T-BERD/MTS 4000V2
SW version ≥ 25.xx

VIAVI Solutions

GETTING STARTED MANUAL

T-BERD/MTS-4000 V2 – Fiber Inspection and OTDR Measurements

GETTING STARTED MANUAL

SAFETY INFORMATION

Laser safety

The provisions contained in two standards define the safety procedures to be observed both by users and by manufacturers when utilizing laser products:

- IEC 60825-1: 2014 - Safety of laser products – Part 1: Classification of products, requirements and user guidelines.

- FDA 21 CFR § 1040.10 - Performance standards for light-emitting products - Laser products.

Due to the range of possible wavelengths, power values and injection characteristics of a laser beam, the risks inherent in its usage vary. The laser classes form groups representing different safety thresholds.

-VFL option: Laser Class 2.

Due to the reduced dimensions of the optical modules, it is not possible to attach the required warning labels to them. In line with the provisions of Article 7.1 of the IEC 60825-1:2014 standard, the laser class identification labels are shown below:

Ref. standard	IEC 60825-1:2014	FDA21CFR§1040.10
Class 2	LASER RADIATION DO NOT STARE INTO BEAM CLASS 2 LASER PRODUCT	CAUTION LASER RADIATION - DO NOT STARE INTO BEAM CLASS II LASER PRODUCT

The user must take the necessary precautions concerning the optical outputs of the instrument and follow the manufacturer's instructions.

AC/DC power supply safety

Always use the proper adaptable plug to connect the power supply to an electrical outlet. VIAVI is not responsible for direct or indirect damage including damage to persons or property if the power supply is not use correctly. For assistance using one of the VIAVI supplied adapters (your specific regional adapter may not be available) please refer to the user manual.

T-BERD/MTS 4000V2
SW version ≥ 25.xx

VIAVI Solutions

GETTING STARTED MANUAL

INSPECT AND CLEAN CONNECTORS

Before connecting a fiber into a test module, inspect and clean the module bulkhead and the fiber jumper connectors.

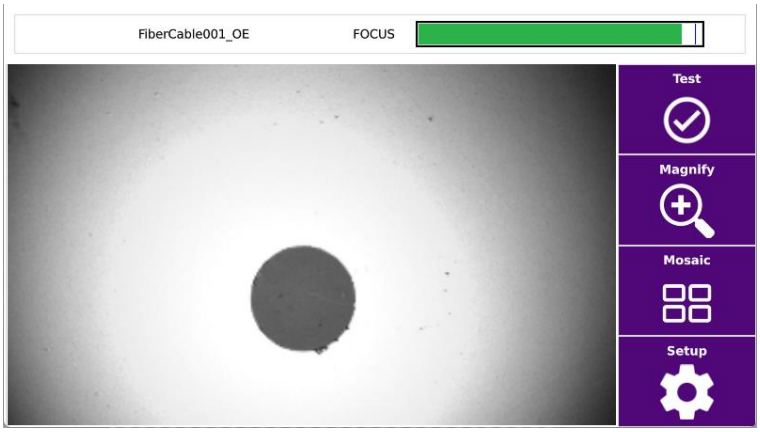
1. Use a fiber microscope (such as P5000i or FiberChek) to verify the connector quality. Follow this simple “INSPECT BEFORE YOU CONNECT” process
2. Use appropriate cleaning material (e.g. IBC™ cleaner, cotton swab, etc...) and re-inspect to confirm.
3. Carefully align the connector and test port prior to mating both,

Never force the connector ferrule or insert it with an angle into the test port adapter. Mechanical stress may permanently damage the ceramic sleeve of the adapter or the end face of the connector,

