configurator tool while connected to one of the LAN-Cell's LAN interface ports. Do NOT use a Wireless (Wi-Fi 802.11 b/g/n) wireless connection to the LAN-Cell to perform the firmware update.

We discourage upgrading firmware over a WAN connection (esp. Cellular) due to the slow speed, high latency and potential for permanently damaging the LAN-Cell if communications are interrupted.

Backup the LAN-Cell's Configuration
We strongly recommend backing up the LAN-Cell's configuration parameters before upgrading the firmware:

- Choose the ADMIN > MANAGEMENT menu
- Click the EXPORT CONFIGURATION button
- Save the configuration file to your PC

Installing LAN-Cell Firmware
Download the firmware package from http://support/proxicast.com. Unzip the package contents and save the *LC3-52U-Firmware-vN.N.N.bin* file to a local disk drive (preferably not a USB flash memory stick).

- Choose the ADMIN > MANAGEMENT menu
- Use the BROWSE button next to the Upgrade Firmware field to locate the firmware's ".bin" file on your PC
- Click the UPGRADE button

Once a firmware upload process has started, DO NOT POWER CYCLE or disconnect from the LAN-Cell.

When the firmware upload is complete, the LAN-Cell will reset and the Web interface will be available again. Do not reset the LAN-Cell until successfully reconnecting to the device after a firmware upgrade.

Confirming the New Firmware Revision
After the firmware upload is complete, confirm that the running firmware revision matches the one installed by checking the Firmware field on the right-side status column displayed on all system screens.

If the Firmware Update Fails
Restart the LAN-Cell (via a power cycle or the ADMIN > MANAGEMENT > REBOOT button) to clear any partial firmware images in memory. Then perform a hardware reset on the LAN-Cell (using the front Reset button or the ADMIN > MANAGEMENT > DEFAULT button) and then re-attempt the firmware installation.

Supported USB Modems:

Modems are listed by their original equipment manufacturer and model name. Model names used by cellular operators may be different. Refer to the label on the modem or the documentation to determine if your modem is a rebranded version of a supported device.

Many USB modems from the same manufacturer have similar interfaces – unlisted modems may also function in the LAN-Cell 3 but have not yet been verified.

3GO	**Franklin Wireless**	E960
3GO11	U770 (Sprint) [1]	EC1260
Alcatel	**Huawei**	EC156
OT-X020	B970	EC168C
X220L	E122	EC169
A-Link	E1550	ET168
3GU	E156	K1550
AMOI	E156G	K3715
H01/H01A	E160	K3765
H02	E160E	K4505
U2000	E160G	K4511
AnyData	E161	T1731
ADU-500A	E169	UMG366
ADU-510A	E1692	**Hummer**
ADU-520A	E169G	DTM5731
AT&T Wireless	E176G	**iSonic**
Beam	E169U	EDGE CARD
Lightning	E170	**LG**
Momentum	E172	LDU-1900D
Shockwave	E1750	**Maxon**
Bandrich	E1762	BP3
BandLuxe C120	E176G	BP3-EXT
BandLuxe C170	E177	**Neotel**
BandLuxe C270	E180	NeoGo
BandLuxe M300LC	E182E	**Netgear**
BenQ	E219	AirCard 340U [1]
U31	E220	AirCard 341U [1]
C-Motech	E226	**Nokia**
CDU-680	E270	CS-11
CGU-628	E3131	CS-12
CNU-680	E353	CS-15
D-Link	E367	**Novatel Wireless**
DWM-156	E368	4620L MiFi [1]
DWM-157	E397	5510L MiFi [2]
DWR-510	E398	MC760
Dupont / Toshiba	E600	MC930D
BC2703	E612	MC950D
G450	E620	MC990D
EpiValley	E660A	U679
SEC-8089	E800	U727

U760	AirCard 330U	UML290
U998	AirCard 340U [1]	UML295 [1]
USB551L	AirCard 341U [1]	USB551L
Option	AirCard 595U	USB760
ICON 210	AirCard 598U	**Vibo**
ICON 225	AirCard 875U	D200
ICON 401	AirCard 880U	**WinBest**
ICON 7.2	AirCard 881U	HSDC-02
GlobeSurfer HSUPA	Compass 885	**ZTE**
GT Max 3.6	Compass 888	K3565-Z
Vodafone EasyBox	Compass 889	MC2716
Vodafone K3760	USB 305	MDC503UP
Pantech	USB 306	MDC505UP
UM175	USB 308	MDC525UP
UML290	**Simcom**	MF620
UML295 [1]	5250	MF622/MF622 v2
Pro-Link	**Solomon**	MF626
PHS100	S3Gm-660	MF628
Qisda	**Sony Ericsson**	MF628+
H21	MD300	MF631
Quanta	MD400	MF633
MDO 588	**Sprint**	MF636
Q101	341U [1]	MF636+
Q110	595U	MF637
Q111	598U	MF638
Q120	760U	MF668
Samsung	770U	MF668A
i9000	**Toshiba**	MF820
GT-S8500	G450	MH600HS
SGH-Z810	**Verizon Wireless**	MU351
Sierra Wireless	JetPack 4620LE [1]	
AirCard 312U	JetPack 5510L [2]	
AirCard 313U	UM170	

[1] Modem requires configuration prior to use in the LAN-Cell 3. See http://support.proxicast.com for more info.
[2] Modem does not support inbound initiated (remote access) connections.

