

# CDM-625A Modem 1.4.4 Release

Applicability
Bulk release 1.4.4 (FW-0020731J_CDM-625A_1.4.4) for the CDM-625A Modem. Includes bulk firmware, SNMP MIBs and IQmon.exe.

[illegible]

FSCM No. 4J515

## Table of Contents

<b>THIS RELEASE .....</b>	<b>3</b>
<b>COMPATIBLE BULK VERSIONS .....</b>	<b>3</b>
<b>COMPATIBLE SNMP MIBS .....</b>	<b>3</b>
<b>CHANGE HISTORY .....</b>	<b>3</b>
<b>KNOWN ISSUES .....</b>	<b>7</b>

## This Release

This CDM-625A Modem release has the following changes.

### 1.4.4 Features

- None.

### 1.4.4 Fixes

- Reverted Main FPGA back to prior version due to intermittent issues with ASI interface caused by the last D&I change.
- Implemented complete port isolation similar to that of the DMD20 when the Radyne HDLC mode is enabled, a Dedicated Management port is selected, and Local Only is selected.
- Allow BUC Output Enable setting to be changed from remote interface (WEB, SNMP, Serial) when ODU comm is disabled. (CS TT#10343, TT #13492).

## Compatible Bulk Versions

CDM-625A Modem Bulk	CDM-625 Packet Processor Bulk
FW-0020731- (v1.1.1)	FW-0000342K (v1.4.4)
FW-0020731A (v1.2.1)	FW-0000342L (v1.4.4) or FW-0000342M (v1.4.5 Beta)
FW-0020731B (v1.2.2)	FW-0000342M (v1.4.5)
FW-0020731C (v1.2.3)	FW-0000342M (v1.4.5)
FW-0020731D (v1.2.4)	FW-0000342N or FW-0000438N (v1.4.6)
FW-0020731E (v1.3.1)	FW-0000342P or FW-0000438P (v1.4.7)
FW-0020731F (v1.4.1)	FW-0000342T or FW-0000438T (v1.4.9)
FW-0020731G (v1.4.2)	FW-0000342T or FW-0000438T (v1.4.9)
FW-0020731H (v1.4.3)	FW-0000342T or FW-0000438T (v1.4.9)
FW-0020731J (v1.4.4)	FW-0000342T or FW-0000438T (v1.4.9)

## Compatible SNMP MIBS

MIB Name	Filename	Date (mm/dd/yyyy)
<b>CEFD Root MIB</b>	FW10874-2-.mib	08/20/2004
<b>CDM-625A MIB</b>	FW-0020742E.mib	06/01/2020
<b>CDM-625A Traps MIB</b>	FW-0020749-.mib	06/05/2013
<b>DistantEndCDM-625A MIB</b>	FW-0020743B.mib	10/27/2014
<b>CSAT-5060 Transceiver MIB</b>	FW10874-8A.mib	07/09/2013
<b>KST-2000A/B Transceiver MIB</b>	FW10874-9-.mib	11/04/2005

## Change History

This section shows the change history over previous versions.

#### 1.4.3 Features

- SNMPv3 AuthPriv USM (DES Encryption only).
- Adds Gigabit Bridge compatibility with Radyne modems.

#### 1.4.3 Fixes

- Fixes D&I issue in Main FPGA.
- Fixed issue where ULL doesn't get programmed when switching from VF2 to ULL directly (TT #13036).
- Fixed issue where web page doesn't show remote Eb/No with EDMAC in VersaFEC-2 (CS TT #10363)
- Fixed issue where RTI function to turn off the Tx carrier is inhibited when there is a Tx alarm (CS TT #10378)

#### 1.4.2 Features

- Adds 1:1 Tx power level synchronized/independent control.
- Monitors the BUC via FSK even if the modem is in the 1:1 offline state. (CS TT#10304)

