

# NetComm Wireless M2M Family

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## Firmware Release Notes

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**This document covers the following products:**

NetComm Wireless NTC-6200-02

NetComm Wireless NTC-6908

NetComm Wireless NTC-6908-02

NetComm Wireless NTC-6520

NetComm Wireless NTC-30WV

NetComm Wireless NTC-40WV

DOCUMENT VERSION	DATE
1.0 – Initial document release	27/02/2014
1.1 – Updated for v2.0.4.2	07/05/2014
1.2 – Updated for v2.0.11.2	23/07/2014
1.3 – Updated for v2.0.19.1 and added NTC-6200-02	19/09/2014

1.4 – Updated for 2.0.21.1	09/12/2014
1.5 – Updated for 2.0.24.3	1/04/2015
1.6 – Updated for 2.0.27.3	26/06/2015

*Table 1 - Document Revision History*

# Firmware Details

Firmware Version: 2.0.27.3

Date: June 26, 2015.

Generic / Custom: Generic

Beta / Official: Official

## File Names

MODEL	FIRMWARE FILENAME	SDK	MODULE BOOTLOADER FILENAME	MODULE FIRMWARE FILENAME	LARGE FILE SUPPORT IPK (ONLY REQUIRED IF UPGRADING FROM 1.X FIRMWARE)
NTC-6908	ntc_6908_2.0.27.3.cdi (39.0MB) MD5: 126c0bacfbcb026dbab6671df5e772ed2	SDK_Bovine_ntc_6908_2.0.27.3.tar.bz2 (175MB) MD5: 2935240d763a33fa2a4722c78e446b8d	MC8790_DLEX_K2.0.7.28.cwe (609KB)	MC8790_K2.0.7.30.cwe (15.3MB)	
NTC-6908-02			MC8704_DLEX_T3_0_2_2.cwe (492KB)	MC8704_T3_0_2_2.cwe (21.3MB)	
NTC-6520				R3B01 (Note: Ericsson module does not support firmware upgrade via web GUI)	
NTC-30WV	ntc_30wv_2.0.27.3.cdi (44.5MB) MD5: bd457edfe4301755a7ee563bf2c558ee	SDK_Bovine_ntc_30wv_2.0.27.3.tar.bz2 (184MB) MD5: 859313b6be66aa297814eeb44e6c8570	Bootloader_MC8704_T3.0.6.4.cwe (507KB) MD5: 65448660cef3971d92ed7f0e141a98f2	Application_MC8704_T3.0.6.4.cwe (21.3MB) MD5: 1721fc378e34d7529f5f19edfeb11c59	appweb-large-file-support_1.2.1_arm.ipk (1.50KB) MD5: 2105fe90157d5c0cda12dd00404d2ea2
NTC-40WV	ntc_40wv_2.0.27.3.cdi (44.3MB) MD5: 9e6e7e0bb92ee683f1a7c69053dfa2ef	SDK_Bovine_ntc_40wv_2.0.27.3.tar.bz2 (184MB) MD5: dafdafa3f70aa506397d44505db099fdb			
NTC-6200-02	ntc_6200_2.0.27.3.cdi (48.4MB) MD5: da86159fb421b1bf4c499f5e66344755	SDK_Bovine_ntc_6200_2.0.27.3.tar.bz2 (192MB) MD5: 14ff8aec13747ad42bec51f817559f4c	N/A	N/A	N/A

# Firmware Upgrade Instructions

Please refer to the steps described in the [NetComm M2M Family Firmware Upgrade Instructions.pdf](#) document.



Warning:

- It is not possible to downgrade the router from firmware version 2.x.x.x to an older 1.x.x.x version due to the improvement made to the u-boot for environment redundancy.
- Configuration files exported from a router on FW 2.x.x.x to a router on FW 1.x.x.x will not work properly due to the updated Web 2.0 interface.
- The RIP Setting cannot be preserved when upgrading from firmware 1.9.x.x to 2.x.x.x due to a known bug in 1.9.x.x, where the RIP setting was not persistently saved in the configuration file.

