

Release Notes for NetLink e340/h340/i640 SpectraLink Radio Protocol (SRP)

Build 89.135

Release Date: March 1, 2007

Changes

- Added necessary enhancements for compatibility in mixed environments with NetLink 8000 Series handsets and the NetLink Softphone application

Build 89.134

Release Date: August 18, 2006

Changes

- Added Regulatory Domain option 06 for Korea with 30 mW transmission power limit
- Increased maximum transmission power for Regulatory Domain option 02 (Europe) to 100 mW
- Fixed Assert: vmac.c ln 642
- Handset no longer responds to ARP of 0.0.0.0
- Improved handoff performance with WPA

**Builds 89.128 through 89.133
Not Generally Released**

Build 89.127

Release Date: December 28, 2005

Changes

- Various fixes for better recovery from TFTP server timeouts/failures
- Added duplicate IP address detection, with DHCP Decline and Release
- Fixed SRP protocol license auto-learn function
- Various fixes/tuning of battery gauge and low battery detection
- Fixed Assert error caused by malformed WPA2 extended IV

Build 89.126

Release Date: Not Generally Released

Changes

- This release number has not been used.

Build 89.125

Release Date: Not Generally Released. This release was made for manufacturing test purposes only

Changes

- Includes update to radio configuration for enhanced performance in multipath environments.

Build 89.124

Release Date: September 23, 2005

Changes

- Fixes issue of not allowing code to load into h340 handset model

Build 89.123

Release Date: September 14, 2005

Changes

- Fixes memory.c assert in site survey mode
- Fix to properly handle group traffic under WPA2 with WMM enabled
- Fix to ensure that a phone on a fully-loaded AP rings for an incoming call after roaming to another AP
- Includes minor tuning to the battery gauge

Build 89.122

Release Date: August 1, 2005

Changes

- Improved in-call low-battery detection/warning (audible and textual)
- Radio enhancements for improved operation in multi-path environments
- Fix to prevent transmitting stale packets to old AP after handoff
- Resolves the two known issues in release 89.121: DHCP for Aruba relay agent and DHCP does not properly handle broadcast responses

Build 89.121

Release Date: July 14, 2005

- Adds support for 11 Mbps without SVP Server for four and under Gateway configurations
- Enhancements to manufacturing audio test (no impact on customers/users)

Build 89.120

Release Date: Not Generally Released

Known Problems

- DHCP for Aruba relay agent
- DHCP does not properly handle broadcast responses

Changes

- Fix for rx vector switch assert
- Fixed admin menu entry bugs for regulatory domain and default WEP key
- Various DHCP and SRP failure recovery improvements
- Fixed asserts in ring.c due to race conditions
- Fixed WMM-with-WPA/WPA2/FSR operation
- Fixed problem with ESSID "Learn Always" only learning once
- Transmitter timeout (ptb24xx.h) assert fix
- Interrupt disable/enable bug fix
- Fixed site survey app buffer overrun in display of AP key ciphers
- Admin menus fix to force re-compute of WPA2 PSK when ESSID is changed
- Fixed handoff report syslog to use correct "From" AP information
- DHCP fixes -- renewals in presence of relay agent , problems with DHCP Turbo
- Fixed uninitialized TFTP retry timer variable
- Fixed manufacturing test loopback audio volume
- Fixed continuous in-ear ring
- Fixed initialization issues when restarting TFTP after server timeout
- Restored Language menu entry in Admin menus

Build 89.119

Release Date: Not Generally Released

Changes

- Enhancements to manufacturing radio test (no impact on customers/users)

Build 89.118

Includes Downloader version 110.010 (pd11gl3.bin) and Phone International version 103.017(phintl24.bin).

Release Date: April 4, 2005

Known Problems

- Wireless Telephone has been seen to "lockup" (display unchanged and unchanging) at time it is placed into charger.
- Battery indicator is not very accurate.
- Wireless Telephone displaying "Battery Low" will not show "Charging ..." when placed in charger, even though it is charging. When battery is partially charged, "Battery Low" message will disappear and normal "Charging ..." messages will appear.
- WPA and WPA2 testing is limited at this time. Note the Access Point models and versions carefully. Updated information will be available on the web-site as it becomes available.
- Site survey mode has display issues in the detailed information (Detl softkey) display. The ESSID does not always erase previously displayed data, so left-over characters appear off the end of the current ESSID. WPA and WPA2 security modes are not displayed correctly.

- Diagnostic display mode screen 1 has questionable data for the “MissedRcvCnt” field.
- Syslog has been seen to lose report packets.

