GE MDS *PRODUCT RELEASE NOTE*

RELEASE NOTE: TD220MAX Firmware Version 1.2.21
RELEASE DATE: December 9, 2020

FIRMWARE

MDS TD220MAX FIRMWARE – VERSION 1.2.21

Overview

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

Product: MDS TD220MAX

Version: 1.2.21

Release Date: 09-DEC-2020

Package Element	Version
Bootloader	0.0.2
Kernel	0.0.5
RootFS	1.2.21* 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, 1.2.20.**
- **Release file TDM-krmd-1_2_21.mpk SHA256 sum:
dc0c725e8d3a0e0bf3fe6ce25d166f617a2496bd9979a71a6ec5285bf42dd92a**

New Features

1. Add SSH support and Security Configuration, SSH Access setting. This implementation is based on the security library available in the product and is not very recent. It may require adding key exchange and cipher algorithms to your client. For example, connecting from my Linux desktop computer requires a command like:

```
ssh -o KexAlgorithms=+diffie-hellman-group1-sha1 -o HostKeyAlgorithms=+ssh-dss
-o Ciphers=+aes256-cbc <radio IP address>
```

2. Add Statistics, Clock Source Status, PTP Status Details screen for details when the Timing Source includes PTP.
3. Add integrator command PTP with options CONFIG and STATUS to display the corresponding files.

Changes to Existing Features

1. MCU upgraded from 1.1.2 to 1.1.3 (as with any MCU change, first power on will take a few minutes to initialize)
   a. Use correct part number for TD220MAX MCU, 06-6912A01. This is a metadata change only—there is no change to the MCU functionality other than the response to a version query.
2. DSP upgraded from 1.1.4 to 1.1.5 (as with any DSP change, first power on will take a few minutes to initialize)
   a. Use correct part number for TD220MAX DSP, 06-6913A01. This is a metadata change only—there is no change to the DSP functionality other than the response to a version query.
3. Suppress 'LOG DUMP: DELIM/TCP Link Manager' when a unit boots up with MCM provisioned.

4. Reduce confusion by keeping Tx Last Frequency, Tx Last Power, Rx Last Frequency, and Rx Last RSSI blank (menu) or zero (SNMP) until a message has been transmitted or received. Add SNMP OIDs td220maxOtaTxDutyCycleErrors, td220maxOtaTxLastFrequency, td220maxOtaTxLastPower, and td220maxOtaRxLastFrequency.
5. Reduce support bundle product-specific files so complete bundles may be saved for units with long uptime.
6. Replace support bundle product-specific header and footer subprocesses with direct functions to reduce the number of processes involved in collecting the bundle.
7. Replace radiomgr startup subprocesses with direct functions to reduce overhead during bootup.
8. Accept USB flash logging trigger file 'dologging.txt' as well as 'dologging' to simplify flash drive preparation.

Defect Fixes

1. Start ptpd with normal (rather than niced) process priority to prevent repeatedly losing sync due to starvation.
2. Change td220maxEth and td220maxOta SNMP OID syntax from Integer32 to Counter32 so the reported values don't become negative after 2,147,483,647 (= 0x7FFF_FFFF).

Known Errata

1. None

Operational Notes and Limitations

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.