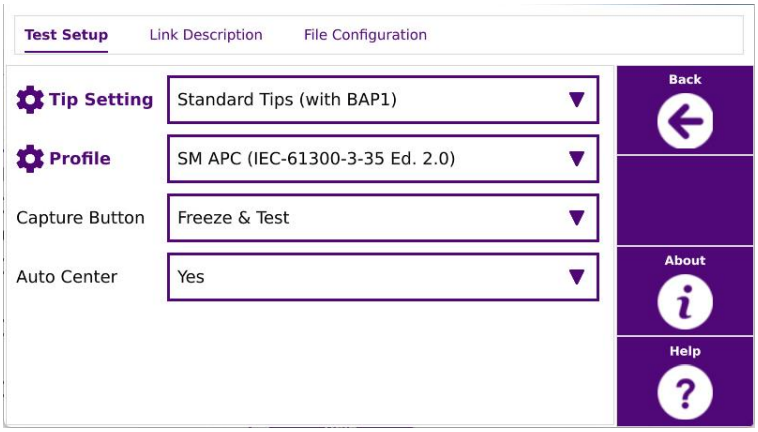
USING A P5000i WITH THE 4000v2 PLATFORM

1. Connect the Microscope to the 4000 V2 Mainframe USB port.
2. On the **Home** page, select the **Microscope** icon 

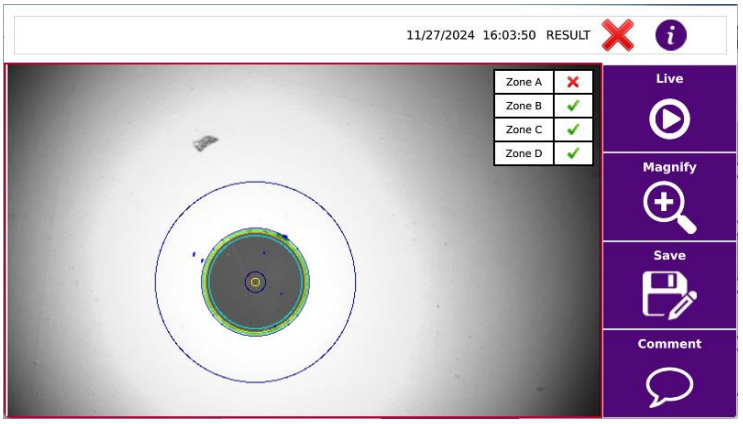
.
3. Use the **Focus** control button of the Microscope to adjust the focus



4. Press **Setup** key and touch the **Test Setup** link to configure the test of the connector.



5. Press **Back** to return to Results page, and press (or press on the **Quick Capture** button on the probe), to launch the test of the connector.



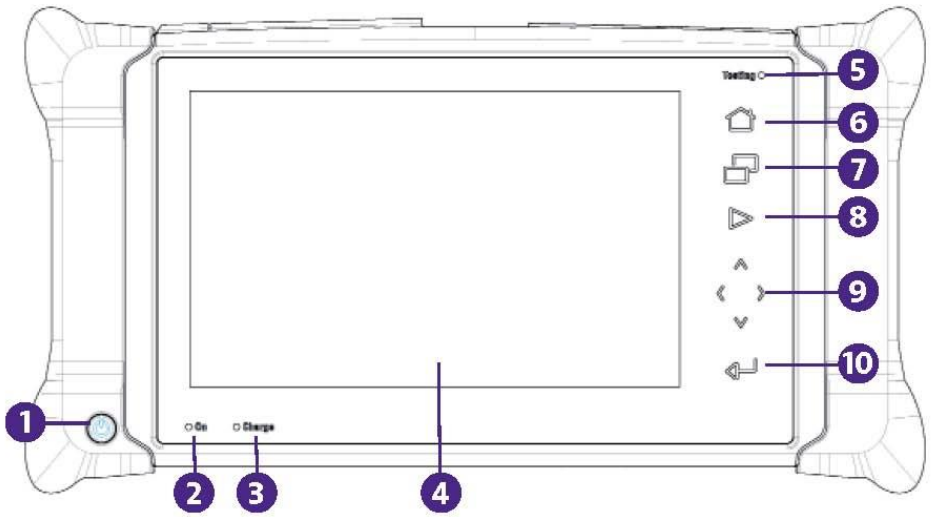
A summary of test results is displayed.
Zones: A - Core / B - Cladding / C - Epoxy / D - Ferrule.