Changes

- Adds support for “Netlink 2.0” user and administrative features.
- Adds WPA, tested only on Cisco 1100/1200 version 12.2(15)XR2 and Airespace AS-4000/AS-1200 version 2.2.128.0.
- Adds WPA2, tested only on Airespace AS-4000/AS-1200 version 2.2.128.0.
- Supports WMM (basic) Access Points.
- Supports the Healthcare Wireless Telephone (h340).
- Improved Echo Cancellor
- NetLink e340/h340 speaker volume increased +2/+3 dB for hearing aid compatibility
- Microphone gain increased +4 dB for TIA-801A SLR compliance
- Lockout of Japan regulatory domain *Now use North American or European settings for Japan.*
- Fixes assert in phintl.c if the phintl file is old or corrupted. Now displays “Unknown xx:yy:zz” message instead of assert.
- Fixes problem with vibrator coming/staying on during internal error or assert.
- Multiple fixes for assert memory.c In 561.
- Multiple fixes for DHCP Lease Expired error.
- Fix for assert asic.c In 277 or In 279 at power on.
- Adjustment to reorder tone at loss of wireless network connection to allow brief “drop-out” without reorder tone. Tone will play if connection is lost for several seconds, and will still play for several seconds before “unhappy beep” is played.

Build 89.117

Release Date: March 29, 2005 – Not Generally Released

Changes

- Pre-release of 89.118. See 89.118 notes for details.

Build 89.116

Release Date: February 10, 2005 – Not Generally Released

Changes

- Experimental release for field testing of WPA, only.

Build 89.115

Release Date: January 14, 2005 – Not Generally Released

Changes

- Experimental release for field testing of WPA, only.

Build 89.114

Release Date: January 7, 2005 – Not Generally Released

Changes

- Experimental release for field testing of WPA, only.

Build 89.113

Release Date: December 17, 2004 – Not Generally Released

Changes

- Experimental release for field testing of WPA, only.

Build 89.112

Release Date: December 10, 2004 – Not Generally Released

Changes

- Experimental release for field testing of Healthcare phones, only.

Build 89.111

Release Date: November 2, 2004

Changes

- Set TTL (Time to Live) on IP multicast packets to 5. This allows Gateways to be on a different subnet than the WTs (if the network infrastructure can meet other performance criteria).

Build 89.110

Release Date: October 1, 2004

Core Changes

- Fixed a problem with Reg Domain (Regulatory Domain) being reset from 02 Euro to 01 when upgrading from earlier versions or when initially loading software on an out-of-the-box unit or when changing language.

Build 89.109

Build Date: September 28, 2004 – Not Generally Released

Known Problems

- When selecting a language in the Stand-by menu, the Reg. Domain under the Admin menu will be reset to 01. The language selection option is only available if there are multiple languages present in the chosen phintl file.

Application Changes

- Fixed problem where the message icon would disappear.
- Added a feature to play Reorder Tone before giving an error beep when the link goes down.

Core Changes

- Added Echo Canceller.
- i640/e340 microphone gain increased +4dB for TIA-810A SLR
- e340 speaker volume increase of +2dB for hearing aide compatibility
- Locked out Japan regulatory domain from admin menus. No longer support selection of channel 14. Use either FCC (domain 1) or ETSI (domain 2) for operation in Japan
- G.729 decomband scheduling change. Fixes dropped audio on G.729 calls.
- Prevents freeing already-freed sockets
- Fixed DHCP to properly handle renewal responses from multiple sources

Build 89.108

Release Date: September 8, 2004

Resolved Issues

- Key tone interactions fixed. Resolves several reported issues where pressing a key, and getting a key tone, during some other action (like switching from Speakerphone to handset on the Docking Station) would result in audio routing to the wrong output device and/or being at the wrong volume.
- Correctly sets the current noise mode when coming out of standby. No longer need to power cycle phone for noise mode setting to take effect.
- Speakerphone LED on Docking Station gets turned off regardless of the state that the END key is pressed in.
- Modified user menu text: No "OK" softkey on display-only menus; Backspace key underflow and last column fixed; Up/Down arrows fixed
- Fixes issue (SRP ACK ID change) with phone not working if it was reset after 32K acknowledged messages had been exchanged. This only happened after a long period of uptime on a very "chatty" PBX integration. Issue required a Gateway reset or phone de- and re-registration to recover.
- PTT/in-ear interaction fixed. The Push-to-Talk application did not allow an incoming PBX call to be signaled (via a mixed-in alert tone).

Enhancements

- Won't associate to IBSS. Improved check that the Beacons and Probe Responses are from an ESS device, not an IBSS device
- Rejects malformed probe responses. The phone now checks a probe response for bad lengths, etc., and discards the packet rather than possibly overflowing an internal buffer and/or memory asserting.