## v2.0.27.3

### New Features

1. Wireless Distribution System (WDS) feature added to NTC-30W/NTC-40W routers.  

A wireless distribution system (WDS) is a system enabling the wireless interconnection of access points in an IEEE 802.11 network. WDS makes it possible to configure a network where a single router acts as a gateway while other routers in the network provide additional geographical coverage for wireless clients, acting as bridges and redirecting traffic through the same gateway. WDS provides layer 2 bridging and preserves the MAC addresses of stations connected through the WDS network.
2. TCP Connect-on-demand Client endpoint in Data Stream Manager.  

The TCP connect-on-demand endpoint allows data to be buffered and then sent to a TCP server when the buffer has been filled. It is primarily useful in situations where you do not want 'keep alive' packets to keep the socket open and create an overhead when the TCP data connection is not in use.
3. WAN Failover is now enabled on the NTC-6200. This means the router can automatically switch between WAN interfaces based on link status or ping responses. This requires the built-in Ethernet port to be configured in WAN mode and the use of a USB-to-Ethernet adapter to create a secondary WAN interface.
4. LWM2M now has support for encryption.
5. WiFi client now has auto roaming. This allows the router's WiFi client to automatically roam between WiFi access points using the same SSID name depending on the signal strength.
6. Ability to monitor the number of WiFi clients connected to the device via Event Notification.

### Enhancements

1. Reliability and longevity of flash memory improved by implementing better error correction technique.
2. Issues with Google Chrome™ browser incorrectly autofilling fields on WiFi Client page resolved.
3. A spurious data corruption in Modbus modes of Data stream manager fixed.
4. Warnings are provided to the user in cases where outdated encryption schemes, such as TKIP are used for WiFi.
5. Improvements on Web page for Package manager which did not display correctly when a large number of packages were installed.
6. Fixed an issue where the OpenVPN client was not accepting URLs with underscores.
7. Improved telnet password security.
8. The user guide is now provided as an installed IPK to better utilize available storage.
9. Corrected an issue where GPS display showed incorrect conversion in Latitude & Longitude.
10. Increased the number of firewall filtering rules to at least 100, and provided a warning when the number of rules may be approaching the memory limit
11. SMS "get sessionhistory" incorrectly displayed data units in KB, instead of MB. This is now corrected.

## v2.0.24.3

### New Features

1. OMA-DM LWM2M support.
2. Event Notification support for events based on digital and analog I/O pin states.
3. CSD call support in Data Stream Manager.
4. HTTPS and OpenVPN server certificate generation has been combined into the "Server Certificates" page under "System" in the Web UI.
5. There is now support for configuring an IPSEC VPN as the default gateway.
6. OpenVPN now supports the "tls-auth" option.
7. More options added for configuring email destinations in event notification, including unauthenticated servers.

### Enhancements

1. Fixed an issue where IPSEC pre-shared keys breaks the display of the html page when special characters are used.
2. The package manager page in the Web UI was unable to display special characters (including some foreign language characters) properly.
3. SMS were not able to be sent when using DoCoMo Japan SIM cards.
4. For users facing one-way voice issues on products using the Sierra MC8704, a new module firmware has been released by Sierra to fix this issue, and is available in the release package. It only applies to this particular module, on the NTC-30WV and NTC-40WV.
5. A memory leak was found and fixed in the Event Notification feature. Users of previous releases can avoid this leak by disabling Event Notification.

6. Toggle buttons in the Web UI will display the word "on" or "off" depending on the state, but only the word for the current state will be visible (instead of both words always being visible).
7. Improvements to the kernel flash drivers to improve checksum handling and to help avoid situations where the UBIFS filesystem becomes read-only during error recovery.