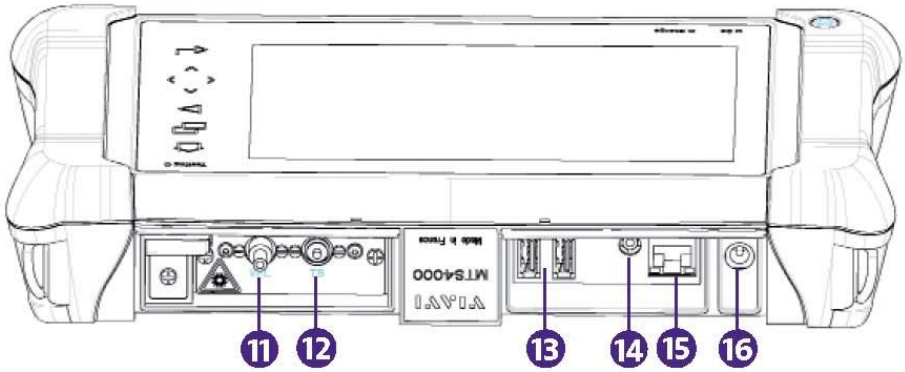
T-BERD/MTS 4000V2
SW version ≥ 25.xx

VIAVI Solutions

GETTING STARTED MANUAL

4000V2 PLATFORM OVERVIEW



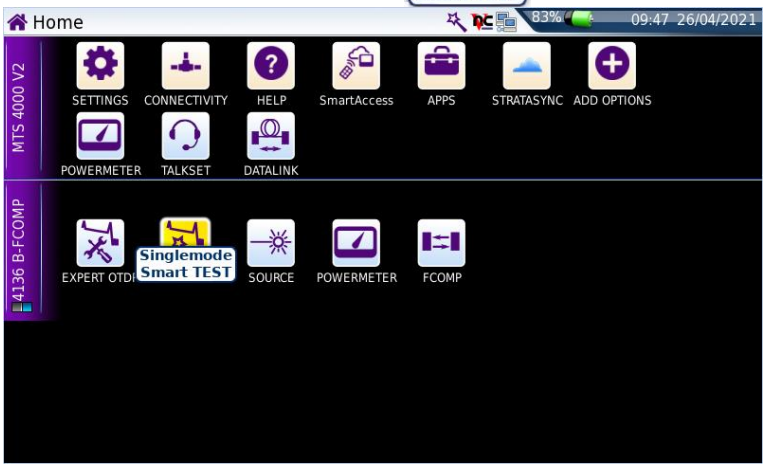


1. On/Off	9. Direction key
2. On indicator	10. Enter
3. Charge indicator	11. Powermeter input
4. TFT Color touchscreen	12. Talkset connection / VFL output
5. Testing indicator Setup	13. USB ports (2)
6. Home Start/Stop	14. Headset jack
7. View (give access to Results / Setup / File)	15. RJ45 connector
8. Start Stop	16. AC/DC Input

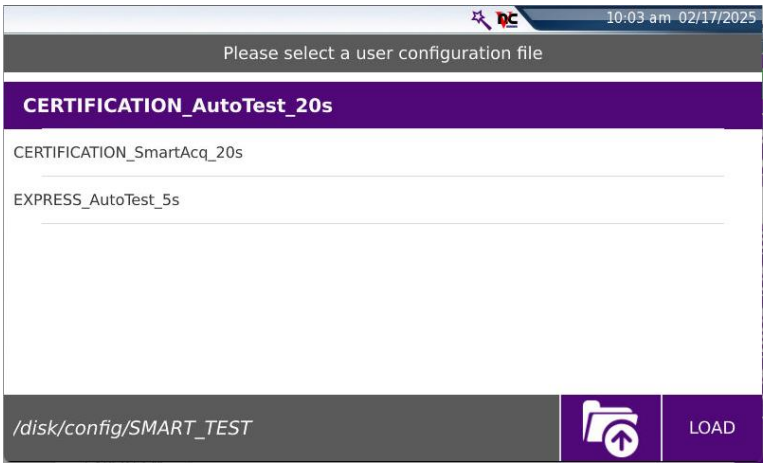
CONFIGURING A TEST IN SMART TEST MODE

1. On the **Home** page, select **SmartTEST** 

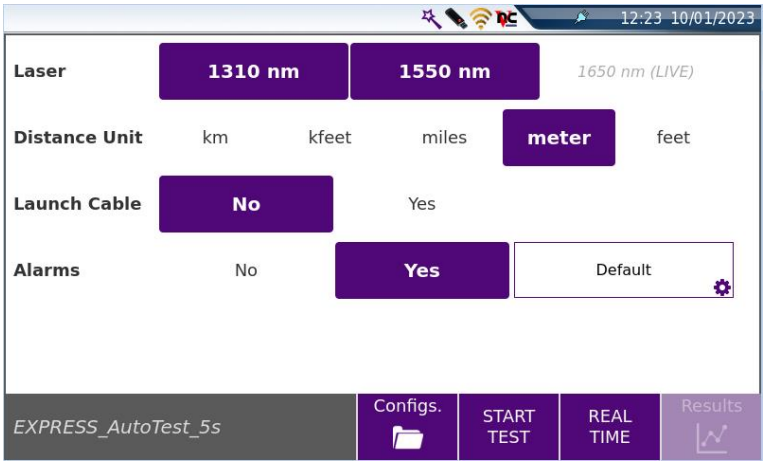
.



