

# T-BERD/MTS-2000/-4000V2

# **Latest Version**

#### Version ID : 234930

Release date : December 06, 2023

Application	Version	Date
Microscope	V23.68	2023/12/06
Instrument Setup	V23.68	2023/12/06
Fiber Optics	V23.68	2023/12/06
Boot	10.84.0	2023/08/11
Linux Kernel	25.6.2	2023/09/22
File System	23.4.7	2023/12/06

# OTDR

New Features / Improvements

- Add loopback software option to new E4146A-PC and -APC singlemode/multimode modules.
- FTTH-SLM: Update splitter detection criteria in discover mode.
- FTTH-SLM: Add new set of unbalanced tap couplers and enhance setup menu to address new configurations.
- Add launch and receive cable information in pdf report.
- Change Viavi default splice threshold to 0.3dB for pass/fail analysis.

#### **Corrections**

- Manage configuration file overwrite.
- locked markers no longer lost during consecutive tests.
- wrong global pass/fail indication in "eventLine" status.
- Pass/Fail status correctly updated when changing split ratio manually in PON test scenario.

#### **Powert Meter**

#### <u>New Features / Improvements</u>

• Display the power measurement unit as dBm by default.

**Corrections** 

• Problem with overwriting during file saving.

# FiberComplete PRO - FiberComplete

New Features / Improvements

- Prevent remote unit to go to sleep mode during multi-fiber test sequence.
- Always focus File Explorer to the running project directory



## Cable-SLM / MultiFiber MPO12 Switch

New Features / Improvements

• Cable-SLM + FiberComplete PRO: messages updated in manual operation.

#### **Job Manager/Test Process Automation**

New Features/ Improvements

- Improve management of special characters per UTF-8.
- Add pop-up message when sync to Stratasync completed.

#### Inspection

New Features/ Improvements

• Potential turn-up issue when P5000i connected to mainframe.



# **Previous Versions History**

Version ID : 234241

Release date : October 19, 2023

Application	Version	Date
Microscope	V23.62	2023/10/19
Instrument Setup	V23.62	2023/10/19
Fiber Optics	V23.62	2023/10/19
Boot	10.84.0	2023/08/11
Linux Kernel	25.6.2	2023/09/22
File System	23.4.6	2023/12/06

#### OTDR

New Features / Improvements

- T-BERD/MTS-2000 only: Removal of SuperExpert license, the features are now available by default in ExpertOTDR set-up menu
- Main enhancements:
  - FTTH-SLM: 1/64 splitter topology measurement
  - o OTDR grouped-events
- Main bug fixes:
  - o FTTH-SLM: Multiple fiber ends icons at 1310/1550nm
  - o Events displayed after a manual "Fiber End" event addition in SmartLink view
  - o Wrong Section loss displayed in PDF and json files
  - o Cursor position or presence in PDF
- Translation updates and overlap corrections (German)

#### FiberComplete PRO - FiberComplete

<u>New Features / Improvements</u>

- Simplified set up & New options:
- -> Caution: all existing Config. Files may need to be redone.

-> Caution: both units will need to have this SW version. Mixing previous SW versions with this one will cause communication errors.

- New: Direct short cuts in Process view for: "Launch cable, Receive cable, Location A, Location B": a long touch gesture on the purple screen zone allows to open the dedicated dialog box, without the need to go in the set up menu,
- New: Set up wording & sections changed: "Test Cables", "laser" selection different between IL/ORL & OTDR,
- New OTDR acquisition option: "Manual" with "Pulse" & "Acquisition time" set up,
- New: .sor files saving option in Report set up (file content: "one & all traces"),
- Simplified: Expert set up menu adjusted upon FCOMP set up:

