

Software Release Notification

CDM-760 Modem 2.1.3 Release

Revision History		
Rev #	Description	Date
-	Initial Release, Version 1.1.1	Per PLM
A	Version 1.2.1, MEO support	Per PLM
B	Version 1.2.2, Improved CnC	Per PLM
C	Version 1.2.3, Improved CnC	Per PLM
D	Version 1.3.1, -EB2	Per PLM
E	Version 1.4.1, Packet Processor	Per PLM
F	Version 1.5.1, Digital PreDistortion	Per PLM
G	Version 1.6.1, Packet Processor 1:1 Redundancy	Per PLM
H	Version 1.6.2, PacketProcessor 1:N Redundancy	Per PLM
J	Version 1.6.3, Alarm Port AGC Output	Per PLM
K	Version 1.7.1, ASI and DVB-S2X	Per PLM
M	Version 1.7.2 Maintenance release, bug fixes	Per PLM
N	Version 1.7.3, Reduced average RX acquisition time.	Per PLM
P	Version 1.7.4, Maintenance release, bug fixes	Per PLM
R	Version 1.7.5, Maintenance release, bug fixes	Per PLM
T	Version 1.8.1 Tx-only Rx-only, misc features, bug fixes	Per PLM
U	Version 1.8.2 Added support for 128APSK, 256APSK, ASI TS-204 framing, extended user configurations, bug fixes	Per PLM
V	Version 1.8.3 Maintenance release, bug fixes	Per PLM
W	Version 1.9.1 Added support for ACM Linear Modcodes enable/disable, bug fixes	Per PLM
Y	Version 1.9.2 Maintenance release, bug fixes	Per PLM
AA	Version 1.9.3 ASI multistream, extended user configurations from 30 to 100, bug fixes	Per PLM
AB	Version 1.9.4 Maintenance release, bug fixes	Per PLM
AC	Version 1.9.5 Maintenance release, bug fixes	Per PLM
AE	Version 2.1.1 Added support for DVB-S2X high speed, bug fixes	Per PLM
AF	Version 2.1.2 Maintenance release, bug fixes	Per PLM
AG	Version 2.1.3 MEO support, bug fixes	Per PLM

FSCM No. 4J515

Table of Contents

This Release

Version 2.1.3

1. Addressed issue where corrupted BB frame could cause a corrupted Ethernet frame to be output from Ethernet port in high-speed DVB-S2X.
2. Addressed MGC= issues regarding improper handling of EBA, OPM, LC1 and LC2 fields and installed piic types.
3. Waiting for RSL and EsNo to settle before using in ACM modcod determination. Reduces intermediate modcods in ACM MEO.
4. Reduced AHO execution time.
5. Changed statistics to display "0" instead of "0.0E+00" to more easily identify non-zero values in web and FP.
6. Added single AHO logging accessible by custserv:
7. No longer accumulate Rx BB Stats when offline.
8. No longer update Tx BB stats when MEO RX ONLY.
9. Made MEO mode more robust.
10. Addressed issue regarding PaP initialization.
11. Addressed MEO issue where both tx/rx and rx-only units would remain offline even if both had demod lock.
12. Fixed issue during piic config regarding MEO mode and G703 in slot 1.
13. Addressed MEO issue where if DemodUnlock of Remote Rx-only unit cause a flooding of failsafe events.
14. Addressed AHO TO issue at end of successful AHO.
15. Addressed MEO issue where power cycling online RX-Only unit causes both units at earth station to be offline.
16. Addressed MEO issue where power cycling offline RX-Only unit causes TX/RX unit to change from o3bState_ONLINE to o3bState_POWERUP.
17. Addressed issue where MEO mode MDM2MDM COMMS took approx 5mins to recover after power cycle of TX/RX unit.
18. Addressed issue when hotswapping g703 in MEO mode.
19. Meo code to disable/enable g703 output upon mdm2mdm comm loss.
20. Added programming of piic regs when in Meo mode (for new g703 FPGA build).
21. Addressed MEO REM TX/RX issue where a handover timeout event is logged after successful handover.
22. Cleanup of FP FAST reporting.
23. Changed the term Deprecated to Reserved.
24. Addresses issue where compression and decompression are disabled upon power cycle.
25. Addressed an issue where CnC would not lock when unit is power cycled while CnC is disabled, and then enable CnC.
26. Addressed issue where PaP took 5 min to begin transferring data after power-cycle then enable.
27. Addressed issue where modem issued a PaP to Modem COMMS fault every 5 min after power-cycle then enable.
28. Addressed issue where could not enter OC3 FP menu.
29. Addressed issue where could not enable OC3 when TX DR was already 155520000bps.
30. Addressed issue where TX only unit, FP cannot enter into ASI params menu.
31. Addressed issue where, FP cannot enter into OC3 params menu.
32. Addressed TT #13386, where web Dropped Packets to WAN statistic does not increment when exceeding the Available Tx WAN Capacity.