2. Select the configuration file corresponding to your application and press LOAD key.



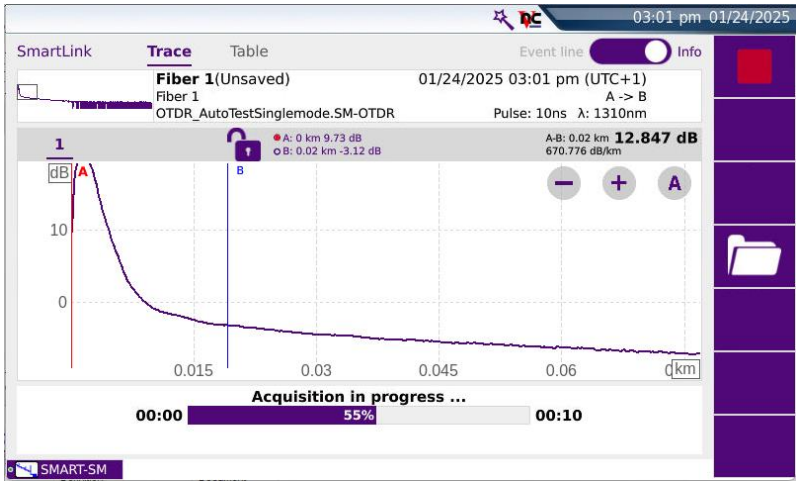
3. If necessary, modify some parameters before starting the acquisition,



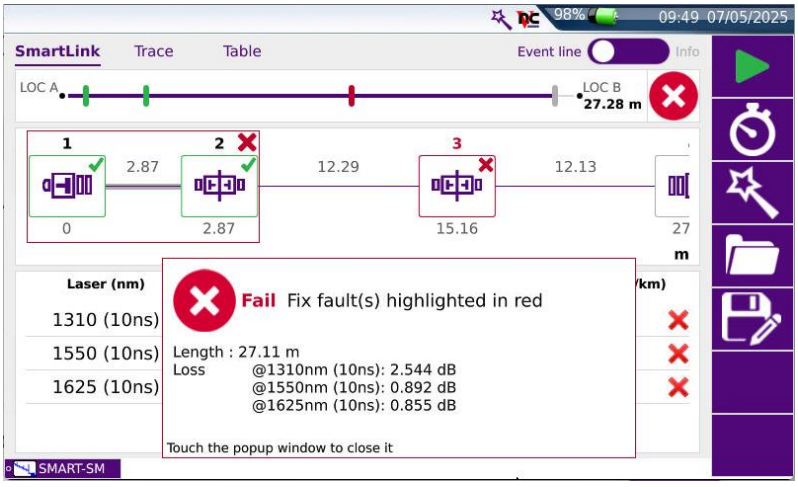
GETTING STARTED MANUAL

PERFORMING AN OTDR TEST IN SMART TEST MODE

1. From the previous configuration screen START TEST.
   The measurement starts:
   - Step1: Test port connection health check
   - Step2: OTDR measurement



2. At the end of the test, the Smart Link view is displayed, with a pop up window indicating global test results (loss, length at each wavelength, and alarm status).



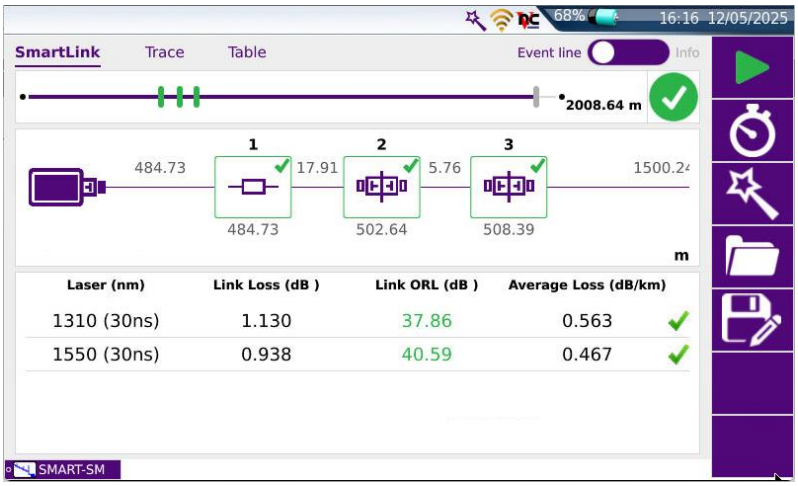
The pop up window displays:

- the icon  if no alarm thresholds are defined.
- the icon  if no event exceeds the alarm thresholds.
- the icon  if at least one event exceeds the alarm thresholds.

