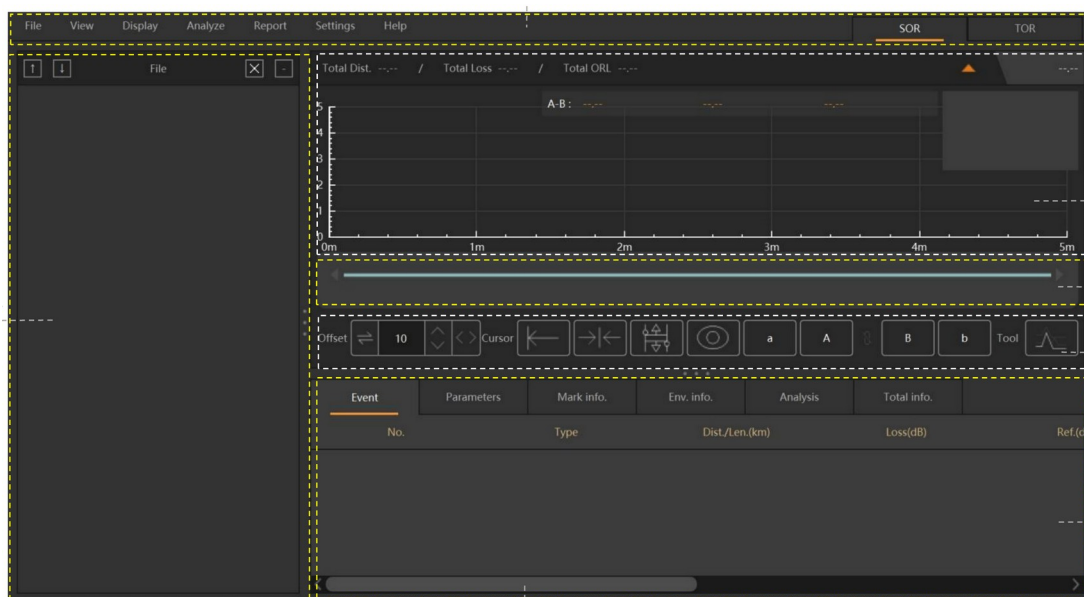




M10000743 / M10000668
Installation document PC software (SOR) OTDR TB-720, OPM/OLS/VFL,
Maunt



Description

Manual for the PC software "OTDR Assistant for PC" (OTDR PC Software Manual – SOR, version V0.2.8.2). With the software, you open, analyse and compare OTDR measurement files (*.sor, max. 40 traces at a time) on the PC, edit measurement information and export or print reports in PDF or XLS format.

Brand

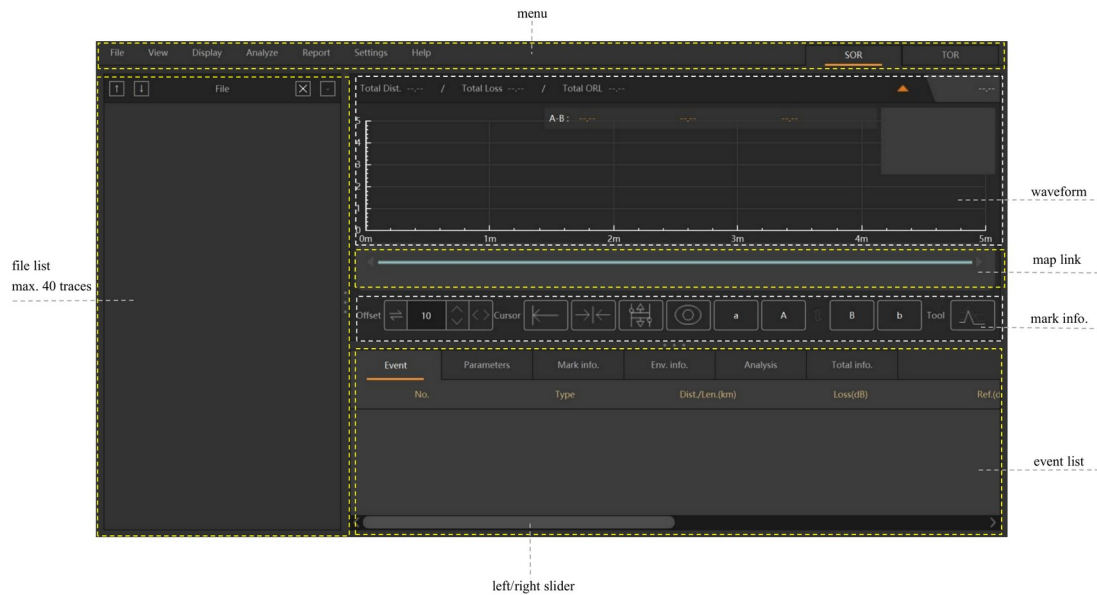
Maunt

Contents

Main screen overview	2
1. Menu	3
2. File list	6
3. Data list	6
4. Event list	8
5. Report	11
6. Cursor operation	16
7. Zooming in and out and restoring	16
8. Moving horizontally/vertically and restoring	17

