



# TORRENT

## Assembly Steps

### Controller Module

Document Number: TRNT-EL-02-0024

Version : A  
04/26/2012

#### Revision Chart

Rev	Who	Date	Sections Affected	REASON / INITIATION / REMARKS
A	Dms	5/1/12	All	Rearrange steps, remove unnecessary step

Applicable Reference Drawings & Documents:

- TRNT EL-02-0004 Power Supply Module Assembly
- TRNT EL-02-0009 & TRNT EL-02-0010 Local Control PCB Mount
- TRNT EL-02-0008 Controller Module Chassis Assembly (
- TRNT EL-02-0002 Controller Assembly
- TRNT EL-02-0011 Ethernet (GIGe) Assembly
- TRNT-EL-07-000X-XXX ART: Board Assembly Record Tag
- \_TRNT\_Accting: System and Board tracking spreadsheet.

AFE= Analog Front End Boards (CAFÉ-CCD version) (IAFE-IR version)

LCB= Local Control Board

PSM= Power Supply Module

PSB= Power Supply Board

TSM= Transition Module

<b>PARTS LIST</b>				
<b>ITEM</b>	<b>QTY</b>	<b>DOC / PART No.</b>	<b>DESCRIPTION</b>	<b>LOCATION</b>
1	1	TRNT-EL-02-0018	Controller Base Kit	B45M-Shlf
2	1	TRNT-EL-04-0001	(PSB) Power Supply Board	B45S-C3 S1
3	1	TRNT-EL-04-0002	(LCB) Local Control Board	B45S-C3 S2
4	1	TRNT-EL-04-0003	(MEZ) Mezzanine Board	B45S-C3 S3
5	2	TRNT-EL-04-0004	(CAFE) CCD Analog Front End Board	B45S-C3 S2
6	1	TRNT-EL-12-0019	Pleora Ethernet Module Altered Item	B45M-C4 S3
7	1	TRNT-EL-02-0016	Flex Cable Kit CCD	B45M-C4 S3
8	1	OEM MRV SFP-DGD-SX	Fiber Module	B45M-C4 S2
9	1	TRNT-EL-02-0022	Controller Cover Kit	B45M-C4 S1
10	1		Label Serial number "CCXXX" (next available in sequence)	B45M-Bench right

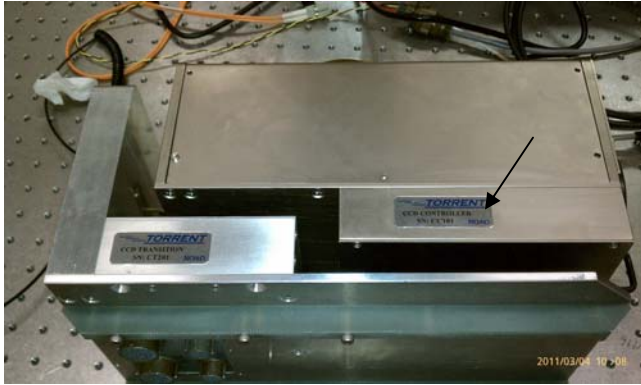


**Figure 1**  
Controller Module Base Kit

**Remember to note all serial numbers on Recording Slip for all installed items.**

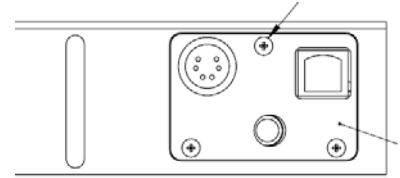
Pull all parts from Parts list on Page 2, Controller Base kit PN:TRNT-EL-02-0018, should consist of the item shown in Figure 1.  
Use this document in conjunction with the referenced drawings to assemble TORRENT Controller Module.  
Fill in Serial numbers on the recording slip found with base kit.

1. Reference TRNT-EL-02-0004 and mount Power Supply PCB into PSM cavity, connect utility cable to Power Supply board J2. Attach cover and install fill plate on PSM.



