



# GE MDS *PRODUCT RELEASE NOTE*

RELEASE NOTE: TD220MAX Firmware Version 1.2.23  
RELEASE DATE: March 23, 2021

**FIRMWARE**

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## MDS TD220MAX FIRMWARE – VERSION 1.2.23

### Overview

This section describes Software/Firmware updates for the MDS TD220MAX product.

Product: MDS TD220MAX  
Version: 1.2.23  
Release Date: 23-MAR-2021

Package Element	Version
Bootloader	0.0.2
Kernel	0.0.5
RootFS	1.2.23* CM ACSES 4.13.0
MCU	1.1.3
DSP	1.1.5

\* = updated

### Important Notes:

- This release note lists changes since the most recent production release, 1.2.21.
- Release file TDM-krmd-1\_2\_23.mpk SHA256 sum:  
7f780f36bebe4952da67f90a42b1b9458b9c5a2b757b85cb5ad18914d6a02af6
- Booting release 1.2.23 the first time will log 'Parameter Changed (Unexpected Reboots = 1)' in the event log. This occurs because the data indicating a user-initiated reboot is missing. See New Features #1.

### New Features

1. Add Statistics, Unexpected Reboots count to help identify units experiencing spontaneous reboots after running normally for some hours.  
The count is reset when a user initiates a reboot, selects the Statistics, Reset Reboots item or sets SNMP OID td220maxResetReboots.  
The count increments when the unit boots up without user interaction (such as a hard power cycle), logs 'Parameter Changed (Unexpected Reboots = <n>)' in the event log, and sends SNMP trap parmChanged.
2. Add SNMP cmFileTable query to report the contents of the CM flash partition.
3. Log 'Resource Low' event when CPU Idle is 10 percent or less (after a 90-second guard time at bootup for application and integrated CM startup). This should help identify configurations that overtax the unit but note that the event will be logged for operations like reprogramming or image copy.
4. Log 'LAN Link' event when an ethernet cable is connected or disconnected from the unit.
5. Add Wireless Packet Statistics, Tx Last Age to show the age of the last transmission in seconds.
6. Add Wireless Packet Statistics, Dropped Packet Statistics, ID Mismatch count to show when received STFP messages have a different radio ID than the unit's STFP Configuration.
7. Add Statistics, Process Status screen and integrator TOP command to show top-based CPU utilization. Enforce inactivity timeout from 'top' screens.

8. Add integrator DSP command support for 'md modem' query. This provides a simple way to confirm lost calibration. Normally 'dsp md modem' returns '9.6Kbps BT=.2 12.5KHz' but when calibration is lost it returns gibberish like '+++++++'.

### Changes to Existing Features

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1. Add the parameter value to 'Parameter Changed' event log entries to complement unexpected reboots logging
2. Log 'File' events for integrator commands LN, RM, and TOUCH. It is already logged when the TFTP command adds files. This parallels the cases where the CM menus log the event.
3. Reorder Wireless Packet Statistics, Dropped Packet Statistics screen to match the order of checks applied.
4. When the 'High Reflected Power' alarm is asserted, show red text on the Wireless Packet Statistics menu to draw attention to the clear alarm option.
5. Change CM Process Status screen from ps-based to top-based.
6. Reduce the running radiomgr processes to those that are in use:
  - a. Run nmeaproc for GPS or fallback units, not units that are configured as PTP only. (ptpmgr and ptpd2 already run only for PTP or fallback units.)
  - b. Run stfplogger when setting STFP Log Enable is enabled.
  - c. Run forcekeyproc while using the Radio Test menu.
7. Reduce support bundle contents and append data as generated rather than append many temporary files.
8. List project-specific directories with full timestamps (including seconds) when support bundle is generated.

### Defect Fixes

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1. Prevent cfgscript import failure when TABs are between the value and comment.
2. Add SNMP td220maxEvtObj values timeNotSet(45), timeByUser(46), and timeFromServer(47) corresponding to 'Date/Time Not Set', 'Date/Time Changed by User', and 'Date/Time from Server' events respectively. The first could always be logged and TD220MAX has allowed users to set Device Information Date and Time (which logs the second) since release 1.2.6. The third was added in release 1.2.17 with the '<Timing Source> Update RTC' settings and the timeFromServer(47) value was missed.
3. Change System Configuration, Free Run to always ignore other DSP flags, matching Radio Test behavior.
4. Verify ptpd is running, restart it and log 'Process ptpd restarted' in the event log within 60 seconds if not.
5. Replace support bundle send status 'File Loading' with 'Transferring the support bundle'. Display percent transferred rather than 'Working'.
6. Retrieve active timing source rather than always reporting the default in project-specific support bundle data.
7. Restore the text of GPS and PTP timing alarms that changed to plain events in release 1.2.14. Timing events recorded before 1.2.14 will no longer appear as Spare 10, Spare 15, Spare 16, or Spare 18.

### Known Errata

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1. None

### Operational Notes and Limitations

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1. Compatibility with TD220, TD220PLUS, TD220X
  - This firmware is for use on TD220MAX units only.
  - TD220MAX is not over-the-air compatible with TD220 or TD220PLUS products.
  - TD220MAX releases 1.2.5 and above are over-the-air compatible with TD220X releases 2.0.16 and higher.
2. After upgrading, the Starting Information screen may show Device Status "Initializing" for up to five minutes.
3. The ethernet port operates in 10Mb half-duplex mode.