#### 1.4.2 Fixes

- Improves Eb/No monitor stability.
- Fixes the false lock log event indication for CnC.
- SNTP updates with PaP in 1:1 offline mode. (TT# 11345)
- Modification of CnC code in redundancy. This fixes the problem that when CnC is in use with CRS-500 switch, auto switch over on power failure didn't work.
- Fixes the bug that when Rx data rate/symbol rate is changed to match Tx side, CnC APC clock change is not done.
- Fixes bug in Ethernet Statistics. (TT #12443)

#### 1.4.1 Features

- SNTP with Packet Processor
- SNTP Time Zone
- SNTP is standard feature.
- Port Monitoring
- PTP Unicast Mode
- CDM-625 MIB compatibility with Packet Processor Enabled

#### 1.4.1 Fixes

- Fixes bug that EdMac at 8192Kbps data rate had a Frame Sync alarm when using TPC 3/4. (TT #10721)
- Fixes bug that modem didn't sync up with the SNTP Server. (TT #10899)
- Fixes bug that symbol rate was not copied from Tx to Rx in IF/RF loopback mode. (TT #10585)
- Fixes 1:1 redundancy issue for VersaFEC-2 in CnC mode and in ACM mode wherein the back-up modem won't reliably lock. (Customer Service TT #10287)
- Fixes problem that IP traffic stops when some terrestrial interference occurred while running VersaFEC-2 ACM and CnC.
- Corrects CnC ratio monitor for VersaFEC-2 in the presence of noise.
- Corrects CnC PSDR +/- display for asymmetric symbol rate. (TT #10298)
- Fixes problem that BUC FSK information was retained after switch-over to off-line. (TT# 10299)

- Fixes wrong value of SNMP OID cdm625aEnetRxCurrentDatarate and cdm625aEnetTxCurrentDatarate on SAT port when Packet Processor is enabled. (TT #11028)
- Fixes a 1:1 redundancy bug when CDM-600 emulation mode is on. (TT# 10346)
- Fixes problem that when Tx carrier output is set to RTI, Tx carrier was ON for RTI time length selected during boot up time. (Customer Service TT #10301)
- Fixes communication issue with LPOD-R due to no redundancy feature on LPOD-R.

#### 1.3.1 Features

- VersaFEC-2, CCM and ACM, Short block and Long block – 74 new ModCods and new constellations, including new 8-ary, 16-ary and 32-ary.
- Dedicated Management Port with Packet Processor.
- Kymeta Break before make (MEO).
- IP-ACM stored statistics on HTTP and SNMP interface.
- New Tx fault: PMSI Sym Clock Fail.
- Added CnC lock alarm mask. (CS TT #10279)
- Expanded Acquisition sweep range from 200kHz to 300kHz at high symbol rates.

#### 1.3.1 Fixes

- Fixed bug that RTI does not shut down the Tx carrier when Ethernet cable is removed. (CS TT #10267)
- Fixed bug that number of QDI channels is limited to 127 when CnC-APC is on. (CS TT #10278)
- Change to IF loopback when CnC is on. Turning on IF loopback in CnC now temporarily bypasses CnC mode, and will result in CnC ACTIVE LED off, and no CnC lock fault logged. The loopback now functions correctly. CnC is restored after IF loop is removed. (CS TT #10281)
- Fixed incorrect CnC monitor display when Tx is muted. (TT #10054, #10279)
- Fixed bug that backup modem has incorrect configuration in 1:1 redundancy system when online modem is changed from RS-422 to IP-ACM. (Customer Service TT #10276)
- Fixed incorrect SNMP WAN port statistics when Packet Processor is enabled. (TT #10098)
- Fixed bad BER query response ">0000/BER=>1.0-". (TT #10350)
- Changed default WAN Buffer Length to 100ms for IP-ACM and V2-ACM.
- Various cosmetic fixes to front panel menus and web pages.

#### 1.2.4 Features

- RADIUS Enhancements based on customers feedback.
  - Added RADIUS server logs in the admin web page
  - Hid the share secret using "\*\*\*\*\*"
  - PaP web page uses RADIUS authentication.
  - RADIUS service-type "Administrative" grants admin access, and service-type "Callback-Administrative" grants read/write access. The local admin account has no access unless the RADIUS server is down.
- Added 3 more Submit buttons to the Modem Configuration web page.
- The user may upload the config file to load/save location directly.