## v2.0.21.1

### New Features

1. For devices with built-in serial ports, there are 3 new endpoints for Data Stream Manager (DSM): PPP server, Modem Emulator, IP Modem. This allows DSM to replace the legacy modem emulator behaviour, by providing a way for serial port users:
  -  for dial-up PPP clients, to connect through to a PPP server and hence the Internet via a (emulated) modem, or
  -  to forward serial data to TCP/UDP endpoints, including support for incoming/outgoing calls via a (emulated) modem, or
  -  AT (V.250) command emulation.Modem emulator remains present as a legacy option for existing customers and is located under the "Legacy data managers" section of the user interface; new users should use DSM rather than the legacy modem emulator.
2. Combined image upgrades - upgrades are now packaged as a single file containing images for each part of the system: the main, recovery and u-boot images. The installer will upgrade each of these as required and in the correct order, allowing the user to update the device with a single simple install. The system is upgraded selectively by comparing each part of the combined image with the running system, and only the necessary parts are upgraded. Note that the combined image does not include upgrades to the firmware running on the cellular module. The SDK includes a combined image by default, and this can be repackaged to include IPKs using imagepack.sh (as previously).
3. Wireless clients on the same SSID can now be isolated from each other.

### Enhancements

1. Fix for a high CPU usage issue found in the TR-069 client.
2. Fix for serial port RS232 control lines not properly following the standard.
3. Fix for the high failure rate of PPP dialling over the serial port.
4. Syslog settings are now on a separate page for clarity. The display level of the syslog is now remembered after refreshing or browsing to another page (but not across reboots). The default log level is set to LOG\_NOTICE.
5. When uploading RSA keys for IPSEC, the upload status is now displayed correctly.
6. Details of uploaded HTTPS certificates are displayed in the user interface.
7. Fix to SMS pages displaying the incorrect total number of pages, plus other cosmetic fixes.
8. Data Stream Manager automatically opens firewall for the ports that it uses.
9. Timezones for Asia/Riyadh added.
10. SNMP package, net-snmp has been upgraded to version 5.7.2.1.
11. Decrease the time taken to load help and file upload pages.
12. Users are now warned when enabling remote access to the device not to use insecure passwords.
13. Progress of generating HTTPS certificates is now displayed in the user interface, and the time taken to generate certificates has been reduced.
14. Ethernet ports configured as WAN interfaces will now default to DHCP mode.
15. Default max number of WiFi clients now defaults to 31.

## v2.0.19.1

### New Features

1. Event Notification: this feature allows SMS, TCP, UDP or email notifications to be sent when certain system events occur on the device. See the user guide for more information.

### Enhancements

1. RDB variables can now store longer values (up to 4096 characters).
2. The RDB header rdb\_operations.h and rdb\_lib.a have now been deprecated in favour of rdb\_ops.h and rdb.a. The newer library contains an updated API that is similar to the old API but now functions include a session handle so that calls are thread-safe. Note that rdb\_set is binary clean now, so it should be passed zero-terminated arguments. A new API rdb\_set\_string will add zero-termination to the end of strings.

3. Wireless client mode now supports WPA/WPA2-EAP/TLS network authentication.
4. The OpenSSL library has been updated to version 1.0.1h.
5. The Net-SNMP package updated to version 5.7.2.1.
6. The system log now defaults to 'Error' level, so that errors are not obscured in the log. It is also now possible to capture logs at one level, and display them at another level.
7. Fixed: manual band selection sometimes does not persist across power-cycles.
8. On networks that support this option, it is now possible to request a static IP address on WWAN connection via the profile settings page. Note that some networks may ignore or even reject this request.
9. Fixed: If the modem emulator feature is enabled, it may prevent the data stream manager from bringing a stream back up after disconnection. The workaround is to disable modem emulator when not in use.
10. Fixed: The Wireless client scan list appears unsorted on some browsers.
11. Fixed: The Wireless station list sometimes does not show the IP address of connected stations.
12. Due to the migration of the wireless drivers in firmware v2.0.11.2, the WDS feature is no longer available.