Software Release Notification

33. Fixed issue when changing netspec where the modcod (and/or mod_type/code_rate) is invalid for the new netspec.

Compatible SNMP MIBS

MIB Name	Filename	Date
CEFD Root MIB	FW10874-2-.mib	8/20/2004
CDM-760 MIB	FW-0020630X_CDM-760_v160.MIB	7/23/2018
CDM-760 Traps	FW-0020631- 1_1_1.MIB	8/31/2012
Packet Processor MIB	FW-0020775B_1_2_2.MIB	08/21/2015

Change History

This section shows the change history over previous versions.

Version 2.1.2

1. Fixed bug where in MEO mode, change opmode of rem TX/RX unit to hub TX/RX and back to rem TX/RX, a MDM2MDM COMM fault persists.
2. Fixed bug where ACU_task did not accept lower-case hex values for checksum.
3. Fixed bug where some alarms were not defined in MIB.
4. Fixed bug where -1 gold codes were accepted by web and serial port.
5. Fixed bug regarding SNMP math overflow in TFQ and RFQ.
6. Fixed bug regarding allow OTA FTP firmware update.
7. Fixed bug where FP modcod did not update when changed via other UI.
8. Fixed issue regarding modcod of QPSK 4/15 in DVBS2X.
9. Fixed bug where UDG not saved in NONVOL.
10. Fixed issue when changing netspec where the modcod (and/or mod_type/code_rate) is invalid for the new netspec.
11. Fixed issue when changing modcod in 1:1 or n:m redundancy.
12. Updating SC.mod_type and SC.code_rate when changes in actual modcod instead of user modcod.

Version 2.1.1

1. Added DVB-S2X high-speed data rate, support.
2. Added SNTP. Added NTP serial command.
3. Added LER query LocalEsN0 Range to get min and max EsN0 since last reset (LER=).
4. Added ASI support to output of erred NULL mpg packets when unlocked.
5. Added ASI TX RX data rates to MGC.
6. Added Active/Inactive indicators to Status->Firmware webpage.
7. Changed the term Degredation to EsNoMargin.
8. Replaced 0-Auto(ACM) with Reserved on min and max ACM modcod dropdown lists in web.
9. Removed support for AHO logging which was only enabled via web.
10. Restricted ACM menus in web to only when ACM is allowed.
11. Reduced modcods in web drop lists to those actually available.
12. Fix for entering FP menu ASI->TX MODE with demod only.
13. Fixed issue where detected RX modcod changes after unlock to lock to cause incorrect clock rate exchange.
14. Fixed issue where ASI was not completely DR centric, in which a change to SR occurred when ASI enabled.
15. Issuing RCB command after unlocked to locked transition for PIICs with RX enabled to recenter buffer.
16. ACU requested handovers no longer incorrectly logged as failsafe handovers.
17. Fixed RX ASI issue.
18. Reducing reloads of FPGAs.
19. Fixed issues with PIIC Ids.
20. Carrier state recovers from PaP reset.
21. Fixed Carrier state and LED to stay in sync.
22. Fixed bug where PaP was not able to communicate to base modem card on power-cycle.
23. Fix bug regarding EBA field in MGC=.
24. Fixed/enhanced custserv.