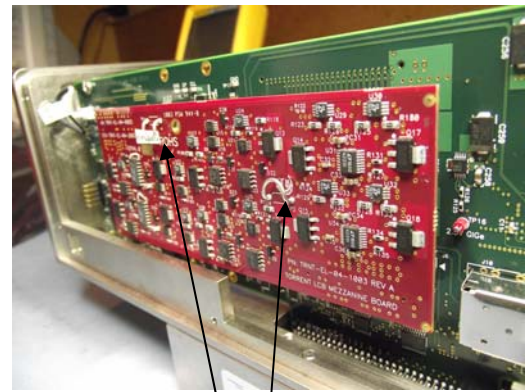
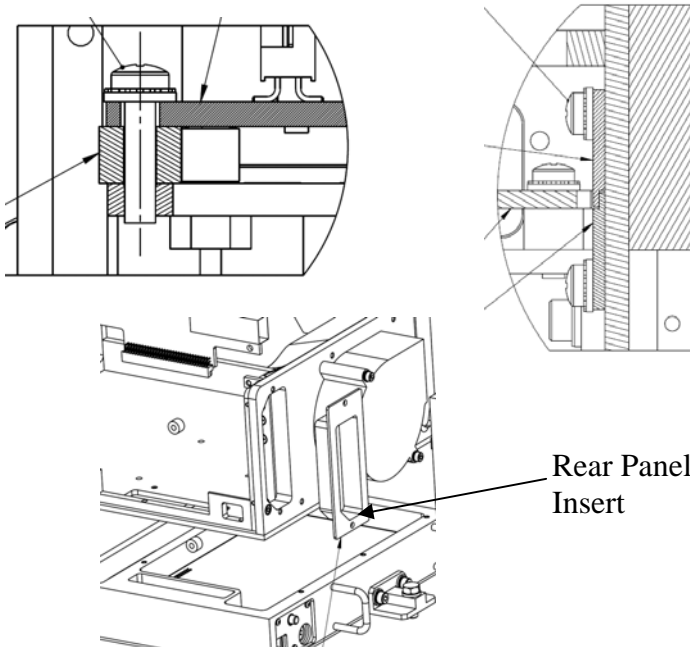
**Figure 2**  
ID label application

2. Apply Controller ID Serial number label, if not already assigned, to the left side of unit approximately where shown (next in sequence) Figure 2

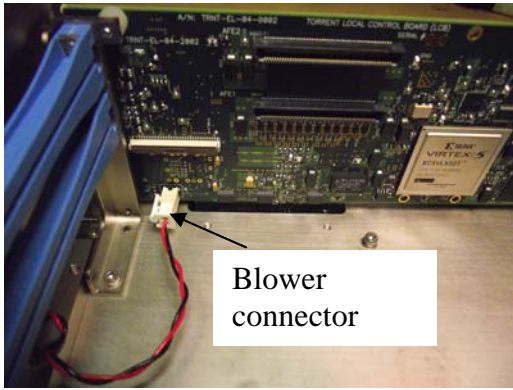


3. Remove Front Panel, refer to Figure 1. Note: Trim DB connector leads on flex cables to .075”-.095” if necessary. Attach flex cables from Flex Kit to the panel. Connector orientation should be narrow side down toward base plate, set aside until step 6.

4. Use LCB Mounting Kit, PN: TRNT-EL-02-0017 & Assembly drawing TRNT-EL-02-0002, mount card guides to rails, locking pin down. Mount LCB to rails, leaving fasteners somewhat loose. Mount LCB assembly in controller, completely seating LCB into mating Power Supply connector through slot in base plate, if Rear Panel Insert is preventing correct positioning loosen fasteners more, seat LCB. Reposition Insert and tighten fasteners. Reference TRNT-EL-02-0008 - Fasten LCB sub assembly to controller bottom plate, tighten LCB mounting screws. Position and attach EMI plates (plates are symmetrical) in location around the LCB tab on the controller base. Install Mezzanine card on back of the LCB, make sure ground loop profiles will clear installation of the cover. Plug blower connector onto LCB J11..



Grounding  
Loops



5. Completely assemble the Pleora, GIGE Ethernet module per TRNT-EL-02-0011, using kit TRNT-EL-02-0019. Connect ribbon cable to Pleora module (contacts away from brown part of connector), mount module to base plate. Connect ribbon to LCB J7. Connect RJ45 coming from the blower housing into Module.

6. If removed, re-attach front panel with mounted flex circuits. Connect TSM present switch to LCB J13, orient for friction lock retention.

9. Install AFE Boards into card guides, seat completely to LCB, engage latches on card guide ends. Carefully connect flex cables to matching AFE Board connectors, verifying alignment and properly mated connectors.

10. Using the recording slip update TORRENT Accounting spreadsheet in the CTRLERS tab with all of the board serial numbers under the appropriate controller serial number, be sure to enter physical location of the Controller Module, under "Sys Name" enter the name of the system it has been assigned or if not assigned, enter the word "Module". In "Location & Contact" enter where it is going for test and who is responsible for it. If module is not being tested right away, place it in the Test Ready Cabinet in B45T. Be sure to fill in the current date, your initials and comments as necessary. Update the ART for each board installed with an entry recording the controller serial number. Tape the "recording slip" to exterior cover of the module.