## v2.0.11.2

### New Features

1. Updated: Migrated from proprietary Ralink Wireless drivers to open-source Linux Wireless drivers.
2. Added Wireless client mode, which allows the device to connect to an upstream Wireless AP and use Wireless as the device's WAN connection
3. Added: Wireless hotspot functionality. The Wireless network can be configured as a public hotspot, with captive portal functionality that allows 'Terms of Service' to be displayed, and also the initial HTTP page visited to be redirected.
4. Added: WAN connection failover. This allows multiple WAN connections to be defined and prioritised. If the highest priority WAN interface goes down, the device will automatically start using the next highest priority WAN interface. The WAN interface in use will always be the highest priority available interface.
5. Added: Support for HTTPS configuration restore via SMS
6. Updated: SDK package is now versioned with the release number.
7. Updated: When browsing to a web UI page requires a login, a successful login will now continue to the page requested instead of redirecting back to the status page.
8. Added: 'scp' command is now available for transferring files to and from the device via SSH.
9. Updated: OpenSSL library has been updated to 0.9.8y.

### Enhancements

1. Fixed: When upgrading NTC-40WV from 1.9.x.x to 2.X.XX and unit is configured with a custom SSID, wireless network mode is set to "11b/g mixed mode" and Broadcast SSID is "On", the SSID is not broadcast unless the Broadcast SSID option is toggled off and on.
2. Fixed: When editing an already existing Modbus Data stream, the Mode field displays "Raw". This does not affect the behaviour of the stream.
3. Various cosmetic changes to the web user interface.

## v2.0.4.2

### New Features

1. Updated: Data stream manager to have "Endpoints" and "Streams" in two separate configuration pages in all five models: NTC-6908, NTC-6908-02, NTC-6520, NTC-40WV and NTC-30WV.
2. Updated: Data stream manager to exclude PADD and modem emulator in all five models: NTC-6908, NTC-6908-02, NTC-6520, NTC-40WV and NTC-30WV.
3. Updated: Re-located PADD and Modem emulator configuration pages. PADD on NTC-6908, NTC-6520, NTC-6908-02 is now grouped together under Services > Legacy Data > PADD and Modem emulator is now grouped together under Services > Legacy Data > Modem Emulator. PADD is now present in a separate configuration page under Services > PADD for NTC-40WV and NTC-30WV only. There is no modem emulator feature for NTC-30WV and NTC-40WV.
4. Updated: Embedded device user manual on web GUI for all five models: NTC-6908, NTC-6908-02, NTC-6520, NTC-40WV, and NTC-30WV with user manual version 1.1.
5. Updated: Dynamic DNS support list to include: no-ip.com (currently the only free DYNDNS server) on top of the existing list: [www.dhs.org](http://www.dhs.org), [www.dyn dns.org](http://www.dyn dns.org), [www.dyns.cx](http://www.dyns.cx), [www.easydns.com](http://www.easydns.com), [www.justlinux.com](http://www.justlinux.com), [www.ods.org](http://www.ods.org), [www.tzo.com](http://www.tzo.com), [www.zoneedit.com](http://www.zoneedit.com)
6. Updated: PADD configuration page to remove UDP port option as it is not supported.

7. Added: Data Stream Manager > Data Streams validation diagnostic message to show if end point data is valid or not. If an end point is added, but details are not entered, then that particular data stream will stop working.
8. Added enhancement: Parameters validation check:
  -  Host name only accepts valid characters
  -  OVPN (client) only accepts valid characters
  -  OVPN (peer) only accepts valid characters
  -  SNMP trap destination only accepts valid characters
  -  ACS URL only accepts valid characters
9. Included SDK with Firmware version 2.0.4.2 with embedded SDK document 4.0 in this family release with file named "SDK\_Bovine\_ntc\_6908.tar.bz2"; "SDK\_Bovine\_ntc\_40wv.tar.bz2" and "SDK\_Bovine\_ntc\_30wv.tar.bz2"