#### 1.2.4 Fixes

- Isolated Port 1 from Port 2, 3 and 4 in 1:N mode to eliminate the broadcast storms. (TT# 9483)
- Telnet doesn't echo in 1:N mode.

- Fixed incorrect elapsed-time calculation when handling the PTP interrupt if the counter has rolled over since the Marvell switch timestamped the packet. Also no longer allow the switch to overwrite pending timestamps that have not been read out of ARR0 and ARR1 because that results in a race condition where the switch could change the timestamp as we are reading it in software. Lastly, removed the smoothing logic that was implemented to try to hide the spikes caused by the rollover bug.
- Fixed bug that cannot receive Edmac Slave data from CRS-300 with CRS-316 TMI Module (1:1 9 pin connector). (DAR 10269)
- Fixed bug that cdm625WANRxCRCErrors SNMP OID gets wrong value.
- Fixed “cdm625aModelNumber” OID GET response, now it’s “625A”.

### 1.2.3 Features

- None.

### 1.2.3 Fixes

- Fixed 1st LO synthesizer lock detect problem. Only Top card (Renesas) code is affected. One bit in one fixed location was changed.

### 1.2.2 Features

- None.

### 1.2.2 Fixes

- Fixed External Reference issue wherein the DAC was not tri-stated properly.

### 1.2.1 Features

- Implemented new Carrier ID that is DVB compliant.
- This software release upgrades the proprietary Carrier ID functionality that was present in previous software versions to the DVB compliant standard – see ETSI TS 103 129 – Digital Video Broadcasting (DVB); Framing structure, channel coding and modulation of a carrier identification system (DVB-CID) for satellite transmission.
- Added Radius client support.
- Supports setting modem configuration via the customer service ftp file.

### 1.2.1 Fixes

- Allows Tx Power level to be changed through web interface in IF/Rf loopback.
- Fixed bug that adjusting Carrier Power Level via webpage turns carrier off and on. Moved Tx power level out of the Tx & Rx parameters form. Tx power level control now has a separate submit button.
- WEB Interface: On modem config page, separated Tx and Rx parameters.
- WEB Interface: Fixed Tx/Rx data rate and Tx/Rx symbol rate setting wrong value due to formatting.
- Fixed ULL no data lock bug in IF loopback mode.
- Fixed bug that some VersaFEC modcodes have no data sync upon modulation change through remote interface.
- Disable VLAN, and grey out VLAN configuration and L2 QoS Mode on web page if PaP is in router mode.
- Fixed bug that front panel allows emulating CDM-600L without L-band FAST option.
- Do not flash Rx Traffic LED in CnC-APC mode when the remote modem's demod is unlocked.
- Added top card EEPROM checksum check on modem boot up, and set unit fault (N=Calibration data transfer error) if the checksums don't match.

- Modified task priorities to give key modem function highest priority.
- Front Panel Alarm Masks menu: removed "ROp", changed "CEX" to "ClkExt".
- Added "SNMP Access Level" in the SNMP web page. SNMP will be read only if set to "Read Only". Default is read/write.
- Fixed bug that ODU FAULT LED doesn't keep flashing when there is no FSK comm to BUC.
- Fixed bug that front panel CSAT FSK info menu reports incorrect value for slope mode.
- Fixed bug that on CSAT FSK Info:Misc FP menu, Auto Fault Recovery reports incorrect state.
- Fixed bug that front panel FSK menu reports incorrect LNA monitor value for CSAT.
- Limits CPU port speed to 2 Mbps.
- Fixed SNMP MIB OID "RxFilterRolloffFactor" GET/SET function. Fixed "RxEqualizerEnable" GET/SET function.

## Known Issues

- For maximum accuracy, the PTP master synchronizing with the modem on port 2 in multicast transport mode should send a sync once every 2 seconds and not any faster or slower interval.
- Sub-Mux with PTP accuracy is more than 1 microsecond.
- SNMPv3 can't be used with Packet Processor enabled.