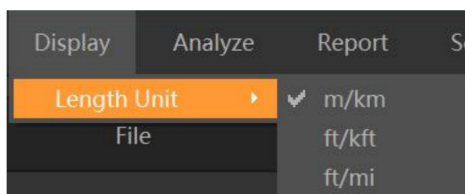
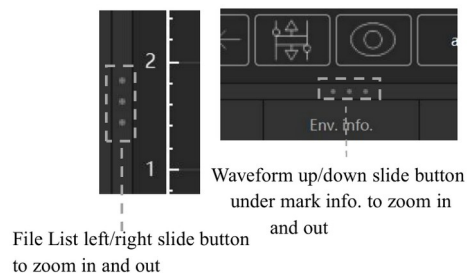
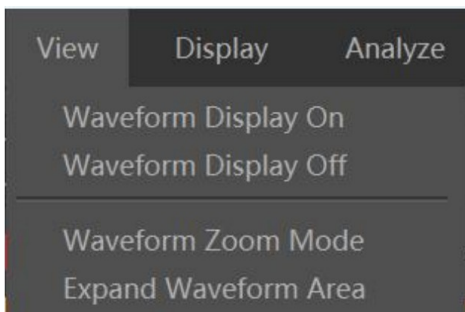
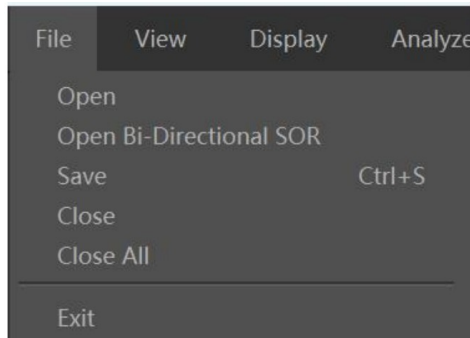


Main screen overview



- The main screen of the software consists of the following parts (see image):
 - Menu:** menu bar at the top (File, View, Display, Analyze, Report, Settings, Help) and the SOR and TOR tabs.
 - File list:** file list on the left, maximum 40 traces.
 - Waveform:** display of the trace.
 - Map link:** event map below the trace.
 - Mark info.:** toolbar with Offset, Cursor and Tool.
 - Event list:** event list with the tabs Event, Parameters, Mark info., Analysis and Total info.
 - Left/right slider:** scroll bar at the bottom to move the event list left and right.

1. Menu



2. File menu:

Open: open measurement files (max. 40 traces, *.sor).

Open Bi-Directional SOR: open a bidirectional measurement. Note: the pulse width, distance and wavelength of both compared measurements must be the same.

Save (Ctrl+S): save marked and other editable information. When saving as SOR, the positions of cursors A, a, B and b on the trace are also saved.

Close: close the selected file.

Close All: close all files.

Exit: close the program.

3. View menu:

Waveform Display On: show the trace.

Waveform Display Off: hide the trace.

Waveform Zoom Mode: zoom in and out in the X and Y direction or only in the Y direction.

Expand Waveform Area: minimise the file list and hide the event list at the bottom.

4. You can also zoom with the slide buttons:

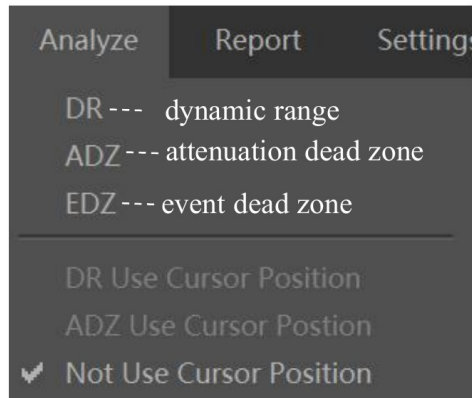
File List left/right slide button: left/right slide button next to the file list to zoom in and out.

Waveform up/down slide button: up/down slide button below mark info. to zoom in and out.

5. Display menu:

Length Unit: set the length unit to m/km, ft/kft or ft/mi.

1. Menu



6. Analyze menu:

DR (dynamic range): show the analysis result for selection.