## Enhancements

1. Fixed: PAD mode and PADD Settings not preserved when upgrading from 1.x.x.x
2. Fixed: Custom band settings not preserved on NTC-6908, NT-6908-02, NTC-6520 when upgrading from 1.x.x.x, where user will need to wait for at least 1 minute for the fixes to take effect after firmware upgrade
3. Fixed: Non-volatile memory system log time stamp formatting.
4. Fixed: MAC/IP/Port Filtering Rules issue where the router does not allow wild card entries for source IP address mask, destination address mask and source port range when configured via GUI.
5. Fixed: WiFi Open authentication does not allow WEP encryption issue where the drop-down option was grey-out and disabled.
6. Fixed: If SIM is in roaming mode, incoming voice calls can't be received on NTC-40WV and NTC-30WV.
7. Fixed: Uboot.bin file type update via TR-069 is not supported. Both uboot.bin and uboot.sb file type are now supported via web GUI management interface and TR-069.
8. Fixed: Wireless Distribution System (WDS) not working in all Encryption Modes.
9. Fixed: Some Wireless SSID alias settings for interfaces "ra1" to "ra4" remained on the NTC-40WV/NTC-30WV when running 'ifconfig' from Telnet after upgrading from 1.x.x.x to 2.0.0.3. User must disable then enable the "Broadcast SSID" option from the GUI to clear these left over settings.
10. Fixed: WiFi Ralink driver related issue where the router would select non-standard channels when set to Auto. Now, when set to Auto, the router only selects standard channels (1, 6, 11).
11. Fixed: Changing the GUI settings on some pages without credentials required.
12. Fixed: When IPsec Remote ID and Local ID fields are configured, IPsec tunnel does not connect.

## v2.0.0.3

### New Features

1. M2M Family Firmware Release that covers five models: NTC-6908, NTC-6908-02, NTC-6520, NTC-40WV, NTC-30WV in a single firmware.
2. Updated: Web GUI with NetComm Wireless Branding and Web 2.0 GUI layout Style on NTC-30WV, NTC-40WV.
3. Added embedded device user manual on web GUI for all five models: NTC-6908, NTC-6908-02, NTC-6520, NTC-40WV, NTC-30WV
4. Added USB Serial to IP data stream manager support in the NTC-30WV and NTC-40WV; USB port is turned ON by default.
5. Added warning message when the user clicks "Install" on a router firmware image (main or recovery), check the first digit of the version number in the filename; if it is less than 2, give a warning pop-up explaining that downgrades to 1.x.x.x images are not supported and will cause device failure. Give "ok" or "cancel" options (future Family Releases will have uboot file version control and warning message when installing different uboot)
6. Added common new features to the NTC-30WV / NTC-40WV:
  - a. Added improvement to uboot for environment redundancy for frequent power cycling scenarios
  - b. Added enhancement to uboot for reset button LED display and timing for the three modes (reboot; recovery and reset to default) as described in the embedded user manual
  - c. Added MAC/Port/IP filtering under the web management interface > Networking > Routing
  - d. Added Data Stream Manager under web management interface > Services, including PAD mode, PADD and Modbus Gateway;
  - e. Added support to show the Last Inform Status under TR-069 Configuration Page.
  - f. Added URL HTTP / HTTPS://192.168.1.1/tr-069parameterlist.html to show all supported TR-069 parameters of the device

