GE VERNOVA

PRODUCT RELEASE NOTES
V3.1.8

RELEASE NOTE For: MDS TransNEXT Firmware Version 3.1.8
RELEASE DATE: January 12, 2026

FIRMWARE

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MDS™ TransNEXT
COVERING FIRMWARE – REV 3.1.8

Overview

This section describes Software/Firmware updates for the MDS TransNEXT platform, noting changes since REV 2.3.2

Products: MDS TransNEXT
Firmware Version: 3.1.8

New Features

1. Mirrored Bits™ protocol support
   Available when TransNEXT is purchased with feature set "MB". Mirrored Bits™ compatibility mode is selected by setting system.mode "MBits". [*"Mirrored Bits" is a trademark of Schweitzer Engineering Laboratories Inc.]*

2. Bridge Mode
   Available when TransNEXT is purchased with feature set "BR". Bridge mode is enabled by setting system.mode "Bridge". Setting this creates a functionally new operating mode for the TransNEXT enabling a collection of other features:
   i) Ethernet Over-the-Air
      TransNEXT layer 2 bridging extends a LAN over a wireless link like a virtual Ethernet cable
   ii) Advanced Serial data handling
      Efficient transfer of Packetized Serial data over the air
      Serial On-demand/push-traffic with media access control for collision avoidance
   iii) Secure Communication with Authentication and AES encryption
      TransNEXT remotes authenticate with Master (AP) prior to any communication (serial/ethernet)
   iv) Simple Firewall / Access Controls
      Simple controls to limit access to unicast data, unicast & ARP, and lock usage to specified MAC addresses
   v) Terminal Server (UDP, TCP client, TCP server)
   vi) Ethernet Payload Data Compression – to make more efficient use of bandwidth

3. Web Enhancements
   i) Configuration page now leads with graphical presentation of boxes and toggle switches to change system parameters. "Editable file" configuration style present in earlier releases remains available near the bottom of the configuration page section.
   ii) System Passwords can now be changed on the web via the Actions page.
   iii) New Network Page for Bridge mode displays all connected remotes

4. System ID
   Modem selectivity control to improve co-channel performance in areas with overlapping TransNEXT networks. System ID = 0 is the default and is reserved for backward compatibility.

Changes to Existing Features

1. New selections available for system.mode attribute. ("Bridge" and "MBits", in addition to "TransNEXT")
2. Web UI Enhancements described under New Features

Resolved Issues (fixed)

1. When using the Web interface, a web refresh will now prompt and allow cancellation before logging the user out. [0443]

Special NOTICES

For New Orders the default operating mode is changing.

- TransNEXT units ordered with authorized feature set "BR" now ship with Bridge mode enabled.
- TransNEXT units ordered with authorized feature set as "MB" now ship with Mirrored Bits™ compatibility enabled.

System modes are not interoperable. Please confirm the proper system.mode setting for the intended operation prior to deployment.

Note that system.mode "TransNEXT" is always user selectable on all models, and is required for interoperability with legacy TransNET networks.