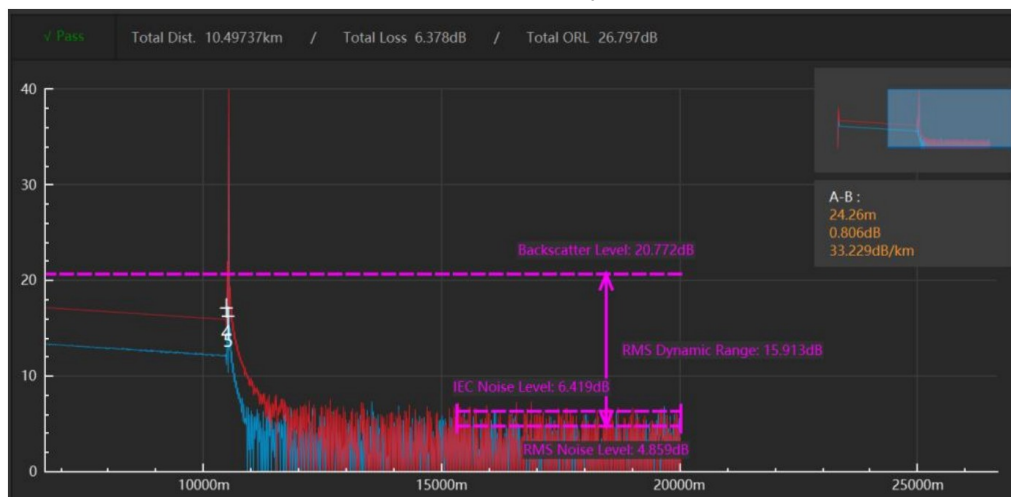
ADZ (attenuation dead zone): show the ADZ when a reflective event is selected.

EDZ (event dead zone): show the EDZ when an event is selected.

DR Use Cursor Position: selectable when DR is checked.

ADZ Use Cursor Position: selectable when ADZ is checked.

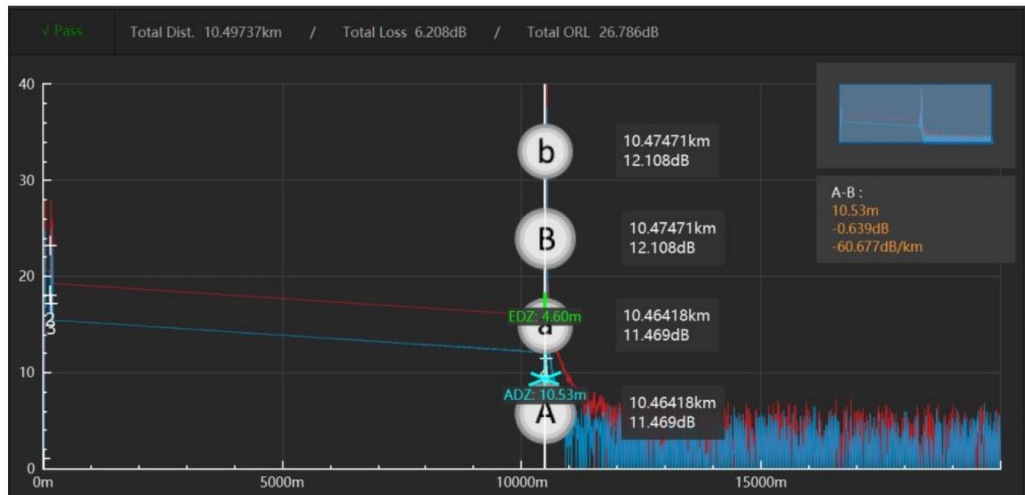
Not Use Cursor Position: do not use a cursor position.



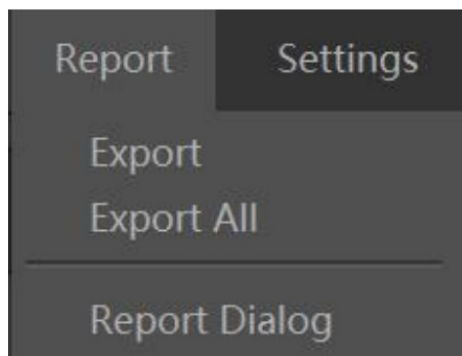
7. Example of a DR analysis on the trace (DR waveform analysis), including Backscatter Level, RMS Dynamic Range, IEC Noise Level and RMS Noise Level.



1. Menu



8. Example of an ADZ and EDZ analysis on the trace (ADZ&EDZ waveform analysis).

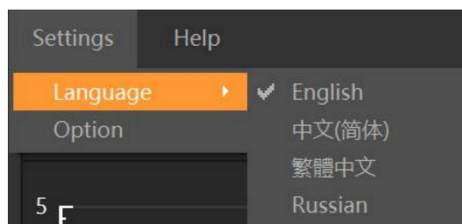


9. Report menu:

Export: export a selected file.

Export All: export all files.

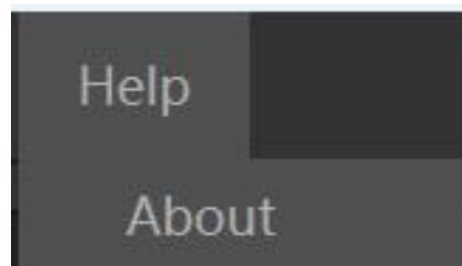
Report Dialog: open the report window (see chapter 5).



10. Settings menu:

Language: change the language here.