- g. Added support to "Allow advanced RDB variables" and "Allow execution of advanced commands" under SMS Messaging > Diagnostic Configuration page
  - h. Added options to select route options: packet-switched, circuit-switched under SMS Messaging > General SMS configuration page.
  - i. Added web-UI toggle to save system logs to non-volatile memory
  - j. Added support for HTTPS access to web management interface and self-signed HTTPS certificate generator
  - k. Added SSH Server and host/client key management where it support user name / password and key authentication with SSH client
  - l. Added LED operation mode support: Always on, turn all LEDs off after timer period
  - m. Added OpenVPN: RSA key length to support 2048 and 4096
  - n. Added support for Open VPN Certificate PKCS#12 format file
  - o. Added support for OpenVPN TAP mode connection
  - p. Added support for changing telnet and SSH password via web GUI up to 126 characters in length
  - q. Added "Profile Routing" under APN Configuration page
  - r. Added "Allow Data Roaming" options on Wireless WAN configuration page
7. Added New Enhancements:
- a. Forcing a particular band/network from the operator settings web GUI setting persists across reboot
  - b. Remote Web GUI device management for file types: Configuration files, router main and recovery images, u-boot images, IPK packages, module firmware images (Sierra modules only), boot loader images (Sierra modules only), SSL certificates, PDF files for help menu
  - c. Remote TR-069 device management for file types: Configuration files, router main and recovery images, u-boot images, IPK packages, module firmware images (Sierra modules only), boot loader images (Sierra modules only), SSL certificates, PDF files for help menu.
  - d. Remote SMS commands device management for file types: Configuration files (the assumption that no password is used during the backup of the configuration file), router main and recovery images, u-boot images, IPK packages, module firmware images (Sierra modules only), boot loader images (Sierra modules only), PDF files for help menu.
  - e. Renamed "System monitor" in NetComm Web 1.0 GUI to "Watchdogs" in Web 2.0 GUI layout and with enhancement for automatic address validation for Ping monitor Web-UI configuration page
  - f. GPS Configuration page now separated to three sub-menu: GPS configuration, MSB (A-GPS), Odometer and GPS Page is only applicable to device using Sierra module MC8790V
  - g. Log file: change the default setting for display level = debug which is the most detailed log level.
8. Included SDK with Firmware version 2.0.0.3 with embedded SDK document 4.0 in this family release with file named "SDK\_Bovine\_ntc\_6908.tar.bz2"; "SDK\_Bovine\_ntc\_40wv.tar.bz2" and "SDK\_Bovine\_ntc\_30wv.tar.bz2"

## Enhancements

1. Fixed: Custom APN Configuration settings not preserved when upgrading from last official release firmware 1.x.x.x to 2.x.x.x
2. Fixed: Device LAN IP address - does not accept a valid IP host address under mask 255.255.255.248
3. Fixed: SNMP Settings not preserved issue when upgrading from last official release firmware 1.x.x.x to 2.x.x.x
4. Fixed: SMS Configuration and Remote Diagnostic Settings not persevered issue when upgrading from last official release firmware 1.x.x.x to 2.x.x.x found in NTC-40WV and NTC-30WV
5. Fixed: VRRP Master and Slave Mode Switching problem
6. Fixed: IPsec cosmetic issued that only shows class C subnet mask in ipsec.conf
7. Fixed: IPsec certificate mode doesn't show the file upload status correctly
8. Fixed: NTC-40WV TR-069 product class naming issue where it should be "40WV Series"
9. Fixed: Inbound SNMP (161/162) port issue when firewall is enabled
10. Fixed: Port Forwarding Rules that were removed not reflected on the iptables unless device is rebooted
11. Fixed: Multicast packets not forwarded by Router under RIPV2
12. Fixed: WiFi MAC Filtering issue where it only allows 7 rules, if you add an 8<sup>th</sup> rule the list goes blank.
13. Fixed: DHCP issue where router fails to renew lease when the client sends a "DHCP REQUEST" to renew, the device only is able to renew by resending starting the process again with a "DHCP DISCOVER".
14. Fixed: Unable to change Admin login password when logged in as admin/admin

15. Fixed: Password fields do not allow the special characters @#\$\$%^&
16. Fixed: SMS remote configuration restore issue. (Only applicable to configuration file with no password)
17. Fixed: LED Operation Mode: Turn all LEDs off after timer period not working
18. Fixed: "Automatic APN selection" under Data Connection Profile Settings page should be set to 'ON' by when reset device to factory default.
19. Fixed: Outbound call Voice Roaming on NTC-40WV and NTC-30WV (Inbound call Voice roaming still has some issue to be fixed in the future release)
20. Fixed: Custom band selection setting isn't recalled after restoring backup config file. The factory default band selection option is used, not the manual band selection setting that was set and saved in the backup configuration file.
21. Fixed: Ethernet and Speed not updating on the GUI status page
22. Fixed: Routing > Static Route should allow network destination address entry: 0.0.0.0 to represent all networks

