GE MDS *PRODUCT RELEASE NOTE*

MDS TD220X FIRMWARE – VERSION 2.1.0

Overview

This section describes Software/Firmware updates for the MDS TD220X product.

Product: MDS TD220X

Version: 2.1.0

Release Date: 25-MAR-2019

Package Element	Version
Bootloader	0.0.3
Kernel	0.0.5
RootFS	2.1.0* CM ACSES 4.8.0*
MCU	2.2.2*
DSP	0.1.8

* = updated

Important Notes:

- **This release note lists changes since the most recent production release, 2.0.17.**
- **Release file tdx-krmd-2_1_0.mpk SHA256 sum:**
  d0abba11b2ea76feaba7623b6b7617c0097101d752204be20f5db4c35147357c

New Features

1. Integrated Wabtec ACSES CM 4.8.0; required for the 'ACSES Security' feature.
2. Added 'ACSES Security' and 'ACSES Feature1' authorization codes to support new Wabtec CM features.
3. MCU upgraded from 2.2.1 to 2.2.2 (as with any MCU change, first power on will take a few minutes to initialize)
   - Decoder corrected for long alternating bit patterns
4. New login 'integrator' provides a command line for provisioning and low-level radio polling with DSP commands.
5. New settings and menus have been added to support integration testing:
   - System Configuration setting Free Run allows bench testing with the td220x_poller program when no timing source is available
   - Maintenance menu Radio Test supports Receive, Force Key, and built-in Poll tests
   - Main menu Communications Manager (if authorized) provides version information, provisioning, configuration, process status, and log management
6. Statistics, Wireless Packet Statistics menu now includes Dropped Packet and Last Frequency stats.

Changes to Existing Features

1. Linux cron service started at system power-on to support periodic monitoring of BCM.

2. Add identifying information when 'Setting Frequency Failed' event is logged.

3. Security update – Factory and engineering access is now disabled by default. Factory access may be authorized temporarily and will end when the unit reboots. Additionally:
    - Factory and engineering passwords changed
    - Enabling factory access logs an alarm

4. Change Maintenance, Radio Test, TX Key Timeout default value from 5 to 20 seconds. For Output Power > 2, show Time Remaining countdown rather than TX Key Timeout setting.

5. Add event 'File' to log both CM menu and integrator command line file changes in the event log.

6. Expose TFTP transfer errors to the UI.

7. SNMP:
    - Deprecate td220xTxKeyTimeout

8. Cfgscript:
    - Remove TX Key Timeout, Max Message Age, Duty Cycle Window, and Duty Cycle Transmit Limit

9. Add letter keys to navigate multipage views like the event log: (U)p, (D)own, Pg-U(p), Pg-D(n), (H)ome, (E)nd.

10. Make range validation feedback consistent: 'Invalid <x>. Enter a value from <a> to <b>.'

Defect Fixes

1. Change GPS parsing so sentences like 'GGA,235439.00,**4307.076**,N,07736.674,W,1,15,,172.0,M' preserve the leading zero after the decimal in the latitude.

2. Prevent a 'File not found' error for CM menu actions like Cksum, Delete, or View after adding a file like 'tests/test01.xml' from TFTP host subdirectory 'tests'.

3. Prompt for a Filename when the current CM menu entry is a string ending in '/' as well as the empty string.

4. Prevent Radio Test Force Key from de-keying at 2W on mobiles.

5. Correct Radio Test Poll test so multiple runs of the test show OTA Rx Payloads and Rx Last RSSI.

6. Report 'File not found' when TFTP send fails due to missing local file.

7. Prevent TFTP cfgscript, CM file, and event log sends stopping when only partially complete.

8. Prevent Maintenance, Ping Utility showing 'WARNING: failed to install socket filter: Protocol not available'.

9. SNMP:
    - Use correct access level for SNMP-initiated cfgscript actions; previously these actions silently failed

10. Prevent 'Telnet User' event being used for serial console logins.

11. Show the correct IP address at the login prompt without having to reboot after a change.

12. Improve reboot reliability by adding a fallback when an attempt to reboot fails.

13. Prevent authcode logins reporting 'No directory'. Resolve authcode logins showing two 'MDS TD' lines.

Known Errata

1. None

Operational Notes and Limitations

1. Compatibility with TD220, TD220PLUS, TD220MAX
    - This firmware is for use on TD220X units only.
    - TD220X is not over-the-air compatible with TD220 or TD220PLUS products.
    - TD220X releases 2.0.16 and higher are over-the-air compatible with TD220MAX releases 1.2.5 and above.

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.