Operational Notes and Errata

- For units running in TransNET serial backward compatibility mode ("TransNEXT"), and using sleep or low power mode, there is a possibility that units may fail to wake. If this occurs a local power cycle is required. Note that this issue is present in all Firmware versions since 1.1.15. [2403]
- If "+++" is used on the serial port to gain CLI access, the session should be ended with a "reboot" instead of "logout". Reboot ensures that the serial port is always restored to data mode. [2370]
- When a local firmware update is terminated by a power interruption, the inactive image may become corrupted. Recommended corrective action is to reprogram the inactive image using the CLI. [1600]
- Do NOT use passive DLINK protocol with LPM mode. [1559]
- Use of the embedded rtu simulator (com1.rtu "on") with lpm mode is not supported. [1555]
- When using LPM mode with radio.hoptime 28, it may be necessary to set radio.lpmhold to 100ms or higher. This is more likely to be required on units that are connected to a store-and-forward device. [1554]
- For mixed systems using TransNEXT and TransNET, if a TransNEXT master (or extension) is set for store-and-forward (radio.saf "on") with radio.hoptime 28, some TransNET remotes may not be able to reliably pass data. Recommendation is to replace the affected TransNET remote with a TransNEXT device. [1534]
- When using the LED panel pushbutton to locally wake a radio from LPM mode, the USB COM port may not always communicate. If needed, power cycle the radio to effect a recovery. [1528]
- Use of ssh with lpm mode may cause lpm sleep to be suppressed following ssh logout. Use of ssh with LPM mode is not recommended. [1520]
- A toggling Sleep I/O line may prevent a Web management session from properly timing out. Use of ethernet is not recommended in combination with Sleep Mode. [1484]
- During web-based firmware reprogramming, do not issue a CLI app command as this may cause a programming failure. If a failure occurs, repeat the programming operation again. [0969]
- The "app copy" command does not properly update system status if an OTA reprogramming session was previously in progress. In this case the inactive image will still show as OTA in progress and not allow switch to the image. [0962]
- When receiving an over-the-air firmware update, once the operation begins the inactive firmware image will be marked as (OTA update in progress). This status indication is persistent - including across reboots -- until the inactive firmware image is successfully updated. [0961]
- In rare cases, if a local firmware reprogramming operation is interrupted by a power disconnection the onboard file system can be corrupted preventing future firmware updates. Recovery requires a drive reformatting operation. Contact Technical Services. [0954]
- In rare cases, when an OTA upgrade is in progress, a remote may incorrectly show a status of "cancelled" when it is still active. Recommendation is to let the operation continue and query for completion status using the app command. [0950]
- When performing Over-the-Air reprogramming from the web, under some conditions the data displayed on the web may not be accurate. This can occur if the user navigates away from the web page and then returns. It can also occur if parameters are changed by CLI commands overriding the parameters used in the original web session. In all cases if the web data does not appear correct, use the CLI to confirm transfer status. [0949]
- NMS query of diagnostics may experience failures while an Over-the-Air reprogramming session is in progress. This can be mitigated by using a lower frequency of NMS query and using Active Polls for query and Passive method for OTA reprogramming. [0947]
- When com1 is configured for RS485 mode, do not use baud a setting of 300 bps. [0863]
- For NMS operation in SAF systems, passive DLINK messages are sometimes not received correctly from a TransNEXT mode X unit transmitting upstream to a TransNET master. In these cases we recommend replacing the TransNET master with a TransNEXT device. [0813]
- For units equipped with a display, changes to display configuration for display.enabled and display.invert require a reboot before taking effect. [0514]
- For a remote (or mode "x") device, when leds.enabled is set to "off", the PWR LED will initially be off when unsynchronized but will transition to solid red upon achieving synchronization with a master. [0512]

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PRODUCT RELEASE NOTES
V2.3.2

RELEASE NOTE For: MDS TransNEXT Firmware Version 2.3.2
RELEASE DATE: June 23, 2025

FIRMWARE

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MDS™ TransNEXT
COVERING FIRMWARE – REV 2.3.2

Overview

This section describes Software/Firmware updates for the MDS TransNEXT platform, noting changes since REV 2.2.4

Products: MDS TransNEXT
Firmware Version: 2.3.2

New Features

2. Regulatory support beyond North America. Based on Order Entry configuration, TransNEXT can be factory configured to lock out certain frequency zones for select target countries. Contact your sales representatives to see what countries are supported and homologated.
3. Receiver Time-Out alarm – this optional feature provides the ability to alarm when a radio stops seeing data for an extended time. Setting radio.rxtot to a non-zero value enables the alarm. The value represents the maximum time in minutes that the radio can go without receiving data prior to issuing the alarm. The alarm is logged and can also provide a signal to external device (based on the value of system.amask)

Changes to Existing Features

2. N/A

Resolved Issues (fixed)

3. Some units would display power output less than actual output power. [n0339]

Special NOTICES

- Config String is a 21-character order code representing product configuration that includes an "Authorized Feature Set" field in characters #17-18. This appears as "CONFIG:" on the product label and can also be found by issuing the "show device" command**. This software will not run on models with a product configuration that has "NN" in character positions #17-18**.