## v2.0.0.1

### New Features

1. First M2M Family Firmware Release that covers models: NTC-6908, NTC-6908-02, NTC-6520 in a single firmware.
2. Updated Web GUI with NetComm Wireless Branding and Web 2.0 GUI layout style.
3. Added New Features:
  - a. Added improvement to uboot for environment redundancy for frequent power cycling scenarios
  - b. Added MAC/Port/IP filtering under the web management interface > Networking > Routing
  - c. Added Data Stream Manager under web management interface > Services, including PAD mode and Modbus Gateway
  - d. Added support to show the Last Inform Status under TR-069 Configuration Page.
  - e. Added URL HTTP / HTTPS: 192.168.20.1/tr-069parameterlist.html to show all supported TR-069 parameters of the device
  - f. Added support to "Allow advance RDB variables" and "Allow execution of advanced commands" under SMS Messaging > Diagnostic Configuration page
  - g. Added options to select route options: packet-switched, circuit-switched under SMS Messaging > General SMS configuration page.
  - h. Added web-UI toggle to save system logs to non-volatile memory
  - i. Added support for HTTPS access to web management interface and self-signed HTTPS certificate generator
  - j. Added SSH Server and host/client key management
  - k. Added LED operation mode support: Always on, turn all LEDs off after timer period
  - l. Added OpenVPN: RSA key length to support 2048 and 4096
  - m. Added support for Open VPN Certificate PKCS#12 format file
  - n. Added support for OpenVPN TAP mode connection
  - o. Added support for changing telnet and SSH password via web GUI up to 126 characters in length
  - p. Added "Profile Routing" under APN Configuration page
  - q. Added "Allow Data Roaming" options on Wireless WAN configuration page
  - r. Added embedded Help menu place holder on web GUI for future family release
4. Added New Enhancements:
  - a. Forcing a particular band/network from the operator settings web GUI setting persists across reboots
  - b. Various enhanced file management functionalities, including consistent TR-069, SMS and Web-UI handling of file uploads to the device for all supported file types: configuration files (TR-069 and Web GUI only), router main and recovery images, IPK packages, module firmware images (Sierra modules only), boot loader images (Sierra modules only), SSL certificates, PDF files for help menu)
  - c. Renamed "System monitor" in NetComm Web 1.0 GUI to "Watchdogs" in Web 2.0 GUI layout and with enhancement of automatic address validation for Ping monitor Web-UI configuration page
  - d. GPS Configuration page now separated into three sub-menus: GPS configuration, MSB (A-GPS), Odometer
  - e. Log file: change the default setting for display level = debug which is the most detailed log level.
5. Included SDK version 2.0.0.1 with embedded SDK document 4.0 in this family release with file named "SDK\_Bovine\_ntc\_6908.tar.bz2"

6. Changed Factory Default Settings if device set to factory default:
  - a. SIM pin protection = OFF

## Enhancements

1. Fixed: Changing the NTP Timezone settings does not require the user to reboot the device
2. Fixed: DHCP Relay not working
3. Fixed: NTC-6520 band selection is not persistent after a power cycle
4. Fixed: Unable to change Admin login password when logged in as admin/admin
5. Fixed: Firewall is enabled but the router still replies to DNS request on WAN interface
6. Fixed: SNMP OID "linkSessionState" doesn't update, always returns "0"
7. Fixed: When Ethernet cable is disconnected and then reconnected, the Ethernet link is sometimes not re-established
8. Fixed: SMS diagnostics-SMS responses have garbage characters using GSM 7-bit & UCS2 encoding with Telecom network