

## QUICK CARD

### Tuning and Testing DWDM Optics with the Nano OSA

This quick card describes how to tune and test DWDM Optical transceivers using a T-BERD/MTS-2000 equipped with a Nano OSA module.

#### EQUIPMENT REQUIREMENTS

- ▶ T-BERD/MTS 2000 equipped with the following:
  - Fiber Optics Software Release V21.14 or greater
  - Nano OSA Module (OCV-4100 or OSA-4100 )
  - 41SFP Software Option
  - Fiber optic cleaning and inspection tools
- ▶ Fiber optic patch cable or Launch Cable
- ▶ Optical Coupler to connect patch cable to Fiber Under Test



Figure 1: Equipment Requirements

#### FIBER INSPECTION GUIDELINES

- ▶ Use the VIAVI P5000i or FiberChek Probe microscope to inspect both sides of every connection being used (Nano OSA Port, Launch Cable, bulkhead connectors, patch cables, etc.)
- ▶ Focus fiber on the screen. If dirty, clean the end-face.
- ▶ If it appears clean, run inspection test.
- ▶ If it fails, clean the fiber and re-run inspection test. Repeat until it passes.

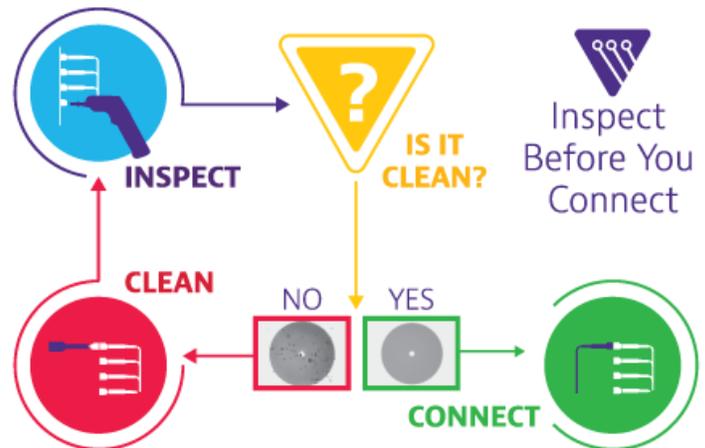


Figure 2: Inspect Before You Connect

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### LAUNCH TEST

1. Press the ON/OFF button  to start the test set.
2. Press the Home button  to display the Home view with the Optical Spectrum icon.
3. Tap the Optical Spectrum icon  until it is yellow and highlighted.

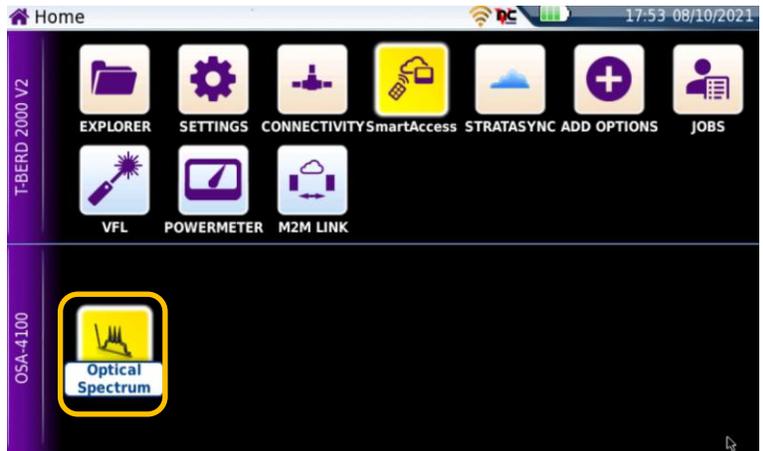


Figure 3: Home Screen

### CONNECT SFP+ TO NANO OSA PORT

All fibers and connectors should be cleaned and inspected prior to connection, as described on page 1.