Operational Notes and Errata

- When a local firmware update is terminated by a power interruption, the inactive image may become corrupted. Recommended corrective action is to reprogram the inactive image using the CLI. [1600]
- Do NOT use passive DLINK protocol with LPM mode. [1559]
- Use of the embedded rtu simulator (com1.rtu "on") with lpm mode is not supported. [1555]
- When using LPM mode with radio.hoptime 28, it may be necessary to set radio.lpmhold to 100ms or higher. This is more likely to be required on units that are connected to a store-and-forward device. [1554]
- For mixed systems using TransNEXT and TransNET, if a TransNEXT master (or extension) is set for store-and-forward (radio.saf "on") with radio.hoptime 28, some TransNET remotes may not be able to reliably pass data. Recommendation is to replace the affected TransNET remote with a TransNEXT device. [1534]
- When using the LED panel pushbutton to locally wake a radio from LPM mode, the USB COM port may not always communicate. If needed, power cycle the radio to effect a recovery. [1528]
- Use of ssh with lpm mode may cause lpm sleep to be suppressed following ssh logout. Use of ssh with LPM mode is not recommended. [1520]
- A toggling Sleep I/O line may prevent a Web management session from properly timing out. Use of ethernet is not recommended in combination with Sleep Mode. [1484]
- During web-based firmware reprogramming, do not issue a CLI app command as this may cause a programming failure. If a failure occurs, repeat the programming operation again. [0969]
- The "app copy" command does not properly update system status if an OTA reprogramming session was previously in progress. In this case the inactive image will still show as OTA in progress and not allow switch to the image. [0962]
- When receiving an over-the-air firmware update, once the operation begins the inactive firmware image will be marked as (OTA update in progress). This status indication is persistent - including across reboots -- until the inactive firmware image is successfully updated. [0961]
- In rare cases, if a local firmware reprogramming operation is interrupted by a power disconnection the onboard file system can be corrupted preventing future firmware updates. Recovery requires a drive reformatting operation. Contact Technical Services. [0954]
- In rare cases, when an OTA upgrade is in progress, a remote may incorrectly show a status of "cancelled" when it is still active. Recommendation is to let the operation continue and query for completion status using the app command. [0950]
- When performing Over-the-Air reprogramming from the web, under some conditions the data displayed on the web may not be accurate. This can occur if the user navigates away from the web page and then returns. It can also occur if parameters are changed by CLI commands overriding the parameters used in the original web session. In all cases if the web data does not appear correct, use the CLI to confirm transfer status. [0949]
- NMS query of diagnostics may experience failures while an Over-the-Air reprogramming session is in progress. This can be mitigated by using a lower frequency of NMS query and using Active Polls for query and Passive method for OTA reprogramming. [0947]
- When com1 is configured for RS485 mode, do not use baud a setting of 300 bps. [0863]
- For NMS operation in SAF systems, passive DLINK messages are sometimes not received correctly from a TransNEXT mode X unit transmitting upstream to a TransNET master. In these cases we recommend replacing the TransNET master with a TransNEXT device. [0813]
- For units equipped with a display, changes to display configuration for display.enabled and display.invert require a reboot before taking effect. [0514]
- For a remote (or mode "x") device, when leds.enabled is set to "off", the PWR LED will initially be off when unsynchronized but will transition to solid red upon achieving synchronization with a master. [0512]
- Note that when using the Web interface, a web refresh will log the unit out. Login again to proceed. [0443]

GE VERNOVA

PRODUCT RELEASE NOTES
V2.2.4

RELEASE NOTE For: MDS TransNEXT Firmware Version 2.2.4
RELEASE DATE: April 7, 2025

FIRMWARE

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http://www.gegridsolutions.com/communications

MDS™ TransNEXT
COVERING FIRMWARE – REV 2.2.4

Overview

GE Vernova has updated MDS TransNEXT products including both hardware and firmware.

