NORTEL

Nortel WLAN Handset 6100 Series Battery Error: "I2C" Battery Issue (Software Rls 2.x Fix - Build 115.021)

Background:

Nortel provides notification that a Nortel WLAN Handset 6100 Series battery error condition has been identified with WLAN Handset 6120/6140 models running Software Rls 2.x (build 115.019 or earlier).

The error condition can be presented when a Nortel WLAN Handset 6120/6140 attempts to power up with a fully-charged, new out-of-the-box battery pack believed to have a manufactured date code of January 2009 or later [date code start date is approximate - battery pack models are inclusive of the WLAN Handset 6100 Series "Standard", "Extended", and "Ultra Extended" capacities].   See the below in this document on how to locate the battery pack manufactured date code on the product label.

The specific "I2C" type error that could appear varies, but typically includes one of the following messages or conditions:
*Possible error messages on the WLAN Handset 6120/6140 display:
* "Assert i2c.c Ln 269"
* "Battery Failed"
* "Battery I2C Error"
* The WLAN Handset 6120/6140 display appears to hang during the boot process with only the unit's MAC address shown
* The WLAN Handset 6120/6140 appears to hang during the boot process with a mostly blank screen (only the download icon and battery icon showing at the top of the display with blank outlined softkey boxes at the bottom of the display).

The "I2C" error state condition is caused by a communication error between the WLAN Handset 6120/6140 and the EEPROM (Electrically Erasable Programmable Read-Only Memory) found inside the battery pack. During the WLAN Handset 6120/6140 boot process, the handset software attempts to access the battery pack EEPROM prematurely, causing the battery pack to report a false error.

This "I2C" error condition is more likely to occur with battery packs having a manufactured date code of January 2009 or later (note that the date code start date is approximate), however not all battery packs from the same manufactured date batch will experience the "I2C" error condition. Also the "I2C" condition, if present, should immediately present itself upon initial installation of the battery pack with the WLAN handset (e.g. it should not be an issue that manifests itself over the life of the battery).

Important Notes:
A new out-of-the-box battery pack exhibiting the "I2C" error condition is not physically defective.   To avoid exchange processing/deployment delays and potential customer dissatisfaction, Nortel highly recommends the channel partner attempt to resolve an "I2C" battery error issue in the field wherever possible.

Please see below in this document for recommendations on how to pro-actively avoid this battery error issue and/or properly recover a battery pack exhibiting the "I2C" error condition.

Analysis:

The Nortel Product Engineering Codes (PECs) and Order Codes (CPCs) for the specific components in the WLAN Handset 6100 Series Portfolio involved with the battery error issue are listed below.

PEC	CPC	Product Description
NTTQ4020E6	N0129562	Nortel WLAN Handset - 6120 (Handset Only)
NTTQ4021E6	N0129563	Nortel WLAN Handset - 6140 (Handset Only)
NTTQ4025	N0129567	Nortel WLAN Handset - 61xx Standard Battery Pack*
NTTQ4026	N0129568	Nortel WLAN Handset - 61xx Extended Battery Pack*
NTTQ4027	N0129569	Nortel WLAN Handset - 61xx Ultra Extended Battery Pack*
* Believed to only be applicable to Nortel WLAN Handset 6100 Series Battery Packs with a manufactured date code of January 2009 or later (start date is approximate)		

* Believed to only applicable to Nortel WLAN Handset 6100 Series Battery Packs with a manufactured date code of January 2009 or later (start date is approximate)

The above components involved with the "I2C" battery error issue are also included in the following Nortel WLAN Handset 6100 Series handset kit/bundle Product Engineering Codes (PECs) and Order Codes (CPCs):

PEC	CPC	Product Description
NTTQ4044E6	N0142639	Nortel WLAN Handset - 6120 Handset Kit with single slot charger, standard battery, belt clip
NTTQ4045E6	N0142640	Nortel WLAN Handset - 6120 Handset Kit with dual slot charger, 2 extended batteries, belt clip
NTTQ4046E6	N0142641	Nortel WLAN Handset - 6140 Handset Kit with single slot charger, standard battery, belt clip
NTTQ4047E6	N0142642	Nortel WLAN Handset - 6140 Handset Kit with dual slot charger, 2 extended batteries, belt clip

Important Note: The "I2C" battery error / issue is not applicable to the Nortel WLAN Handset 2200 Series handset models (2210, 2211, and 2212) or their respective battery packs.
Identifying the WLAN Handset 6100 Series battery pack manufactured date code

The "I2C" battery error condition can be presented when a Nortel WLAN Handset 6120/6140 attempts to power up with a fully-charged, new out-of-the-box battery pack believed to have a manufactured date code of January 2009 or later (date code start date is approximate - battery pack models are inclusive of the WLAN Handset 6100 Series "Standard", "Extended", and "Ultra Extended" capacities).

