



Turbo and LDPC Option Assembly

Revision History			
Rev	Description	Date	Processor
-	Initial Draft.	4/9/09	Cwingo

FSCM No. 4J515

Table of Contents

1.0	Introduction	3
2.0	Included Items:	3
3.0	Removal:	3
4.0	Installation:	4
5.0	Power Up Check:.....	6

1.0 Introduction

This instruction guide is designed to outline the steps necessary to install the Turbo and LDPC 5/10/20 Mbps FEC option assembly into a Radyne DMD20, DMD20LBST, or DMD2050 modem. The Turbo-LDPC boards are preassembled and require only basic tools for installation.

Note: The firmware (Must be Rev. BY or greater) needed for this upgrade to initialize must be installed in the modem prior to Turbo LDPC power up. The firmware can be sent in a Compact Flash Card or downloaded from the Comtech EF Data website. Contact Comtech EF Data Sales for details.

2.0 Included Items

1. KT-0000099 Field Upgrade Kit. Contains the following:

- PLR6002-LDPC/8QAM Codec Board.
- PL/12874-LDPC Option Card.
- All related hardware for field installation.

} Pre Assembled

Note: Keycode required to enable the Turbo/LDPC Options. The Keycode is supplied with the purchase.

3.0 Removal

1. Remove all cables from the rear of the modem.
2. Remove the fasteners required to remove the modem from the rack.
3. Remove the following and set aside:
 - All pan head Phillips screws that secure the top cover.
 - Top cover.
4. Remove Turbo Card (If Installed) by removing 4 ea. pan head Phillips screws. Refer to Figure 1 for the Turbo card location in the modem.
5. Remove two ribbon cables from J22 and J23 from modem baseband board.

Note: Use extra caution when removing the ribbon cables from the modem baseband board by applying even pressure straight upward to avoid bending the contact pins.

4.0 Installation

1. Install 4/40 X 3/16 Standoff hardware from hardware kit in two places on bottom of chassis as shown in Figure 1

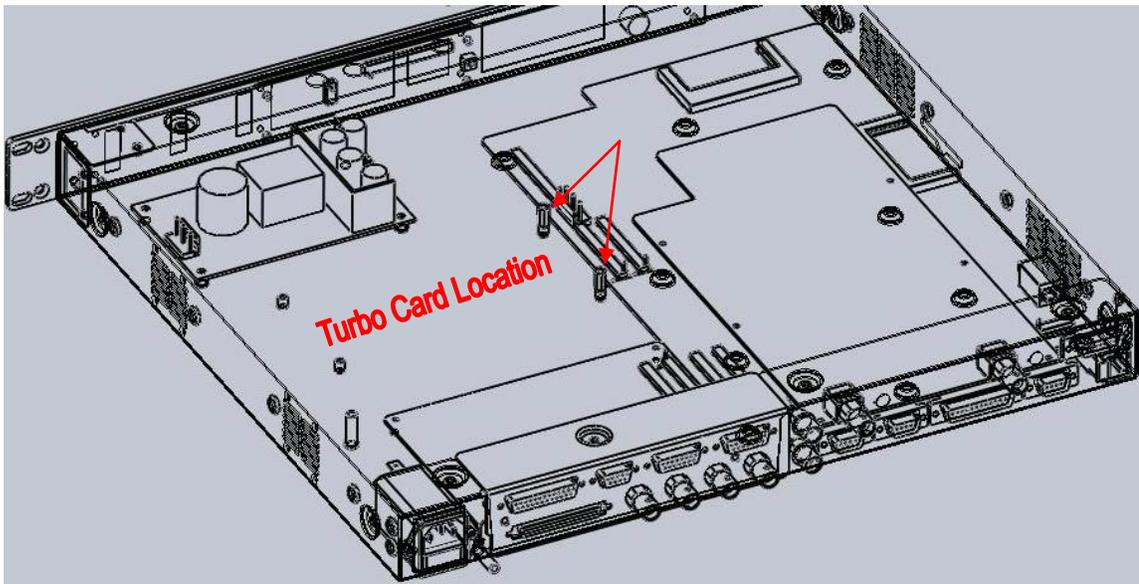


Figure 1

Warning: Use extra care when aligning the multi pin headers of the LDPC assembly and the modem baseband board. Irreversible damage will result to both assemblies if unit is turned on with these connectors misaligned or incorrectly installed.