Figure 4: Inspect Nano OSA port

1. Insert SFP+ into SFP bay on top of module.
2. Connect fiber patch cable to the SFP+ Tx port and Nano OSA Port.

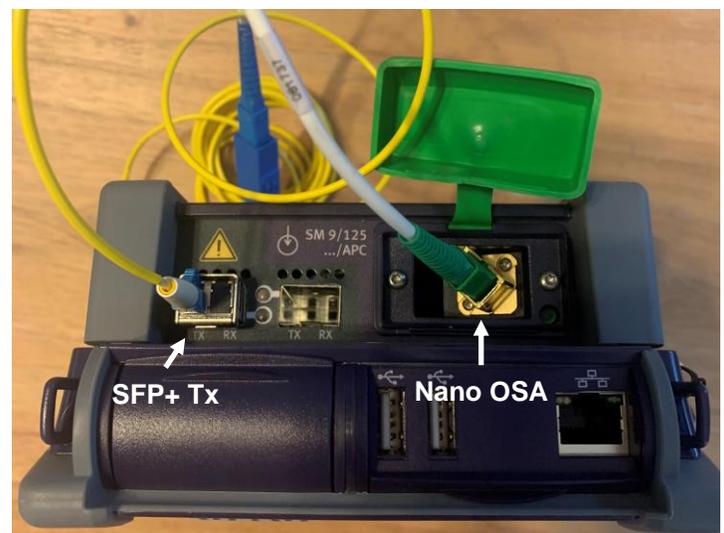


Figure 5: Connect SFP+ Tx to Nano OSA port

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### TUNE AND TEST SFP+

1. Tap **SETUP** icon 
2. Tap **SFP Settings** (SFP must be inserted for this selection to appear).
3. If tunable DWDM SFP, tap **ITU\_T Ch** and set the DWDM Channel.  
*Note: SFP Must use standard MSA compliant tuning method.*
4. Tap State and select **State = ON**.

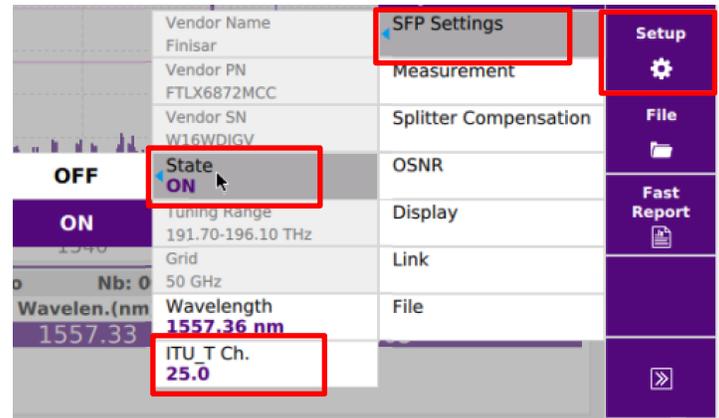


Figure 6: Setup

5. Verify red light next to SFP+ is now on.

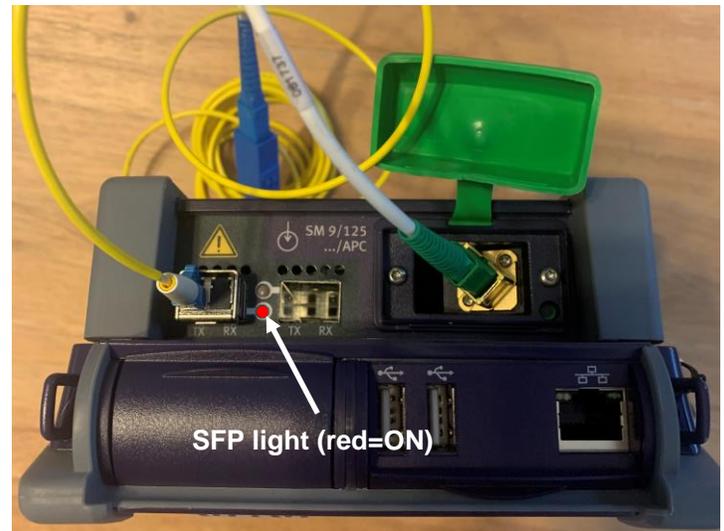


Figure 7: SFP Light

6. To verify wavelength and power level, connect the fiber patch cable from the SFP+ Tx port to the Nano OSA Port.
7. Tap **START** icon to run sweep 
8. View Results (ITU-Ch, power, offset) to verify optic.

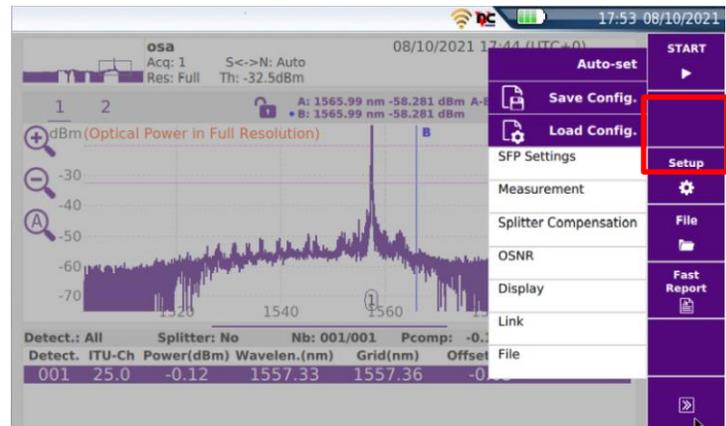


Figure 8: Sweep