To locate the WLAN Handset 6100 Series battery pack "manufactured date code", the user must remove the battery pack from the WLAN Handset and examine the following area on the product label**:

Figure 1: WLAN Handset 6100 Series Battery Pack Product Label Example

Manufactured Date Code: **XXX ####**

XXX = Three letter abbreviation of the battery pack manufacture "month"
(e.g. JAN, FEB, MAR, APR, MAY, JUN, etc)

= Four digit of the battery pack manufacture "year"
(e.g. 2008, 2009, etc)

** The "manufactured date code" is in the same location on the product label regardless of the product WLAN Handset 6100 Series "Standard" (NTTQ4025 / N0129567), "Extended" (NTTQ4026 / N0129568), or "Ultra Extended" (NTTQ4027 / N0129569) capacity model.

When a new battery pack enters the "I2C" error state, it will no longer function properly in a WLAN Handset 6120/6140 until the battery pack is "re-conditioned" (recovered) in either the rear slot of the Nortel WLAN Handset 6100 Series Dual-Slot Handset Desktop Charger (NTTQ4023E6) or in the Nortel WLAN Handset 6100 Series Quad-Slot Battery Pack Charger (NTTQ4024E6).   The battery pack "re-conditioning" process does not require a completed charge cycle. Once the loose battery pack is placed into the rear slot of the Dual-slot charger or placed into the Quad-slot charger, it should be recovered and into fully operational state within approximately 30 seconds.

Important Notes:
Once a battery pack enters the "I2C" error state, it can not be recovered while placed in the WLAN Handset 6120 (NTTQ4020E6), WLAN Handset 6140 (NTTQ4021E6), or by using the Nortel WLAN Handset 6100 Series Single Slot Handset Desktop Charger (NTTQ4022E6).

Any Nortel WLAN Handset 6100 Series battery pack in the "I2C" error state which has not gone through the proper Dual-Slot Desktop Charger or Quad-Slot Battery Pack Charger "re-conditioning process" listed above will continue to exhibit the "I2C" error behavior.

Sites that do not have a Dual-Slot Desktop Charger or Quad-Slot Battery Pack Charger, have an option to return in-warranty batteries affected by the "I2C" battery error issue by following the standard Nortel DOA procedure appropriate for the given customer.

While the WLAN Handset 6120/6140 Software Rls 2.x (Build 115.019 or earlier) can cause the "I2C" error state with the newly manufactured battery packs, the WLAN Handset 6120/6140 itself is not affected.

The fix for the WLAN Handset 6120/6140 "I2C" battery error issue is resolved with a software update to the handset. The software fix slows down the WLAN Handset 6120/6140 to the battery pack EEPROM communication rate during the boot process, thereby allowing the battery pack additional time to respond to the WLAN Handset 6120/6140 requests and eliminating the error condition.

The Nortel WLAN Handset 6120/6140 units must be updated with software containing the fix with the WLAN Handset 6100 Series Software Rls 2.x - Build 115.021 or later.

Nortel recommends that WLAN Handset 6100 Series customers upgrade to Software Rls 2.x (Build 115.021 or later) for all applicable Nortel Call Servers that at their earliest convenience and especially prior to using newly purchased battery packs.
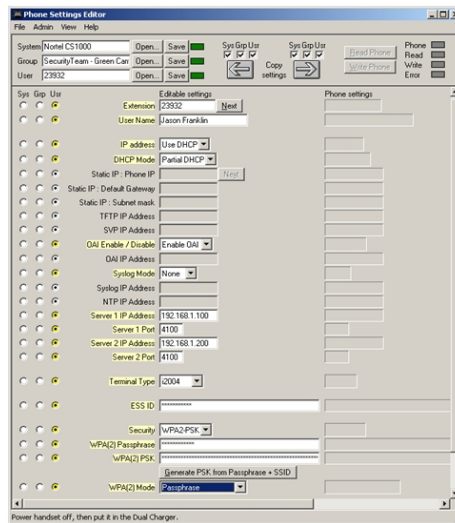
Important Note:
All Nortel WLAN Handset 6120/6140s must be updated with the new software build 115.021 or later to prevent the "I2C" battery error from occurring or re-occurring.

Recommendations:

New WLAN Handset 6100 Series installations with the current factory build of 115.019 can eliminate their exposure to the "I2C" battery error issue by upgrading the WLAN Handset 6120/6140 to Software Rls 2.x (Build 115.021 or later) using the Handset Administration Tool software download feature. This update process uses the WLAN Handset 6100 Series Dual-Slot Desktop Charger, WLAN Handset Administration Tool (HAT), USB cable and a Windows PC to allow the software build with the fix to be loaded directly on the WLAN Handset 6120/6140 and would circumvent the "I2C" battery error issue from occurring.

WLAN Handset Administration Tool (HAT) - General Description

The WLAN Handset Administration Tool (HAT) improves the productivity of system administrators by allowing configuration changes or new software builds to be quickly loaded into the WLAN Handset 6100 Series models.

For the WLAN Handset 6120 or WLAN Handset 6140 products, the HAT solution is comprised of a Nortel WLAN handset 6100 Series Dual-slot Desktop Charger (NTTQ4023E6), Desktop Charger local power supply (PEC varies by region), with a separately obtained standard USB cable (USB connector type "Mini-B" to "Type A" to enable it to be connected into a local PC (running Microsoft Windows) running the HAT software (Rls 02.04.00.15 or later). The HAT Software is posted to the Nortel Technical Support Portal for download.