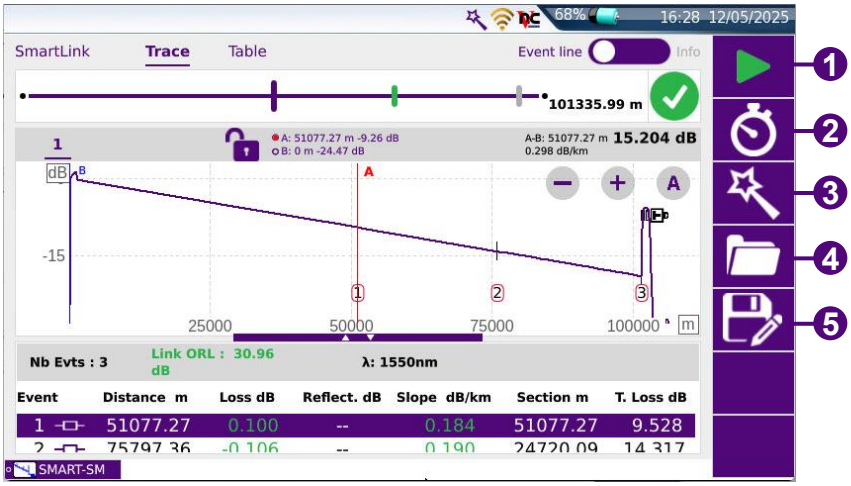
Touch the popup window to close it, and get access to the detailed SmartLink map view

RESULTS DISPLAY IN SMART TEST MODE

The SmartLink View is displayed at the end of the acquisition.



1. Click on the tab **Trace** to display the result trace.

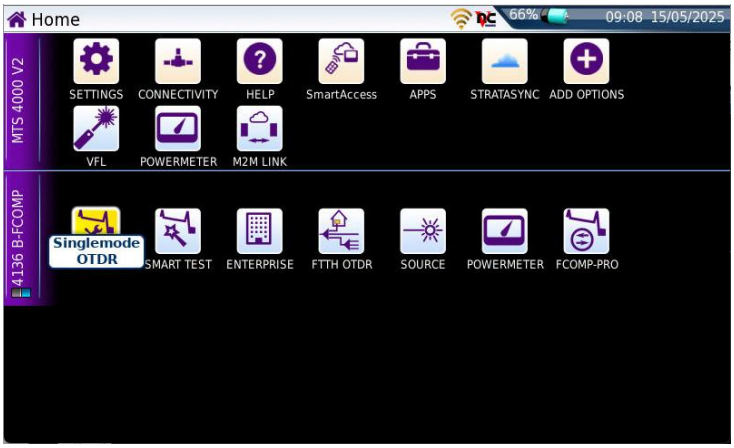


1. **Start**: press to perform a new measurement
2. **Real Time**: press to perform a new measurement in Real Time
3. **Assistant**: press to return to Setup information page (see "Configuring a test in Smart Test Mode“)
4. **File**: press to open the File Explorer
5. **Save**: press to save the results (.sor and .pdf formats)

