



GE MDS

PRODUCT RELEASE NOTES

V1.1.15

RELEASE NOTE For: MDS TransNEXT Firmware Version 1.1.15
RELEASE DATE: July 17, 2024

FIRMWARE

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MDS™ TransNEXT

COVERING FIRMWARE – REV 1.1.15

Overview

This section describes Software/Firmware updates for the MDS TransNEXT platform, noting changes since REV 1.0.8.

Products: MDS TransNEXT
Firmware Version: 1.1.15

New Features

1. Sleep mode I/O line support – Allows a connected device to put a remote radio in low power sleep mode. Sleep is initiated via grounding the serial payload pin associated with DTR.
 2. Low power mode – This feature is interoperable with legacy TransNET radios. Setting radio.lpm “1” at the master tells the entire network of remotes to operate in low power mode. Data to be sent at the master radio is buffered and only sent to the remote radios when they are awake.
 3. Collocated Master support – This feature is interoperable with legacy TransNET radios. It allows collocated or close proximity masters to operate with minimal antenna separation. The radio.csaddr is used to designate a clock sync master and subservient masters. This feature causes all participating radios to take turns between payload transmit timeslots and payload receive timeslots. All masters to transmit their payload during designated master transmit timeslots and listen for payload during designated master receive timeslots. This prevents one master from drowning out a signal intended to be received by another master.
 4. Interoperability with TransNET BUFF command. This is an alternative way to support seamless mode. Setting com1.buff “on” at the master radio causes the system to buffer all messages to prevent gaps in the serial data output stream.
 5. Interoperability with TransNET CODE command. This setting is not recommended but is now provided to support interoperability with existing TransNET networks.
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6. Other minor enhancements
 - Ability to disable pushbutton control (based on local security policy).
 - Ability to restore the last saved system configuration via 15-second pushbutton press and release.

Changes to Existing Features

1. Event logs (visible via the “show logs” command and via the web) now have a timestamp instead of an index number. Logs are now presented in reverse chronological order with an “uptime” timestamp, relative to the last boot instance. This provides an easier means to correlate logs with external events.
2. TransNEXT COM1 port attributes now supports 7-bit data options for 7-bit even / 7-bit odd parity.

Resolved Issues (fixed)

1. Y-modem upload with app update is now more robust [1324]
2. The Web U/I Payload Viewer and CLI based "serdump" command now show data irrespective of the ippl.enabled setting. [934]
3. The “bootloader copy” command now works correctly [920]
4. SSH/serial console interaction is improved [743]
5. DLINK interaction with CLI is improved [848/877/908]
6. System settings for asense and amask are now updated automatically following config save [727/728]
7. The ETH port LED now properly illuminates based on connection status [570]

Special NOTICES

- For remotes previously deployed with firmware version 1.0.5, over-the-air reprogramming is not supported.
- For any units running at version 1.1.15, do not downgrade to earlier version of code.

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]



GE MDS

PRODUCT RELEASE NOTES

V1.0.8

RELEASE NOTE For: MDS TransNEXT Firmware Version 1.0.8
RELEASE DATE: February 28, 2024

FIRMWARE

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MDS™ TransNEXT

COVERING FIRMWARE – REV 1.0.8

Overview

This section describes Software/Firmware updates for the MDS TransNEXT platform, noting changes since REV 1.0.5.

Products: MDS TransNEXT
Firmware Version: 1.0.8

New Features

1. N/A

Changes to Existing Features

1. While an over-the-air reprogramming session is in progress, the inactive image being programmed will now show the qualifier "(OTA Update in Progress)" instead of "(inactive)".

Resolved Issues (fixed)

1. During over-the-air reprogramming, if a remote running FW 1.0.5 started to receive an image and subsequently rebooted prior to completion, the remote could be left in an inoperable state. [906]
2. During over-the-air reprogramming, remotes running FW 1.0.5 could accidentally switch to reprogramming the active image instead of the inactive image. [896]
3. Some units experienced a button bounce when the push button on the LED membrane is released. This behaves like multiple button presses. This issue was resolved by adding a software debounce filter. [880]
4. Spurious temporary bad VSWR alarms are now resolved. The problem was traced to Systems that hear transmissions from other nearby TransNET/TransNEXT radios. This is now resolved. [873]

Special NOTICE

For remotes previously deployed with firmware version 1.0.5, over-the-air reprogramming is not supported.

Known Issues/Errata

1. 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]
2. 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]
3. 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]
4. When a local firmware update is terminated by a power interruption, the inactive image may become corrupted. The CLI "app" command may show the inactive image as "empty" and the web UI may show both the active and inactive image as blank. Recommended corrective action is to reprogram the inactive image using the CLI. [952]
5. 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]
6. 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]
7. 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]
8. When using Web U/I Payload Viewer or the CLI based "serdump" command, valid payload data will not display unless `ippl.enabled` is set to "on". [934]
9. When `com1` is configured for RS485 mode, do not use a baud setting of 300 bps. [863]
10. When `com1` is configured for RS485 mode, do not use the "+++" operation for local CLI mode. [855]
11. The WebUI incorrectly displays negative temperatures as large positive numbers. Query using the CLI to see the correct temperature. [847]
12. When using "setup" mode, make sure to issue the "dkey" command prior to quitting. Failure to do so will leave the radio in a non-functional state until rebooted. [829]
13. 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]
14. For systems using the IP Payload feature, fragmentation of received over-the-air packets may occur. Adjust the `radio.rxd` configuration setting to a higher value to mitigate this effect. [700]
15. For units equipped with a display, changes to display configuration for `display.enabled` and `display.invert` require a reboot before taking effect. [514]
16. Note that when using the Web interface, a web refresh will log the unit out. Login again to proceed. [443]



GE MDS

PRODUCT RELEASE NOTES

V1.0.5

RELEASE NOTE For: MDS TransNEXT Firmware Version 1.0.5

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FIRMWARE

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MDS™ TransNEXT

COVERING FIRMWARE – REV 1.0.5

Overview

This is the initial revision of release notes for Software/Firmware updates for the MDS TransNEXT platform. This platform provides a means of upgrading existing TransNET networks while maintaining interoperability with them. For more information, please consult Publication **05-7280A01_RevA_TransNEXT_Manual**.

Products: MDS TransNEXT

Firmware Version: 1.0.5

New Features (compared to TransNET)

1. Serial or IP Payload data handling.
2. Multiple UIs (Serial CLI, SSH, Web)
3. USB Console and data port
4. Event log (Web or CLI)
5. E-Ink display (in equipped devices)
6. Firmware upgrade via USB, Serial, HTTP, or Over-the-Air (OTA)
7. Role-based login