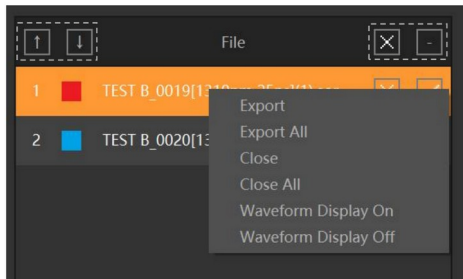
Option: set whether a confirmation window appears when closing.



11. Help menu:

About: version information.

2. File list



12. Switching between files: left-click a file, or click the up/down arrows at the top of the file list. After selection, the related information appears, such as test conditions, cursor information and the event list. Cursors A, a, B and b are also placed on the trace.

13. Closing files:

- A. Click "X" at the top right to close all files.
- B. Click "X" after a file to close that file.
- C. Right-click the file list and choose "Close" or "Close All".

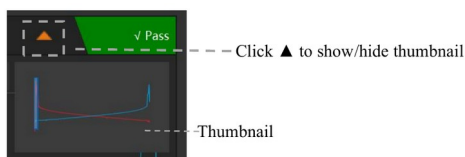
14. Hiding files:

- A. Click "-" at the top right to hide/show all traces.
- B. Click "✓" after a file to hide/show that trace.
- C. Right-click and choose Waveform Display On/Off.

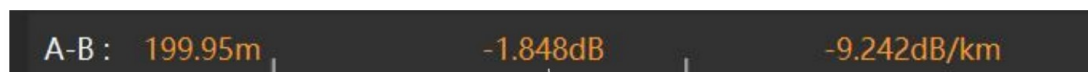
15. Export/Export All: right-click the file list and choose Export (one report) or Export All (all reports).

3. Data list

16. Waveform info: the top left of the trace shows the total distance (Total Dist.), the total loss (Total Loss), the ORL (Total ORL) and the pass/not pass assessment.



17. Thumbnail: shows the complete trace. Click ▲ to show or hide the thumbnail.



18. A-B cursors info: shows the distance, the attenuation and the attenuation rate (dB/km) between cursor A and B.

3. Data list



19. Map link (event map):

- A.** Press and hold the left mouse button on the map link; a hand appears. Move left/right to view all events.
- B.** A SOR/TOR event icon with a tick means pass, a cross means not pass. If 2 or more events are framed together, this is an "M" event (merged event).
- C.** Left-click an event icon: cursors A, a, B and b are placed on the trace at that event and the event is also selected in the event list.



20. Offset (move the trace

vertically/horizontally): from left to right are the step button, the step value, the up/down button and the left/right button. Click to move and restore the trace. For detailed operation, see chapter 8.



21. Cursor: from left to right are the buttons cursor reset, centre cursors, automatically adjust cursor position up/down, show/hide cursors and move cursors together (a, A, B, b). Click to operate the cursors. For detailed operation, see chapter 6.



22. Tool: click the tool icon; the frame turns orange. The selected trace turns red, the others grey.



4. Event list

The screenshot shows the OTDR Assistant for PC software. The main window displays the Event list table, which is highlighted with a dashed box. Below it, the sub event data info window is open, showing a detailed view of the selected event.

No.	Type	Dist./Len.(km)	Loss(dB)
1	Start	0.00000	0.959
	Section	(0.13277)	0.051
2	MShape	0.13277	0.700
	Section	(0.02426)	0.008

No.	Type	Dist.(km)	Ref.(dB)
1/2	Reflect	0.13277	--:--
2/2	Reflect	0.13628	--:--

sub event data info

23. Event:

- A.** Click an event: cursors A, B, a and b are placed on the trace at that event and the event icon in the map link is also selected.
- B.** Select an event and scroll left/right to view the details. Click the tabs of the event list to switch.
- C.** If events are close together, a merged event (M type) is created. Click the sub-event icon to view the information of the merged event (sub event data info).
- D.** If the attenuation rate of the fibre exceeds the threshold, the value is shown in red.

Event	Parameters	Mark info.	Env. info.	Analysis	Total info.
Parameter		Setting			
Wavelength: 1310nm		Refractive Rate: 1.46770			
Pulse Width: 25ns		Backscatter Coefficient: -79.6			
Avg. Time: 15s		Max Reflection Threshold: -75.0			
Range: 20km		Splice Loss: 0.05			

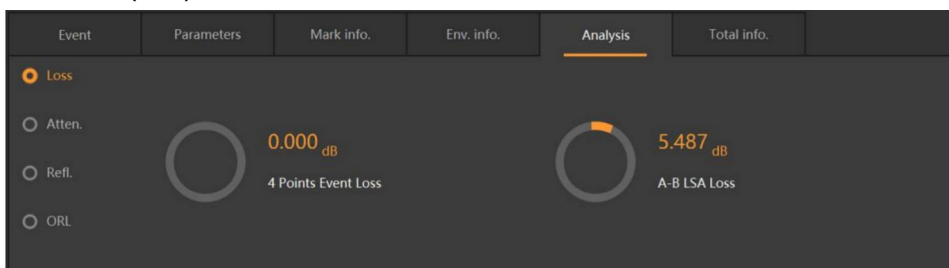
24. Parameters: tab with the measurement parameters (wavelength, pulse width, averaging time, range) and the settings (refractive index, backscatter coefficient, max. reflection threshold, splice loss).