Change History:

V5.4.0

- Please see the Warning under the **Installing Firmware** section above for important considerations when upgrading to v5.4.0.

- Added Wi-Fi Guest Hotspot feature.

V5.3.5

- Added support for Huawei UMG366 (T-Mobile Jet 2.0) modem.
- Fixed issue with Wi-Fi client count on status display panel.
- Fixed issue preventing some Wi-Fi clients from being included in the DHCP table.

V5.3.4

- Added support for the AT&T Beam (Netgear AirCard 340U) modem. See the "AC340U Issues" statement below.
- Added support for the Huawei E3131 modem (non-HiLink mode).
- Added support for the Huawei E397 & E398 modems.

V5.3.3

- Added support for the Sprint/Netgear AirCard 341U (CDMA/LTE) modem. See the "AC341U Issues" statement below.
- Fixed issue causing remote user VPN connections to time-out after 5 minutes.

V5.3.2

- Added support for the Verizon Wireless/Pantech UML295 modem. See the "UML295 Issues" statement below.

V5.3.0

- Added option for IPSec net-to-net VPN tunnels to disable "split-tunneling" (i.e. force all non-local traffic to go through the VPN tunnel rather than directly to its destination).
- Increased length of IPSec Phase 1 ID fields to 128 characters.
- Added support for static IP when WAN is in Wi-Fi Client mode.
- Added ability for Wi-Fi Client Mode to automatically re-associate with a different AP on a different channel having the same target SSID value (WDS roaming).
- Added logging when Wi-Fi devices fail to associate with the LAN-Cell 3's AP.
- Added logging when WAN Wi-Fi Client mode fails to associate with the target SSID.
- Fixed issue generating erroneous log entries when IPSec VPN is configured for Remote User mode.

- Fixed issue with not correctly redirecting DNS queries to OpenDNS servers when client devices have static DNS server settings.
- Fixed issue causing DHCP Lease Time to display incorrect value when DHCP leases are issued prior to an NTP update.
- Fixed issue affecting the Novatel USB551L modem that caused the modem to be incorrectly initialized under certain conditions.
- Improved reconnection technique for the Pantech UML290 modem.

V5.2.0

- Added support for Virgin Mobile MC760 modem (variant of Novatel U760).
- Added support for tethered operation of the Novatel 4620L MiFi JetPack.
- Increased frequency of signal strength display updates when USB modem does not have an active data connection.
- Allow $ ( ) characters in password.
- Increased maximum length of DDNS hostnames to 128 characters.
- Increased maximum IPSec SA lifetime to 86400 seconds.
- Moved scheduled system restart timer function from Setup>Time to Admin>Management screen.
- Changed default system time zone to pure UTC (was GMT).
- Fixed issue causing static routing / IPSec conflict.
- Fixed issue with SNMP MIB causing some values to be returned incorrectly.
- Fixed PPTP client issue causing PPTP client to drop unexpectedly.
- Force IPSec to lookup remote gateway in DNS before every connection attempt when remote gateway specified as FQDN host.
- Corrected issue causing incorrect number of VPN connections to be displayed on status panel.
- Enable Wi-Fi client to connect to access points which have spaces in their SSID
- Fixed issue with outbound ACL that affected packet denials.
- Force number of ports specified in Port Forwarding rules to match between external and internal interfaces.

V5.1.15

- Added support for the Bell Canada variant of the Sierra Wireless AirCard U330 modem.
- Increased aggressiveness of USB connection watchdog to include full system restart after repeated lockup detection.
- Improved initial display of modem signal strength on boot-up.
- Fixed DNS Server issue with DHCP-enabled Wi-Fi Guest LAN clients.
- Fixed DHCP Server issue limiting number of assignable addresses.
- Exempt LAN-Cell management port from DMZ when changed from 8080.
- Persist interface status changes made via Status Panel buttons across system restarts.
- Prevent backup routes from taking precedence over user-defined static routes.
- Increased maximum size of log entries.

- Enable newly added Virtual Host rules by default.
- Fix display issue on VLAN screen.
- Changed Wi-Fi Client Mode wording on WAN interface status.

V5.1.10

- Added software watchdog feature for USB-modems to detect reinitialization failures and other lock-up conditions.
- Fixed issue where Scheduled Reboot was not occurring based on count-down timer.
- Fixed compatibility issue with some Atheros-based Wi-Fi access points.
- Increased security of httpd daemon.
- Added support for D-Link modem: DWM157
- Added support for Huawei modems: EC156, E353, E367, K4511, T1731
- Added support for Novatel modems: U679 (LTE), U998
- Added support for Sierra Wireless modems: 312U (HSPA+), 330U (LTE)
- Added support for ZTE modems: MC2716 and MF668/MF668A

V5.1.0

Initial release to manufacturing.