Build 89.104

Release Date: June 11, 2004

Resolved Issues

- Allow more than five digits for the extension to be seen on the display
- Fixed "Not entered yet" ESSID
- Fixed PTT resource management
- Fixed audio off on standby menu exit

Enhancements

- Warning and alert tones reduced by 8dB.
- Ringing volume reduced by 10db at loud levels and 20db at soft levels in i640.
- Quite key beep at menu exit.
- Menu "up" returns to parent menu and not top.

Build 89.102

Not generally released

New Functionality

- Adds support of NetLink Docking Station
- Support for the ST Micro flash memory chip
- Adds support of vertical scrolling for administration and standby user menus
- Compatible with 170-series of SVP Server software (as well as 160-series of software)
- TFTP timeouts lengthened to 2 seconds

- TFTP doesn't change ports on retries
- Phintl file required (with SRP, adds support for Siemens phintl file to enable German language choice and Siemens font)

Resolved Issues

- FSR bug fixes (problem of losing the network while mobile in standby)
- slnk_cfg.cfg file over 512 bytes fixed
- Fully compatible with 802.11g radios
- Fixes headset detection
- Battery song with headset fix (volume decreased)

Enhancements

- Includes fixes to battery charging. Charges active phone.
- Adds improvements for enhanced battery life, but does not extend the current specifications
- Adjusts echo suppressor for enhanced audio

Build 89.102

Release Date: May 6, 2004

New Functionality

- Adds support of NetLink Docking Station (currently in beta testing)
- Support for the ST Micro flash memory chip
- Adds support of vertical scrolling for administration and standby user menus
- Compatible with 170-series of SVP Server software (as well as 160-series of software)
- TFTP timeouts lengthened to 2 seconds
- TFTP doesn't change ports on retries
- Phintl file required (with SRP, adds support for Siemens phintl file to enable German language choice and Siemens font)

Resolved Issues

- FSR bug fixes (problem of losing the network while mobile in standby)
- slnk_cfg.cfg file over 512 bytes fixed
- Fully compatible with 802.11g radios
- Fixes headset detection
- Battery song with headset fix (volume decreased)

Enhancements

- Quieter alert tones
- Includes fixes to battery charging. Charges active phone.
- Adds improvements for enhanced battery life, but does not extend the current specifications
- Adjusts echo suppressor for enhanced audio

Build 89.099 (GDL v92.056)

Release Date: February 26, 2004

This is the first major release of code for the NetLink e340/i640 Wireless Telephones since version 89.080. There have been several resolutions and enhancements incorporated into this code.

New Functionality

Support for Fast Secure Roaming (FSR) is now incorporated into the code. FSR is a security function that works with Cisco APs running CCKM mode to allow low latency devices to roam within the network more quickly. This functionality is currently in beta at customer sites.

Resolved Issues

- Now correctly utilizes subnet mask and default gateway information in the over-the-air downloader (subnet download fixes).
- The over-the-air downloader now correctly responds to ARP requests (Linux TFTP server issue).
- Fixed “DCA Timeout” errors that can occur with over-the-air downloader v92.054 or v92.055.
- Fixed problems with ringer following the volume adjust.
- Fixed problems with ring cadence processing.
- Fixed issues that caused lockup behaviors.
- Fixed issue where MSG icon would cause phone to stop charging with some PBX integrations.
- Several fixes for memory and VMAC_ISR asserts.
- Added fix to help reduce amount of multicast flooding that occurs in certain network configurations.
- Fixed SVP timing issues that were causing collisions and retries on the air.
- Multiple fixes to resolve code related manufacturing failures.

Enhancements

- Reduced beeper volume by 20dB on alert tones.
- Maximum audio level is now the equivalent of about 1 volume setting louder (~5db louder) and added new audio sidetone curve for NetLink i640 Wireless Telephone only.
- Adjustments to low battery thresholds to optimize call and standby time.
- Allows 32-character ESSID entry and usage.
- 802.11 ACK timing has been adjusted for compatibility with Airespace APs.
- Changed packet-processing behavior to improve audio performance.
- Added enhancements to help reduce amount of multicast flooding that occurs in certain network configurations.

“DCA Timeout” Workaround

Over-the-air downloader versions 92.054 and 92.055 have a bug that can result in repeated “DCA Timeout” failures when attempting to update code. This bug can render the phone inoperative. A fix for this problem has been included in v92.056 of the over-the-air downloader (included with this release), but until the code in the phone is updated it cannot take advantage of the fix.

In order to get the code in the phone updated, thus obtaining the fix you can use the following procedure:

1. Get the phone as close to an AP as possible, or convenient, while powered off.
2. Power the phone on.
3. When the “Erasing memory” message appears on the phone display, power the AP off.
4. Once the phone displays either “No Net Found” or “Updating Code...” it is now safe to power the AP back on, the phone should now correctly download and update code. (Note: during this final step do not power the phone off or you will need to start over at step #1).