4. Event list

Event	Parameters	Mark info.	Env. info.	Analysis	Total info.
Edit					
Company	Testing				
Customer	Tester				
Cable ID	123				
Fiber ID	ABC				

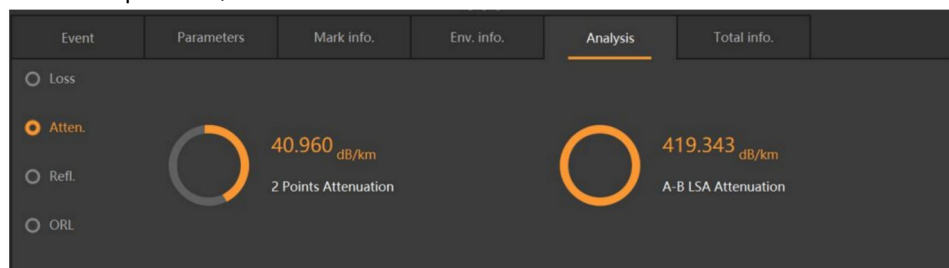
25. Mark info.: company, customer, cable ID, fiber ID and comments can be entered and edited (Edit).



26. Analysis – Loss:

Loss (four-point method): uses the four cursors a, A, b and B. Move the cursors; the difference between the LSA value of “a, A” and that of “b, B” determines the loss more accurately (4 Points Event Loss).

A-B LSA Loss: two-point method; calculates the difference between A and B using the LSA slope of “A, B”.



27. Analysis – Atten.:

Attenuation Rate: calculates the actual attenuation between cursor A and B and converts the loss to per kilometre (2 Points Attenuation). Sensitive to noise.

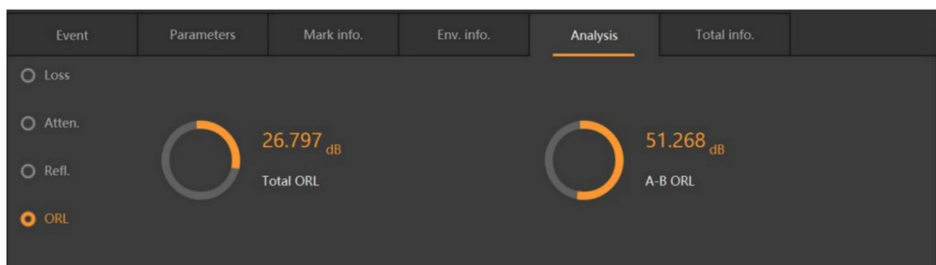
A-B LSA attenuation rate: calculates the LSA slope between cursor A and B and shows the attenuation per kilometre. This value is relatively stable.



4. Event list



28. Analysis – Refl. (reflection, three-point method): uses cursors a, A and B. Place “a, A” on the flat part before the reflection; the initial power is determined with the LSA average. Place B at the highest point of the reflection to show the reflection value.



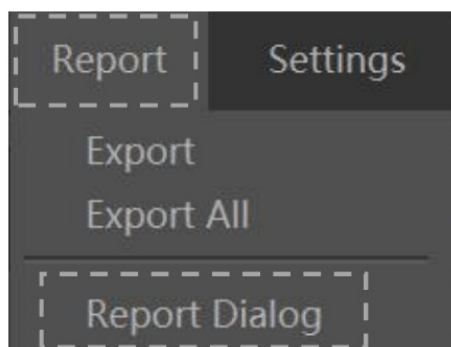
29. Analysis – ORL:

Total ORL: calculates the ORL value of the entire link.

A-B ORL: calculates the ORL value between cursor A and B.

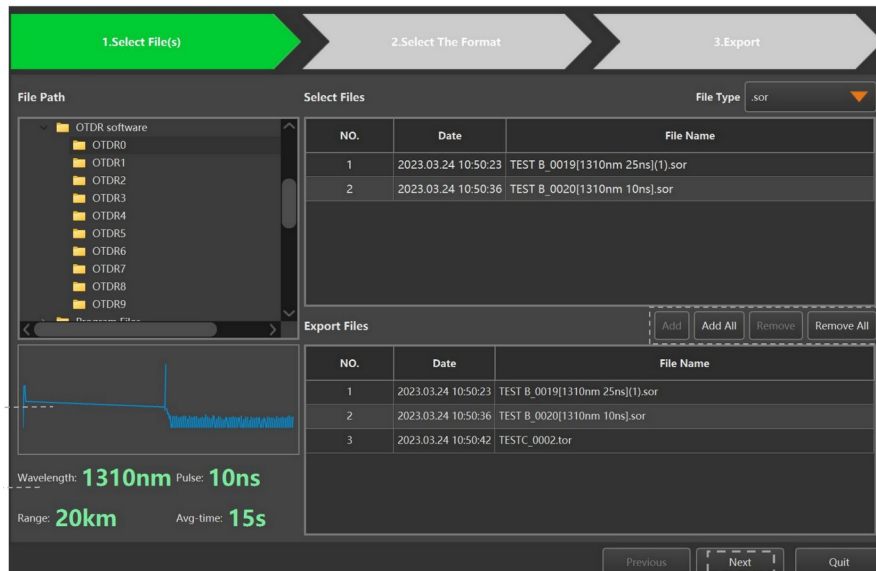
30. Total info.: tab with the total information of the measurement.