2. Secure the assembly onto the modem baseband board by carefully aligning the multi-pin headers located at J1 and J2 of the Turbo LDPC assembly and J22 and J23 of the modem baseband board and gently pushing down until connectors are seated as shown in Figure 2

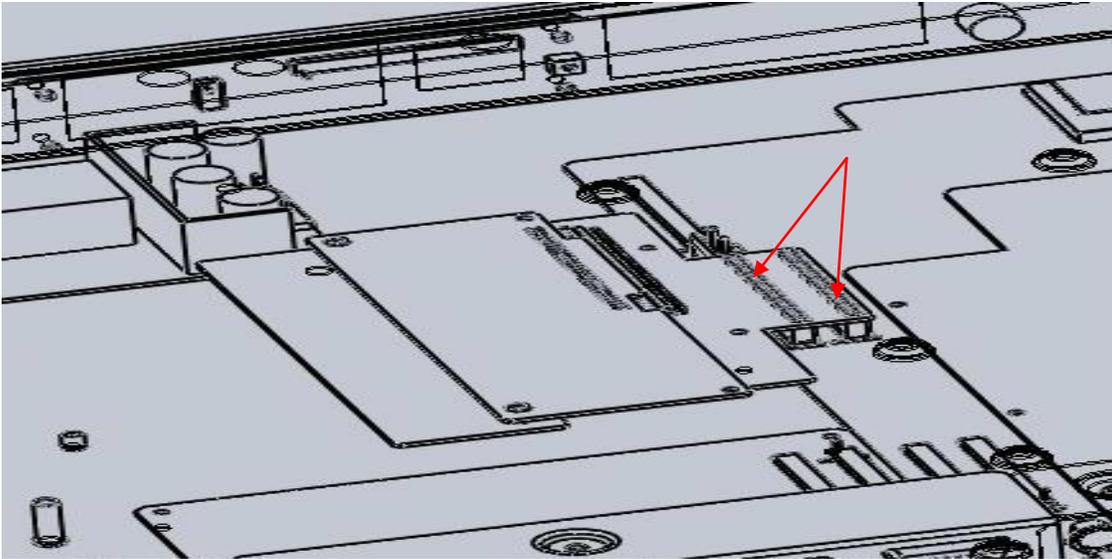


Figure 2

3. Install 4/40 x 3/8 Pan Head Phillips Screws in two places to secure assembly as shown in Figure 3

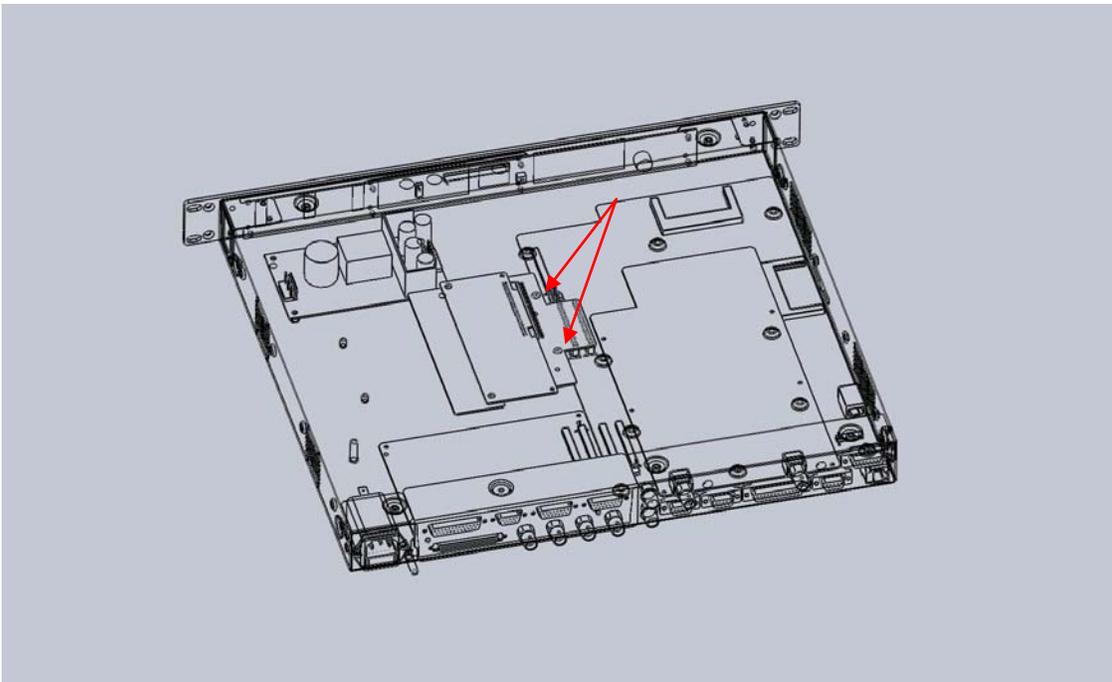


Figure 3

4. Repeat steps listed in Section 3.0 to reinstall cover and hardware.
5. Reinstall modem in rack and reconnect all cables.

5.0 Power Up Check

1. Update firmware by replacing Compact Flash Card located at the side of the modem as shown by the blue arrow in Figure 4 or update firmware by downloading the current revision from the website.

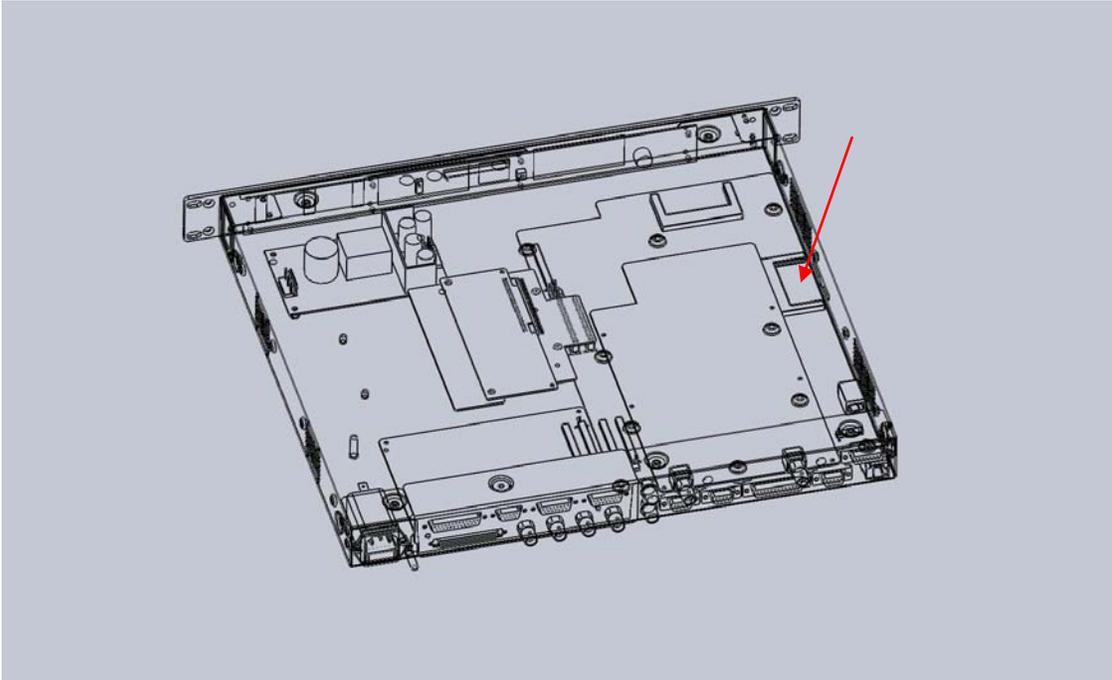


Figure 4

Note: The firmware needed for this upgrade to initialize must be installed in the modem prior to Turbo LDPC power up. The firmware can be sent in a Compact Flash Card or downloaded from the Comtech EF Data website. Contact Comtech EF Data Sales for details.

2. Turn modem on and wait for up to twenty seconds for full initialization.
3. Initialize firmware through front panel window by scrolling through the menu window to **System** then **HW/FW Config** then **Features** a key code window will appear for code entry. Enter the key code and push **Enter** on the front panel. Unit will display **(Entry Acceptable)** Then Enter the second key code and push **Enter**. Unit will display **(Entry Acceptable)** again.
4. Verify firmware initialization by scrolling in the menu window to **System**, then to **HW/FW Config**, then to **Codec Board**. 04=PLR6002 will appear. This verifies that the firmware has been properly installed.
5. The install is verified.

Note: If the upgrade fails to initialize Contact the Comtech EF Data Customer Service Department at (480) 333-4357.