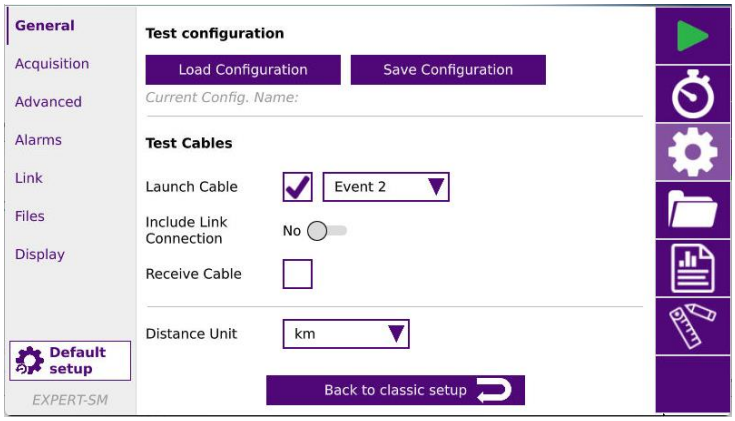
GETTING STARTED MANUAL

CONFIGURING A TEST / CREATING A CONFIG. IN EXPERT MODE

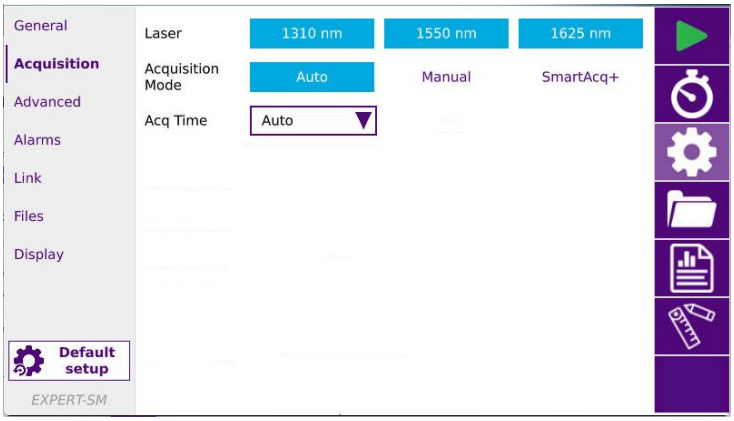
1. On the **Home** page, select **Expert OTDR** icon.



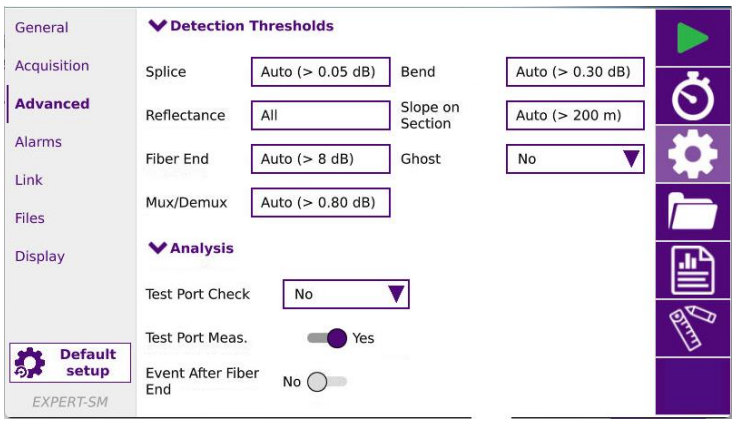
2. From the **Results** page, press  to manually configure the OTDR parameters.