5. Report



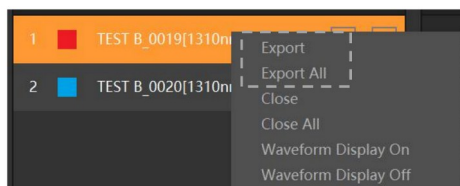
31. Open the report window via Report > Report Dialog to select files.

5. Report



32. Adding export files (step 1. Select File(s)):

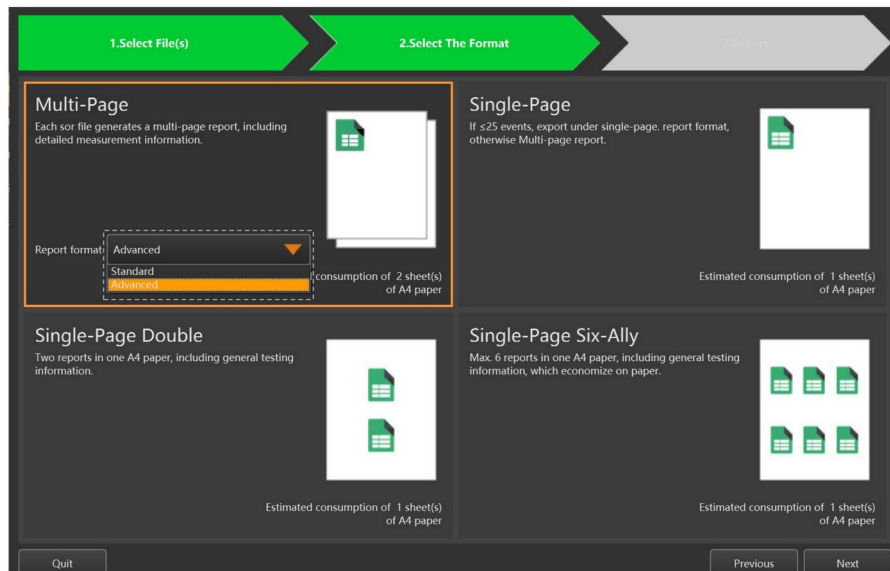
- A.** Hold "Ctrl" or "Shift" to choose multiple files in the Select Files or Export Files list. Click Add/Add All to add some or all files to the export list; click Remove/Remove All to remove some or all files from the export list.
 - B.** If there are files in the export list, change the File Type and add more files; this way "*.sor" and "*.tor" files can be exported together.
 - C.** Open a folder (File Path) and add the files to the export list.
- The bottom left shows the preview of the *.sor trace and the measurement information (wavelength, pulse, range, averaging time).



33. Choosing the report format (step 2. Select The Format). You get here in three ways:

- a)** In the report window, click "Next".
- b)** Report menu > Export/Export All (sor*).
- c)** File list > right-click > Export/Export All (sor*).

5. Report



34. Available formats:

Multi-Page (PDF): each sor file becomes a multi-page report with detailed measurement information (approx. 2 A4). Supports the Standard and Advanced formats.

Single-Page (XLS): with ≤ 25 events, the export is on one page, otherwise as Multi-Page (approx. 1 A4).

Single-Page Double (XLS): two reports on one A4, with general test information.

Single-Page Six-Ally (XLS): max. 6 reports on one A4, with general test information; saves paper.

PDF and XLS formats support print preview, printing and export (sor* only).



5. Report

Fiber ID		☒ Auto accumulate value
Fiber ID	abab	☒ Auto accumulate value
Fiber ID	一号光纤	☒ Auto accumulate value
Fiber ID	20	☒ Auto accumulate value
Fiber ID	cdcd	☐ Auto accumulate value

Preview		
No.	Fiber ID	File Name
1	0	TEST B_0019[1310nm 25ns](1).sor
2	1	TEST B_0020[1310nm 10ns].sor

Preview		
No.	Fiber ID	File Name
1	20	TEST B_0019[1310nm 25ns](1).sor
2	21	TEST B_0020[1310nm 10ns].sor

Preview		
No.	Fiber ID	File Name
1	cdcd	TEST B_0019[1310nm 25ns](1).sor
2	cdcd	TEST B_0020[1310nm 10ns].sor

35. Exporting (step 3. Export): choose the format and click “Next”. Then set the customer information with “Use following information”: the selected and entered information appears in all exported/printed reports.