TransNEXT version 2.2.4 is new firmware equivalent to firmware version 1.1.16 but intended only for TransNEXT units built with new hardware. Version 2.2.4 will not be able to run on prior hardware

Products:	MDS TransNEXT
Firmware Version:	2.2.4

New Features

1. First version supporting new hardware

Changes to Existing Features

1. N/A

Resolved Issues (fixed)

1. N/A

Special NOTICES

- To determine "new" vs. prior hardware look at the product config string. This appears as "CONFIG:" on the product label and can also be found by issuing the "show device" command.
- The Config String is a 21-character order code representing product configuration that includes an "Authorized Feature Set" field in characters #17-18. **This software will only run on models that do NOT have "NN" in character positions #17-18**.
- See product bulletin PB25002 for additional detail on this product change.

Operational Notes and Errata

1. When a local firmware update is terminated by a power interruption, the inactive image may become corrupted. Recommended corrective action is to reprogram the inactive image using the CLI. [1600]
2. Do NOT use passive DLINK protocol with LPM mode. [1559]
3. Use of the embedded rtu simulator (com1.rtu "on") with lpm mode is not supported. [1555]
4. When using LPM mode with radio.hoptime 28, it may be necessary to set radio.lpmhold to 100ms or higher. This is more likely to be required on units that are connected to a store-and-forward device. [1554]
5. For mixed systems using TransNEXT and TransNET, if a TransNEXT master (or extension) is set for store-and-forward (radio.saf "on") with radio.hoptime 28, some TransNET remotes may not be able to reliably pass data. Recommendation is to replace the affected TransNET remote with a TransNEXT device. [1534]
6. When using the LED panel pushbutton to locally wake a radio from LPM mode, the USB COM port may not always communicate. If needed, power cycle the radio to effect a recovery. [1528]
7. Use of ssh with lpm mode may cause lpm sleep to be suppressed following ssh logout. Use of ssh with LPM mode is not recommended. [1520]
8. A toggling Sleep I/O line may prevent a Web management session from properly timing out. Use of ethernet is not recommended in combination with Sleep Mode. [1484]
9. During web-based firmware reprogramming, do not issue a CLI app command as this may cause a programming failure. If a failure occurs, repeat the programming operation again. [969]
10. The "app copy" command does not properly update system status if an OTA reprogramming session was previously in progress. In this case the inactive image will still show as OTA in progress and not allow switch to the image. [962]
11. When receiving an over-the-air firmware update, once the operation begins the inactive firmware image will be marked as (OTA update in progress). This status indication is persistent - including across reboots -- until the inactive firmware image is successfully updated. [961]
12. In rare cases, if a local firmware reprogramming operation is interrupted by a power disconnection the onboard file system can be corrupted preventing future firmware updates. Recovery requires a drive reformatting operation. Contact Technical Services. [954]
13. In rare cases, when an OTA upgrade is in progress, a remote may incorrectly show a status of "cancelled" when it is still active. Recommendation is to let the operation continue and query for completion status using the app command. [950]
14. When performing Over-the-Air reprogramming from the web, under some conditions the data displayed on the web may not be accurate. This can occur if the user navigates away from the web page and then returns. It can also occur if parameters are changed by CLI commands overriding the parameters used in the original web session. In all cases if the web data does not appear correct, use the CLI to confirm transfer status. [949]
15. NMS query of diagnostics may experience failures while an Over-the-Air reprogramming session is in progress. This can be mitigated by using a lower frequency of NMS query and using Active Polls for query and Passive method for OTA reprogramming. [947]
16. When com1 is configured for RS485 mode, do not use a baud setting of 300 bps. [863]
17. For NMS operation in SAF systems, passive DLINK messages are sometimes not received correctly from a TransNEXT mode X unit transmitting upstream to a TransNET master. In these cases, we recommend replacing the TransNET master with a TransNEXT device. [813]
18. For units equipped with a display, changes to display configuration for display.enabled and display.invert require a reboot before taking effect. [514]
19. For a remote (or mode "x") device, when leds.enabled is set to "off", the PWR LED will initially be off when unsynchronized but will transition to solid red upon achieving synchronization with a master. [512]
20. Note that when using the Web interface, a web refresh will log the unit out. Login again to proceed. [443]