Important Note:
Nortel strongly encourages partners/customers to have at least one Dual-Slot Desktop Charger (NTTQ4023E6), local power supply, and USB cable available on site to ease administration and possible future software updates.
To speed installation time, installers may choose to load only the over-the-air downloader (OTADL) component (filename "pd14odus.bin"), however, the remaining handset software files must also be loaded over-the-air using a TFTP server.
For existing Nortel WLAN Handset 6100 Series installations which have batteries with a manufactured date code prior to the January 2009 timeframe (date code start date is approximate), the standard "over-the-air" software update process should be used to upgrade the WLAN Handset 6120/6140 Software to Build 115.021 or later prior to using newly purchased battery packs.
The Nortel WLAN Handset 6100 Series battery pack "I2C" error state is fixed with the WLAN Handset 6100 Series

Software Rls 2.x - Build 115.021 now posted to the Nortel Technical Support Portal.
Build 115.021 is comprised of the previous Nortel WLAN Handset 6100 Series Software Rls 2.x GA load (Build 115.019 introduced in February 2008) with the corrective "I2C" battery error fix.   Build 115.021 is comprised of the following four components / releases / files:

Component Name	Component Release	File Name
USBDL (USB downloader)	113.005	pd14udus.bin
OTADL (over-the-air downloader)	119.058	pd14odus.bin
Functional Code	115.021	pd14cus.bin
Phintl (Language Translation)	116.021	pi1400us.bin

No other feature improvements have been made to the above 115.021 build.
Nortel recommends that WLAN Handset 6100 Series customers upgrade to Software Rls 2.x (Build 115.021 or later) for all applicable Nortel Call Servers that at their earliest convenience.
The Nortel WLAN Handset 6100 Series Software Rls 2.x (Build 115.021) and WLAN Handset Administration Tool (HAT) software is available for download from the "Software Download" link under "Support and Training" on the Nortel website located at: <http://support.nortel.com>. The software is available by the WLAN handset model under "Phones, Clients and Accessories".

A software build with the "I2C" battery error fix is in the process of being introduced as the default load for the WLAN Handset 6120/6140 models shipped from Nortel, however the corrective factory load is not expected to begin shipping from Nortel inventory until the 4Q09 timeframe.

PAA-2009-0105-Global will also be issued on this topic.

Required Actions:

A new out-of-the-box battery pack exhibiting the "I2C" error condition is not physically defective and to avoid exchange processing/deployment delays and potential customer dissatisfaction, Nortel highly recommends the channel partner attempt to resolve an "I2C" battery error issue in the field wherever possible.

Please see below in this document for recommendations on how to pro-actively avoid this battery error issue and/or properly recover a battery pack exhibiting the "I2C" error condition.

For installed equipment where installation of the WLAN Handset battery packs has been attempted at customer sites, exhibit the "I2C" battery error, and do not have a Dual-Slot Desktop Charger or Quad-Slot Battery Pack Charger for an on-site recovery / fix, Nortel Order Management can create replacement orders for these DOA returns.

Important Notes:
All Nortel WLAN Handset 6120/6140s must be updated with the new software build 115.021 or later to prevent the "I2C" battery error issued from reoccurring with any future/newly purchased battery packs.

This is especially important for new WLAN Handset 6100 Series installations which might have the previous GA code (Build 115.019) loaded from the factory and do not have older batteries which are not suspect to the "I2C" battery error issue.

DOA replacement process
Product should be returned through the DOA process below to the logistics facility determined by Nortel Order Management. When returning material, please use the following guidelines and procedures:

1. Contact Nortel Order Management for an RMA (Return Material Authorization), please reference
(PAA-2009-0105-Global, or this Clarify Bulletin)
2. RMA for credit will be issued for all affected battery packs

3. Product will be returned only against a Nortel designated and authorized RMA Number through the DOA process, all boxes must be identified and labeled with Nortel RMA number, and must be returned within 60 days of RMA issuance to the location provided through Nortel Order Management
4. Offsetting PO is not required but if received and identified will be given priority for shipment (Nortel Order Management will create replacement orders for these DOA returns)
5. RMA issuance as described above will expire on Aug 31, 2010

Important Note:
To expedite the fix completion date it is appreciated if distributors return any WLAN Handset battery packs with the "I2C" error as soon as possible.

Attachments:
There are no attachments for this bulletin

Products and Releases:
The information in this bulletin is intended to be used with the following products and associated releases:

PRODUCT	RELEASE
Phones & Accessories-Wireless-WLAN Handset 6120	
Phones & Accessories-Wireless-WLAN Handset 6140	

To view the most recent version of this bulletin, access technical documentation, search our knowledge base, or to contact a Technical Support Representative, please visit Nortel Technical Support on the web at: http://support.nortel.com/. You may also sign up to receive automatic email alerts when new bulletins are published.

REFERENCE:	
PRE-REQUIRED PATCH:	
PATCH ID:	
FIXED RELEASE:	Build 115.021