Auto accumulate value on + number: the Fiber ID in the report starts at that number (e.g. 20 → 20, 21).

Auto accumulate value on + Chinese/English text or empty: the Fiber ID starts at 0.

Auto accumulate value off: the Fiber ID is the content actually entered (e.g. cdcd).

36. Choose “Use the file’s own information” to show the original information of the file in the report.

Export Option					
Report Name	TEST B_0019[1310nm 25ns](1)	☒ Follow source filename	Report Format	.pdf	
Export To	C:/Users/sales/Desktop	☒ Follow source file path			
Preview					
Fiber ID	File Name	Date	Report Name	Export Path	
cdcd	TEST B_0019[1310nm 25ns](1).sor	2023.03.24 10:50:23	TEST B_0019[1310nm 25ns](1).pdf	D:/OTDR software/OTDR0	
cdcd	TEST B_0020[1310nm 10ns].sor	2023.03.24 10:50:36	TEST B_0020[1310nm 10ns].pdf	D:/OTDR software/OTDR0	

37. Export options (Export Option), with “Follow source filename” and “Follow source file path” checked:

a) When exporting one file, Follow source filename and Follow source file path are not shown.

b) With multiple files and Follow source filename checked, the report name is the same as the name of the sor/tor file.

c) With multiple files and Follow source file path checked, the report is saved in the location of the corresponding sor/tor file (see Export Path in the image).

d) Under Report Format, choose .pdf or .xls.



5. Report

Export Option

Report Name: TEST B_0019[1310nm 25ns](1) ☐ Follow source filename Report Format: pdf

Export To: C:/Users/sales/Desktop ☐ Follow source file path

Preview

Fiber ID	File Name	Date	Report Name	Export Path
cdcd	TEST B_0019[1310nm 25ns](1).sor	2023.03.24 10.50.23	TEST B_0019[1310nm 25ns](1)_0001.pdf	C:/Users/sales/Desktop
cdcd	TEST B_0020[1310nm 10ns].sor	2023.03.24 10.50.36	TEST B_0019[1310nm 25ns](1)_0002.pdf	C:/Users/sales/Desktop

38. Export options without checkmarks:

Without Follow source filename, the report is given the name of the first file with _0001, _0002, etc.

Without Follow source file path, the report is saved in the folder under "Export To" (see Export Path in the image).

Preview

No.	Fiber ID	File Name	Date	Report Name	Export
1		TEST B_0019[1310nm 25ns](1).sor	2023.03.24 10.50.23	TEST B_0019[1310nm 25ns](1)_0001.pdf	C:/Users/sales/Desktop
2		TEST B_0020[1310nm 10ns].sor	2023.03.24 10.50.36	TEST B_0019[1310nm 25ns](1)_0002.pdf	C:/Users/sales/Desktop

Preview Print Export Previous Next Quit

39. Viewing, printing and exporting the report:

- Select a file in the Preview list and click Preview for a preview.
- Click "Print" or the printer icon at the top right of the print preview. A print window appears; the reports in the Preview list are printed by default.
- Click "Export"; the "Exporting in progress" window appears.

Exporting in progress

Be exporting (2/2)

TEST B_0019[1310nm 25n...

To

C:/Users/sales/Desktop

Exporting TEST B_0019[1310nm 25ns](1)_0002.pdf...

Exporting in progress

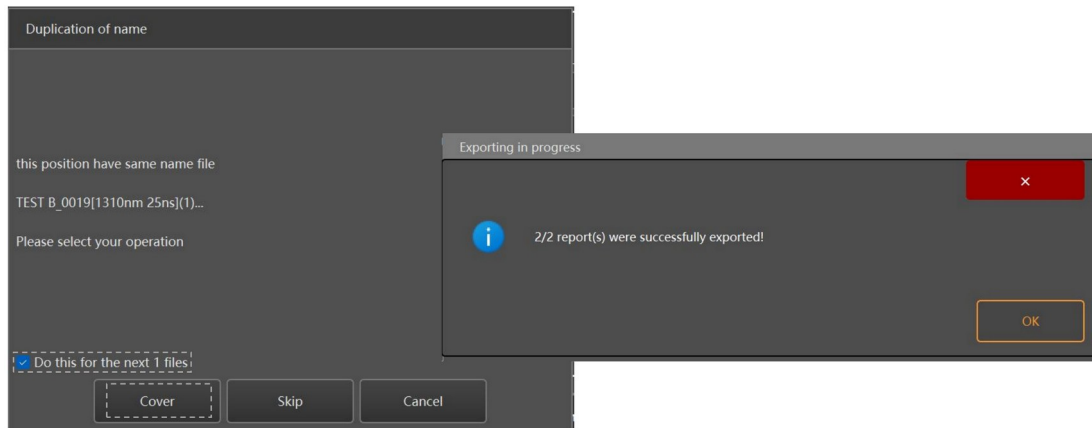
2/2 report(s) were successfully exported!