Software Release Notification

25. Fixed FP bug regarding DPD menu.
26. Adjusted QEF points for DVB-S2 and DVB-S2X to match data sheet.
27. Fixed bug in Web->Status-ACM.
28. Factor out common Carrier Frequency in MIB.
29. Fix bug Web->Admin->FAST where ACM FAST is enabled while ACM is on and demo mode is enabled. Was failing in MGC_set.
30. Added "PP:ResetReq Fault" as pop-up to web event log for unit fault 0x00000002.
31. Fix bug Web->Admin->FAST.
32. Addressed an issue re power-cycle w/ ACM enabled that would be forced to Q 1/4.
33. Fixed bug regarding validateNonvol.
34. Addressed issue where enabling ASI Rx via SNMP caused TX SR to change.
35. Fixed issue where RFD command with PaP could result in an invalid state of PaP, GBEI1 and GBEI2 all enabled.
36. Fixed issue where ASI RX is enabled in a unit and demod is already locked ASI RX DR was not updated until an unlock/lock transition occurred.
37. Fixed issue where failed PTM or PRM had unexpected side effects. Values are now reverted.
38. Now reject any RF or IF where either of the 2 least significant digits are non-zero.
39. Fixed issue where when changing images and PaP enabled, a PaP image update caused tx carrier off even though control variable says on.
40. Fixed issue in SNMP where EsNo margin was incorrectly limited to 23.5.
41. Fixed where TRANSMITTER ON LED was not in sync with actual carrier state.
42. Modified web Status-Info page.
43. Fixed issue re high-speed FAST codes.
44. Fixed EID / demo mode related issues.
45. Fixed MIB re mod and demod equip ID and HS.
46. Reduced image checksum when switching images.
47. Fixed issues with <0000/MGC= failed where <0/MGC= passed
48. Fixed issues with demo mode (DMM).
49. Modified Status->Info webpage removing empty table rows.
50. Modified Status->Info webpage with indications of high speed HW installed.
51. Corrected maxDataRateKHzASI to 216000.
52. Addressed floating point to fixed point rounding differences for FP and SNMP.
53. Fixed bugs where when SNMP changes to ASI PIIC alarm mask changes failed due to attempted PRD command.
54. Fixed bugs overflow of int in SNMP.
55. Fixed bugs regarding FP display of Rx-only ASI PIIC MASKS. Addressed SNMP issue regarding ASI PIIC MSK sets.
56. Fixed bugs regarding FP display of Baseband Framing stats.
57. SNMP MIB fixes.
58. Addressed SNMP issue regarding ASI PIIC sets.
59. Fixed bug where PaP installed but disabled front panel would not allow enabling of GBEI1 or 2 or Optical.
60. Fixed bug where ACM Status tab did not appear at the top status page.

Version 1.9.5

1. Fixed issue traffic throughput was limited in ACM with packet processor.
2. Fixed issue where MEO mode not compatible with v163.
3. Added new High Speed FAST option TX and RX.
4. Bug fix regarding SNMP upper modcod access for S2X.
5. Improved description of modcod textural conventions in MIB

Version 1.9.4

1. Added pp_status_trafficstats_bridge.htm.
2. Fixed issue where web->status where WAN related stats were always zero.
3. Cleanup of web->status circular deps.
4. Added new High Speed FAST option.
5. Changed O3b.c magic numbers into constants.
6. Addressed MEO issue when: powerup force online on hub tx/rx disconnect rx if from hub tx/rx (auto switches rx-only to online) disconnect rx if from rx-only (remains online) reconnect rx if to rx-only (causes to go offline).
7. Bug fix introduced in CCOM.C r751 where extra zeros displayed for EsNo queries.
8. Bug fix regarding SNMP get of EsNoMargin. Bug fix regarding reporting of minEsNo in web and SNMP.
9. Bug fix where web Status->ACM did not display 128APSK and 256APSK Degradations.

Version 1.9.3

1. Added support for ASI multistream.
2. Extended number of user configurations for (load/store) from 30 to 100 (indices 00-99)
3. Factored out redundant text into textual conventions of MIB.
4. Added corrections/clarifications to descriptions in MIB.
5. Fixed Tx and Rx PLL lock detect alarm when in multistream.
6. Added re-centering of the Rx buffer to the execution of the PRM, PRF, PRO and PRD commands.
7. Fixed bugs in PIIC parameter checking and error reporting, including handling of Tx and Rx clock source PIIC parameters.
8. Fixes bug regarding ASI frame syn alarm, factored out common code.
9. Fixed bug where G703 PIIC were not being programmed correctly in MEO operation.
10. Fixed bug where MEO OpMode was being reset to normal at powerup.
11. Fixed bug where packet processor with 1:N did not pass traffic.
12. Fixed bug where 256APSK 31/45-L was mislabeled 256APSK 32/45-L.
13. Factored out common SNMP code into RemakeOctetStringFromText to allow for easier optimization, reducing heap management calls.

Version 1.9.2

1. Fixed bug in SNMP where continuous large SNMP gets caused SNMP and HTTP servers to become unresponsive.
2. Fixes to cdm760ObjectGroups section of MIB.
3. Added GRE support to Packet Processor.

Version 1.9.1

1. Added support for AcM Linear Modcodes disable/enable, remote command ALM and other UI support.
2. Fixed bug in ACM. Where BERT would take errors.
3. Fixed bug in of power-cycle while in IF or RF loopback losing RX saved params.
4. Fixed bug where ACM would not change to a higher modcod because new modcod and current SR were incompatible.
5. Fixed bug in nonvol check function regarding ACM modcod.

