Quick Card

**T-BERD®/MTS-5800 Network Tester**

**CPRI Check, RRU Testing with ALU BBU Emulation and RF over CPRI Spectrum Analysis**

This quick card describes how to connect to a ALU CPRI Remote Radio Unit (RRU) and configure a T-BERD 5800v2 for CPRI Testing including BBU Emulation and RF over CPRI Spectrum Analysis.

**Equipment Requirements:**
- RRU with power
- T-BERD/MTS-5800v2 equipped with:
  - BERT software release V27.1 or greater
  - CPRI test options:
    - C512GCPR for CPRI Rate 2 (1228.8M)
    - C524GCPR for CPRI Rate 3 (2457.6M)
    - C549GCPR for CPRI Rate 5 (4915.2M)
    - C598GCPR for CPRI Rate 7 (9830.4M)
    - C5RFOCPRI for RF over CPRI Spectrum Analysis
    - C5RRHA for ALU BBU Emulation
- SFP or SFP+ optical transceiver that supports the CPRI rate for the interface under test
- Single mode jumper cable to connect the T-BERD/MTS to the interface under test
- Fiber optic inspection microscope (VIAVI P5000i or FiberChek Probe)
- Fiber optic cleaning supplies

**Information Requirements:**
- CPRI Line Rate
- RRH Bandwidth (MHz)
- Carrier Transmit Frequency (MHz)
- Carrier Receive Frequency (MHz)

**Fiber Inspection Guidelines:**
- Use the VIAVI P5000i or FiberChek Probe microscope to inspect both sides of every fiber optic connection being (bulkhead connectors, patch cords, etc.)
- Focus the fiber on the screen. If dirty, clean the connector.
- If it appears clean, run inspection test.
- If it fails, clean the fiber and re-run inspection test.
- Repeat until it passes.
Connect to Fiber Under Test:

1. Insert CPRI optics into the Port 1 slot on the top of the T-BERD/MTS 5800v2.
2. After inspecting the fiber end faces, connect the SFP/SFP+ to the fiber under test using an LC-LC jumper cable.

Launch Test:

1. Press the Power button to turn on the test set.
2. Using the Select Test menu, Quick Launch menu, or Job Manager, launch the CPRI Rates 1-7 CPRI Check Terminate test on port 1.
3. Tap the bottom button to Start a New Configuration.

Configure Test:

1. Tap the Far-end Device drop-down list and select ALU.
2. The Local SFP Verification, Interface, Start-up Sequence, and RTD tests will be automatically selected and greyed-out.
3. Tap the checkboxes for all other desired tests:
   - RRH Identification
   - Remote Electrical Tilt (RET)
   - Voltage Standing Wave Ratio (VSWR)
   - Diversity Imbalance
   - PIM Detection
   - 2-Tone PIM Analysis
4. Tap twice to proceed to the RRH Transmit and Receive settings.
5. Configure RRH Transmit and Receive Settings as follows:
   - Default to Max. Tx Power: No
   - Swap I and Q: No
   - Bandwidth: 10MHz
   - Carrier Tx Frequency (MHz): enter the Transmit Frequency for the RRH
   - Carrier Max. Tx Power (MHz): 40.0
   - Carrier Rx Frequency (MHz): enter the Transmit Frequency for the RRH

6. Tap Next, Skip Save Profiles, and Next to proceed to the Local SFP Verification screen.

Local SFP Verification:
1. Select the CPRI Rate to test.
2. Verify that Signal Present, Sync Acquired, and Frame Sync LEDs are all green.
   - If any of the lights are red in color, the CPRI Rate may be incorrect, the RRU may need to be reset, or power may need to be cycled.
   - If the Frame sync LED is red, the SFP may not be in working order or it may not support the selected CPRI Rate.
3. Press Next to proceed to the Run CPRI Tests screen.

Run Test:
1. Tap Run Test to run the Interface, Start-up Sequence, RTD, and RRH Identification tests.
2. At the end of the test duration, Pass/Fail status for each scheduled test will be indicated by green checkmark, ✔️, or red x, ❌. Tests for which no pass/fail threshold was specified will have a blue checkmark, 🔄.
3. Tap the symbols to view detailed results for each completed test.
4. Tap to return to the Tests screen.

5. Tap the button to run the RET test.
6. Tap the RET symbol to view detailed results.
7. Tap to check the Alarm state for each ALD (RET controller).
8. Tap to return to the Tests screen.

9. Tap the button to run the VSWR test.
10. Tap the symbol to view detailed test results.
11. Tap to return to the Tests screen.

12. Press the button to run the Diversity Imbalance test.
13. Tap the symbol to view detailed results.
14. Tap the button to view the Diversity Screen.
15. Tap to return to the Diversity Imbalance screen.
16. Tap to return to the Tests screen.
17. Press the **Continue** button to run the PIM Detect test.

18. Tap the **Spectrum** symbol to view detailed results.

19. Press the **Spectrum** button to view the PIM trace.

20. Tap **Back** to return to the PIM Detection screen.

21. Tap **Back** to return to the Tests screen.

22. Press the **Continue** button to run the 2-Tone PIM Detect test.

23. Tap the **Spectrum** symbol to view detailed results.

24. Press the **Spectrum** button to view the PIM trace.

25. Tap **Back** to return to the 2-Tone PIM Analysis screen.

26. Tap **Back** to return to the Tests screen.

27. Press **Next** twice to proceed to the Report Info screen.

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**Save Report:**

1. Enter Customer name, Technician ID, and other desired header information for the report.

2. Tap **Next** to proceed to the Create Report screen.

3. Enter a File Name and tap **Create Report**.

4. After viewing the report, tap **Exit**.