OK

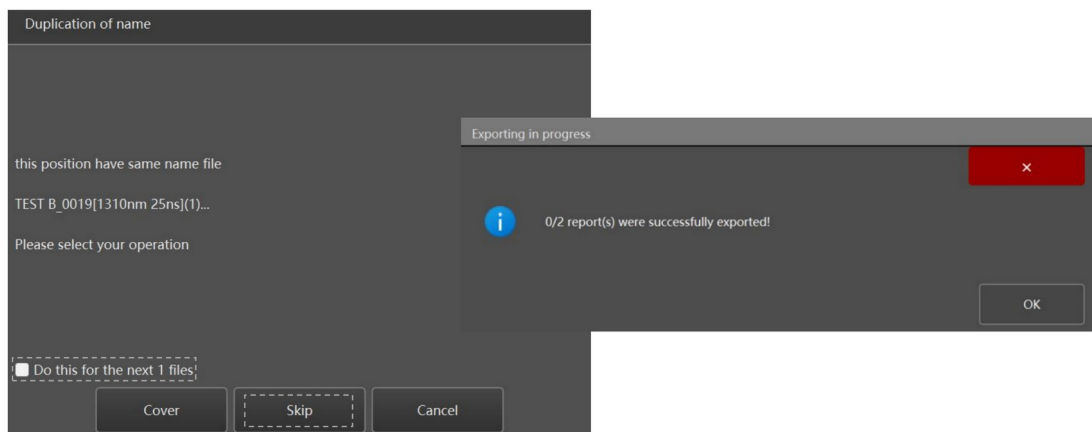
40. After exporting, the window with the export result appears. Check that the file was exported correctly (e.g. "2/2 report(s) were successfully exported!") and click OK.



5. Report

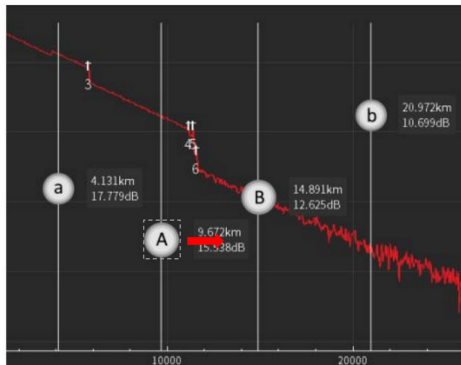


41. If a file with the same name already exists in the export folder, the “Duplication of name” window appears during export. Choose Cover (overwrite), Skip or Cancel. If “Do this for the next n files” is not checked, this window appears for each file and you have to confirm each time. If it is checked, all files are processed without repeated confirmation. The export result then appears.



42. Example with Skip: the files are skipped and the export result shows “0/2 report(s) were successfully exported!”.

6. Cursor operation



43. Moving: in the trace, left-click a cursor and hold the mouse button. The mouse pointer becomes a cross; drag the cursor to the left or right.



44. Positioning with the cursor buttons:

- A.** Cursor reset: cursors A, B, a and b go to the start of the trace.
- B.** Centre cursors: cursors A, B, a and b go to the middle of the trace.
- C.** Automatically adjust cursor position up/down: cursors A, B, a and b are placed on the longitudinal average interval of the trace.
- D.** Show cursors: hide/show cursors A, B, a and b.

45. Moving cursors together:

- a)** Click the icon between cursor A and B to make the four cursors move together, or to switch this off.
- b)** Click the cursor buttons; the selected buttons turn orange. If you move one cursor, the other orange cursors move with it.

7. Zooming in and out and restoring

46. Partial zoom: right-click the trace and drag diagonally.
47. Zooming the entire trace in and out: click Waveform Zoom Mode and turn the mouse wheel to zoom in the X and Y direction. Hold "Ctrl" and scroll to zoom in the X direction. Hold "Shift" and scroll to zoom in the Y direction.
48. Restoring: double-click the trace to return to the original view.

8. Moving horizontally/vertically and restoring

49. Moving: left-click the trace, hold the button and drag to move the trace up, down, left or right.

50. Restoring: double-click the trace to return to the original view.

51. Precise vertical movement and restoring, to make traces easier to compare (Offset):

A. Step button: click the up/down button and then click to switch the step value between 0.1, 1 and 5. Click the left/right button and then click to switch between 1, 10, 100, 500, 1000 and 5000.

B. Step value: enter manually; range 0.01 to 10 vertically and 1 to 100000 horizontally.

C. Up/down button: move the selected trace up/down.

D. Left/right button: move the selected trace left/right.

E. Reset button: return the trace to its original position.