Known Issues:

1. When in WAN Wi-Fi Client mode, the new SSID is not used when target SSID is updated in the GUI. Reboot to use the new target SSID.

2. When connecting a LAN-Cell 3 which has a private WAN IP address (e.g. 10.x.x.x from Verizon's LTE APN "vzwinternet" or AT&T's APN "broadband") to a remote IPSec VPN server, you must explicitly specify the Phase 1 Local and Remote ID values on both VPN devices; otherwise, the LAN-Cell 3 will send its WAN IP address as the default Local ID – this will not match the incoming IP address of the packet on the remote VPN Server. IP Addresses as well as Strings (e.g. DNS, E-Mail) are supported for Phase 1 ID's. If the LAN-Cell 3 has a private WAN IP address, it must also initiate all VPN connections with the remote VPN Server (enable Connection Initiation on the VPN rule popup screen).

3. The Pantech UML290 modem sometimes does not display signal strength when first initialized. Disable and re-enable the USB interface to enable signal strength display.

4. The following characters cannot be used as part of a Preshared Key:
   ( ) $ ^ & + ` | \ ; " ' < >

UML295 ISSUES

By default, the firmware currently available on the Verizon Wireless/Pantech UML295 modem does not allow "inbound" initiated connections from the Internet to the modem. In order to use remote access applications such VNC, pcAnywhere, camera and DVR viewing, etc. the UML295 must have a public static IP address assigned by Verizon Wireless and be configured to perform Port Forwarding. Please see our Knowledgebase article [Configuring the Verizon / Pantech UML295 for Remote Access Applications](#).

You may also work around this issue by having the LAN-Cell 3 initiate an outbound VPN connection to a VPN server (e.g another LAN-Cell, Cisco, Juniper, SonicWall, etc.) to create a two-way communications tunnel. The VPN tunnel must conform to the conditions outlined in Issue #2 above.

The UML295 has a default fixed IP subnet of 192.168.32.0 / 255.255.255.0. An address from this range will be assigned to the USB WAN interface on the LAN-Cell 3 even if the UML295 has been assigned a static IP address by Verizon Wireless. Do not use this subnet on any LAN segments connected to the LAN-Cell 3 or change the UML295's subnet using the instructions in the KB article above.

The UML295 must be configured to AutoConnect via its internal web interface (http://192.168.32.2). If the UML295's "Mobile Broadband Enhanced Application" has been installed on any PC that will remain connected to the LAN-Cell 3, the Enhanced Application should be removed (via the Windows Control Panel) before the connecting the PC to the LAN-Cell 3.

These limitations may be removed in a future firmware release from Pantech, but no timeframe has been announced.

AC341U ISSUES

The Netgear AirCard 341U modem requires an adapter (Proxicast part # ACC-USB-003) for compatibility with the LAN-Cell 3.

The Netgear 341U should have "IP Pass-Thru" mode enabled in its onboard firmware before using it in the LAN-Cell 3. Sprint has sold multiple firmware versions of the 341U modem. Some modems require an external tool to enable IP-Pass-Thru; for others, there is an option in the onboard 341U firmware's web interface. If necessary, download the Netgear Enterprise Tools for Windows: http://downloadcenter.netgear.com/en/Disclaimer.aspx?redirecturl=http://www.downloads.netgear.com/files/aircard/AC341U Enterprise Tools v1_1.zip to obtain the mode change utilities.

On the LAN-Cell 3's Setup>WAN screen, select "4G DirectIP Modems / Netgear / AirCard 341U" for reliable modem detection. New 341U firmware versions may require selecting "AirCard 341U V2".

The 341U's LCD screen may not correctly reflect the cellular connection status at all times.

This modem takes longer to initialize and register on the Sprint network than most other modems. Please allow up to 5 minutes for this process to complete.

AC340U ISSUES

The Netgear AirCard 340U modem requires an adapter (Proxicast part # ACC-USB-003) for compatibility with the LAN-Cell 3.

The Netgear 340U should have "IP Pass-Thru" mode enabled in its onboard firmware before using it in the LAN-Cell 3. Please refer to our knowledgebase article http://www.proxicast.com/AbsoluteFM/?f=268 to obtain the latest 340U firmware and mode change utility.

On the LAN-Cell 3's Setup>WAN screen, select "4G DirectIP Modems / Netgear / AirCard 340U" for reliable modem detection.

Modem signal strength is not displayed in the LAN-Cell 3's GUI, but is available on the 340U's LCD screen.

This modem takes longer to initialize and register on the AT&T network than most other modems. The modem may restart or display various messages during this time. Please allow up to 5 minutes for this process to complete.