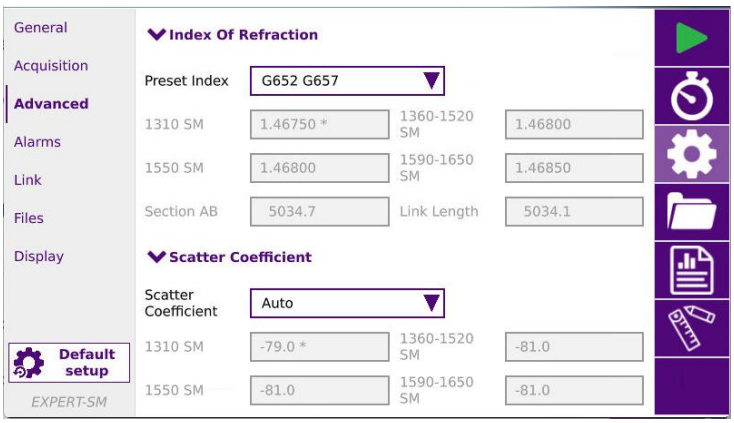


Load or Save a configuration. Set Test cables lengths and distance unit



Define the acquisition parameters Laser, Mode, Time

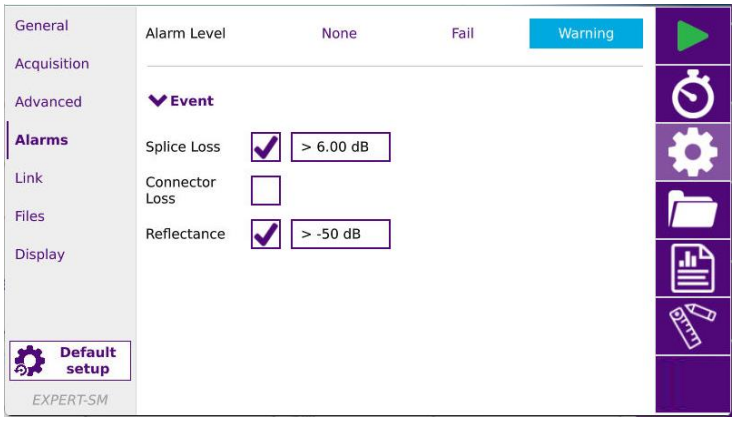




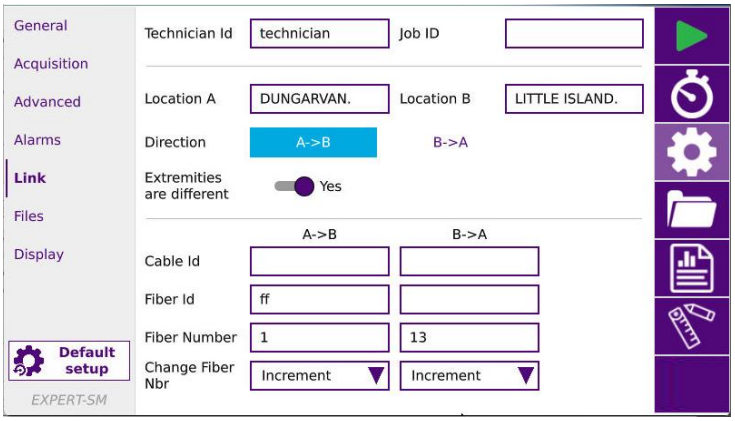
Define the Advanced parameters: Detection Thresholds, Analysis, IOR and Scatter Coefficient

GETTING STARTED MANUAL

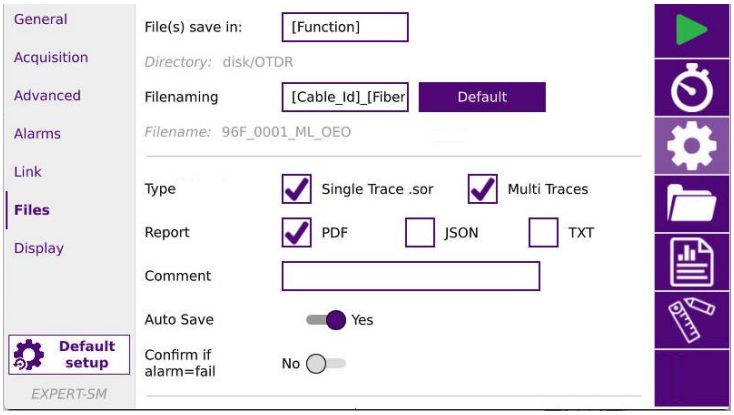
CONFIGURING A TEST IN EXPERT MODE



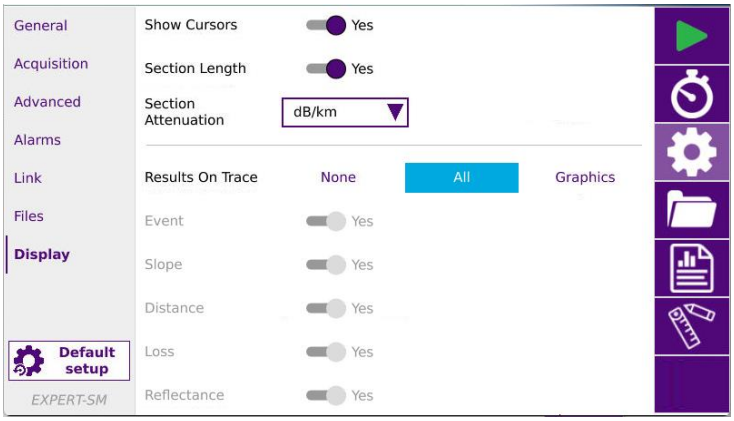
Define the alarms threholds



Define the Link Id parameters (Cable/Fiber Id, Locations…)