Version 1.8.3

Software Release Notification

1. Fixed bug, where RS-485 2-wire would fail.
2. Fixed bug, where a switched online unit in a redundant system in with CnC enabled would be incorrectly configured.

Version 1.8.2

3. Added support for 128APSK and 256APSK, including baseband statistics and degradation.
4. Added support for ASI TS-204 framing.
5. Added support for additional user presets totaling 30.
6. Added support for user defined name strings for each user preset.
7. Added support for remote command <0/CBS=1 to clear the baseband statistics.
8. Added, FP support for BUC ref control to ODU menu.
9. Fixed/modified baseband statistics remote queries ST2, ST3 and ST4 to accommodate additional modcods. <0/ST2? Or with optional argument <0/ST2?0 displays the first upto 496 characters of statistics. <0/ST2?1 displays the second upto 496 characters of statistics.
10. Fixed bug where in ACM could not change SR from FP.
11. Fixed bug, format of Web Configuration->Interface->PIIC->ASI, Submit button was not visible.
12. Disabled Tx/Rx Traffic LEDs when respective options are not enabled.
13. Fixed bug regarding minimum ASI DR check.
14. Fixed bug where when in IF loopback the RX Frequency would be displayed incorrectly.
15. Fixed bug where <0/TMC=4 <0/CST=nn <0/CLD=nn <0TMC? returned a modcod other than 4.
16. Fixed bug, ASI PRM=11 failed w/ rx-only.
17. Fixed bug, PTM=11 from 10 failed w/ tx-only.
18. Fixed bug, NET=x required power cycle on tx-only.
19. Fixed bug, Rx-only EPC=2 failed.
20. Fixed bug, Tx-only BERT, fails as FP attempted to refresh the Rx BERT stats.
21. Fixed bug, Tx-only or Rx-only failed <0/ETS= with G.703 or OC3.
22. Fixed bug, Tx-only or Rx-only <0/EID?
23. Fixed bug, now allowing compression in Tx-only and decompression in Rx only.
24. Fixed bug, now disallowing FP ASI buffer controls in Tx-only units.
25. Fixed bug, Packet Processor firmware upgrade would fail if it contained old param file.
26. Fixed bug, where MGC= would fail using MGC? results in Tx-only and Rx only. Caused failure using redundancy switches.
27. Fixed bug, where some modulators transmitted incorrectly after power-up.
28. Reorganized FP RxParams menu.
29. Moved FP FER to Stats->Baseband menu.

Version 1.8.1

1. Added support for Tx-only and Rx-only units via FAST.
2. Added support for EsNo link margin.
3. Added support for BB Frame Error Rate (FER).
4. Added support for BUC 10MHz reference.
5. Added support for Uni-directional GBEI.
6. Modified FAST code usage by tx/rx modcods, GZIP, AUPC.
7. Fixed issue where: rolloffs other than 20%, 25% and 35% were allowed in EB1 netspec.
8. Fixed issue where: S2X did not show under the FAST front panel menu.
9. Removed digital loopback.
10. Fixed issue where: unit would not lock after CNC disable then enable.
11. Fixed issue where: unit would report incorrect CNC power ratio.

Version 1.7.5

1. Rx data path would lose sync on internal BERT after modcod change w/ packet processor.
2. Packet processor would be disabled as a result of networkspec change.

Version 1.7.4

61. Tx data path would generate errors on internal BERT after modcod change.
62. Tx data path would generate errors on internal BERT after ACM enable with Enet.

Version 1.7.3

This is a maintenance release that addresses the following issues:

1. RX acquisition time could take as long as 40 sec in low symbol rate cases.
2. MIB/SNMP did not have PIIC Tx Sym PLL faults for OC3 and G703.

Version 1.7.2

1. Bug fixes for SNMP access to ASI parameters, NetSpec, rolloff and loopbacks.
2. Fix for MGC bug preventing redundancy.

Version 1.7.1

Features

- Added support for ASI PIIC and DVB-S2X.

Version 1.6.3

Features

- Added support for Alarm Port AGC Output [OFF|ESNO|RSL].

Issues addressed in this release

- Fixed issue (Test Tracker Bug #11788) where G703 and OC3 interfaces did not operate correctly.

Version 1.6.2

Features

- Added 1:N support for Packet Processor.
- Added capability to selectively turn off traffic ports on Packet Processor.
- Added Ethernet Link fault reporting from Packet Processor.