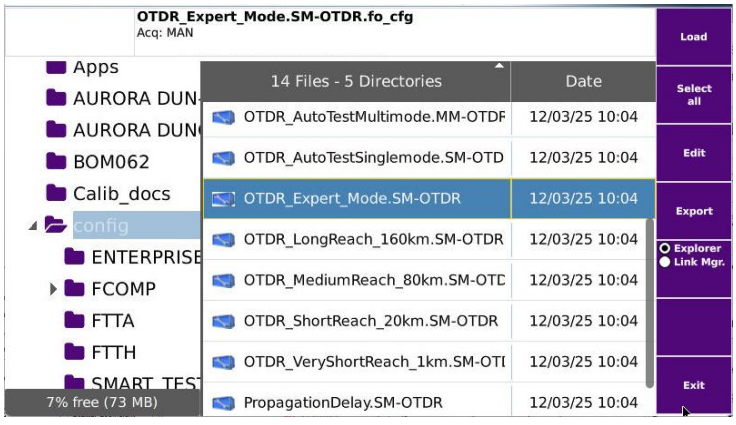


Define the Files and Reports saving parameters (directory, filename, files format…)



Define Features on Traces

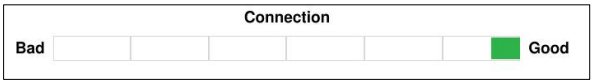
4. If needed, save all the configured parameters by pressing **Save Configuration** in **General** page.
5. Type a file name in the edition keypad and press ✓ to validate.
6. Press  to check the configuration file has been correctly saved.



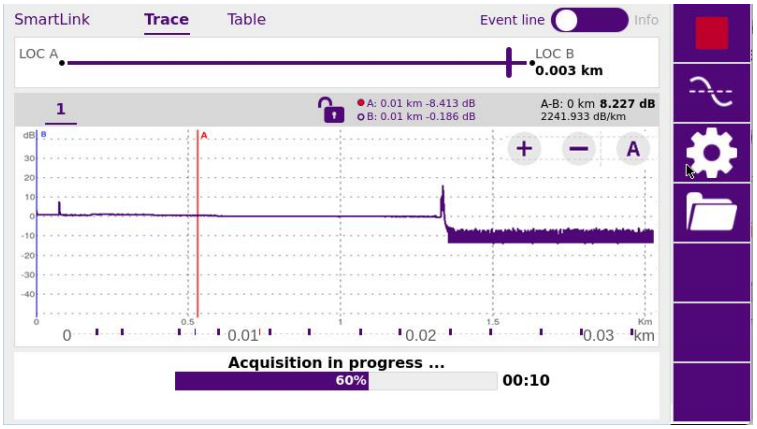
GETTING STARTED MANUAL

PERFORMING AN OTDR TEST IN EXPERT OTDR

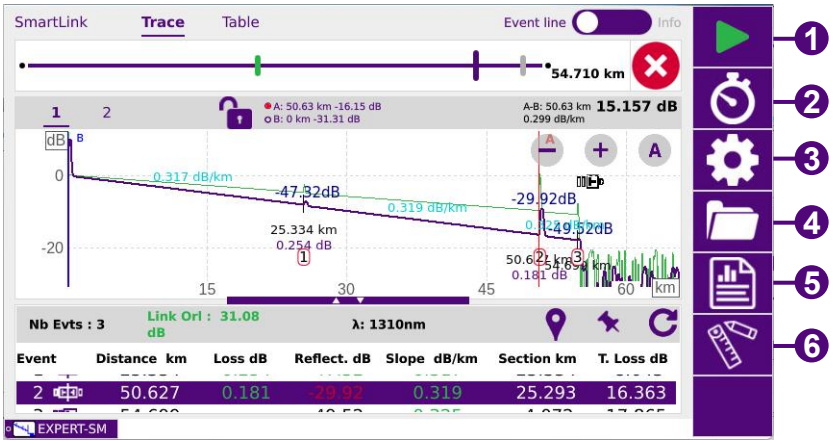
1. Once the OTDR is configured, press  to launch the acquisition:
   - **Step1**: if set up in Advanced page, test port connection health is checked and status (good/back) is displayed in the **Trace** view.



   - **Step2**: OTDR measurement



2. At the end of the test, the OTDR trace(s) and SmartLink View is displayed.



1. **Start**: press to perform a new measurement in Expert mode
2. **Real Time**: press to perform a new measurement in Real Time
3. **Setup**: press to display OTDR parameters (see "Configuring a Test / Creating a Smart config. in Expert Mode")
4. **File**: press to open the File Explorer
5. **Fast Report**: press to save the results (.sor and .pdf formats) if no saving has been pre-set in the "Files" view
6. **Analysis**: press to access to manual measurements: Loss / ORL / Reflectance / Slope

TECHNICAL ASSISTANCE

If you require technical assistance, call 1-844-GO-VIAVI. For the latest TAC information, go to Technical Support | VIAVI Solutions Inc..