Issues addressed in this release

- Fixed issue where changing images could report checksum errors if telnet was active.
- Fixed issue (Test Tracker Bug #11475) where web page ACM table printout has the target margin added twice to the degraded Es/No value. This is only an issue with the web page printout.
- Minimum Symbol Rate for Digital PreDistortion changed from 10 Msps to 20 Msps.
- Fixed issue where PP card could hangup if SNMP community string was changed.

Software Release Notification

- Fixed issue (Test tracker Bug #11653) where web page Carrier ID Longitude value could not be changed.
- Fixed issue which causes Packet Processor traffic to stop flowing after repeated demod lock/unlock.

Version 1.6.1

- Features
 - Packet Processor 1:1 Redundancy.
- Issues Fixed
 - Made improvements to both MEO and normal mode AUPC.
 - Fixed issue where turning On/Off CnC could cause out of band RF spurs.
 - Fixed issue where SNTP doesn't work properly with Packet Processor card enabled.
 - Fixed issue with remote command MGC where command was being rejected when Compression was already turned on.
- ReFlash Support
 - ReFLASH via ZIP file, TAR and individual file ftp supported for backwards compatibility.

Version 1.5.1

- Features
 - Added modcodes below QPSK ½ for all Network Specs.
 - Added support for Digital PreDistortion
 - Added SNTP
- Issues Fixed
 - Made multiple changes and improvements to MEO mode Antenna Handovers.
 - Fixed Multiple Packet Drop issues in PP Card.
- ReFlash Support
 - ReFLASH via ZIP file, TAR and individual file ftp supported for backwards compatibility.

Version 1.4.1

- Features
 - Added support for new Packet Processor Interface Card.
- Issues Fixed
 - None
- ReFlash Support
 - ReFLASH via ZIP file, TAR and individual file ftp supported for backwards compatibility.

Version 1.3.1

- Features
 - Added new DVB-S2-EB2 Netspec and modcodes.
 - Improved ACM performance.
 - Added new web page for FAST option entry and Demo Mode selection.
 - Modified Status->Info web page so that hardware options, current FAST options, installed modem options, and options not installed are displayed.
- Issues Fixed
 - Fixed issues where synchronous PIIC interfaces may not get programmed properly after power-up.
 - Fixed issues with 1:1 redundancy and CnC where offline modem may not get programmed properly when synchronous PIIC interfaces are enabled (synchronous only or multistream).
- ReFlash Support
 - ReFLASH via TAR file, individual file ftp supported for backwards compatibility.

Version 1.2.3

- Features
 - Improved CnC performance.
- Issues Fixed
 - Fixed OC-3 Interface issue causing buffer to overflow when the Rx Buffer Clk Source selection was Tx Clock (Tx Clk) or Internal Clk (int Clk)
 - Added passive ftp mode to ftp server and modified Admin Upgrade web page
 - Fixed issue where internal Marvel switch drops packets when trying to remote manage the modem with InBand turned Off and using an external switch connected to traffic and management ports
 - Added GigE Port 1 and 2 connection status to front panel menu and all remote interfaces
- ReFlash Support
 - ReFLASH via ZIP file, TAR and individual file ftp supported for backwards compatibility.

Version 1.2.2

- Features
 - Improved Acquisition speed.
 - Increased Es/No measurement update rate.
 - Improved CnC Power ratio Accuracy.
- Issues Fixed
 - Fixes acquisition issues at low Symbol Rates (<5 Msps) when CnC is enabled.
 - Fixes issue with MEO Antenna Handover where HUB TxRx unit goes to min modcod (QPSK ½) instead of picking the modcod that meets the min EsNo of the two locked Remote modems.
 - Fixes issue where Framer FPGA doesn't get programmed with valid rx max modcod limit.
- ReFlash Support
 - ReFLASH via ZIP file, TAR and individual file ftp supported for backwards compatibility.

Version 1.2.1

- Features
 - MEO Antenna Handover (includes Min Es/No ACM during Handover Window)
 - AUPC
 - Carrier ID
- Issues Fixed
 - Fixes issue where Pause Frame generation only works when Ethernet ports are set to Auto.
 - Fixes issue where IP Address/Mask could be set to a broadcast address.
- ReFlash Support
 - ReFLASH via ZIP file, TAR and individual file ftp supported for backwards compatibility.

Version 1.1.1

- Features
 - Initial Release.
- Issues Fixed
 - N/A
- ReFlash Support
 - ReFLASH via individual file ftp.

Known Issue(s) In This Release

Functional Issues

None.

User Interface Issues