# VIAVI

- If OTDR acq. Is auto or manual -> "Expert OTDR" app set up available is: Display/Advanced. By default: Connector test = no ; include link start connector= yes, include link end connector = yes,
- If OTDR acq. Is Expert OTDR-> "Expert OTDR" app set available is : Acquisition/ Alarms/Display/Advanced.
- Rationalization & better user guidance:
  - New: time synchronization between local & Remote @Start,
  - New: Referencing/ Factory Ref: automatic exit of the referencing menu after "factory ref" icon pressed,
  - New: icon continuity now displayed during the referencing process/ removed from Process, IL/ORL bidir & Smartlink views,
  - New: @Start, an alert message is displayed if no referencing has previously been recorded,
  - Specific Test sequences no longer available: ORL standalone, OTDR Unidir only
  - Remote unit: Smartlink view no longer displayed, results files no longer saved
  - Revised: Autoset (Fields list in the user manual),
  - Revised & renamed: 5 Default config files for demonstration: IL ORL; IL ORL Fault Finder; IL ORL UnidirOTDR; IL ORL TrueBIDIR; TrueBIDIR. (previous default config files will no longer be available),
  - Revised: all non-relevant soft keys are inactivated during the referencing process.
- FCOMP. Pdf Report:
  - Wording updated,
  - o IL/ORL & Length results with mode: CW or OTDR mentioned,
  - Translation updates: German.
- Main bug fixes:
  - TrueBIDIR analysis,
  - o References with Loopback method: ORL display & specific test sequences,
  - Referencing process stability, 0 ORL recording
  - Synchronization between units (with & without switch),
  - Fast report with .msor & .sor,
  - Automatic detection of remote & local SW version & HW incompatibilities: pop up messages, adjusted set up,
  - Loopback OTDR Acq.: transmission of FCOMP set up in Expert, corrections in .pdf report, SmartAcq. Disabled.

# Cable-SLM / MultiFiber MPO12 Switch

- Cable-SLM + FiberComplete PRO:
  - Project report FCOMP: both devices, alarms, results table with total tested/passed/failed; label ID, Link Loss AB & Link Loss BA with mode : CW or OTDR mentioned, # of events,
  - Continuity icon now displayed in Cable view,



- Cable-SLM :
  - Project creation simplified (less fields, label list @ no by default)
  - Load config files after project creation no longer possible
  - During a test sequence, in cable view: "Close project" soft key inactivated, other fiber selection not possible anymore
  - Results view: color coding simplified, check mark removed on project without labels.
- MultiFiber MPO12 switch:
  - Switch serial # displayed in the .pdf report
  - No longer available: "full switch sequence" without an opened project (with Cable-SLM SW option installed)

# OSA/OCC

Problems Correction

- OSA Error in calculating cursor position
- OSA text setup "Detect.: Permanent" partly overrides "Splitter" on display
- OCC-4055 and OCC-4056: Incorrect auto threshold calculation

#### Inspection

New Features/ Improvements

• Translation Updates (French)



# Version ID : 233110 Release date : July 21, 2023

Application	Version	Date
Microscope	V23.40	7/21/23
Instrument Setup	V23.40	7/21/23
Fiber Optics	V23.40	7/21/23
Boot	10.81.4	3/31/2023
Linux Kernel	25.2.2	3/3/2023
File System	23.1.23	7/31/2023

#### OTDR

New Features / Improvements

- Receive Cable position bug fix
- Translation updates and corrections (German & Czech)
- Miscellaneous bug fixes

# FiberComplete PRO

#### New Features / Improvements

- Link Description set-up menu now consistent between FCOMP and OTDR functions
- FCOMP Remote unit information now included into all reports
- Miscellaneous bug fixes

# Test Process Automation (TPA) / Job Manager

New Features / Improvements

- Added broader character support for TPA fields
- FCOMP-PRO/Bi-dir OTDR Job Manager test sequence bug fix
- Miscellaneous bug fixes



Version ID : 232320 Release date : June 5, 2023

Application	Version	Date
Boot	10.81.4	2023/03/31
Linux Kernel	25.2.2	2022/03/03
File System	23.34	2023/06/06
Instrument Setup	23.34	2023/06/05
Microscope	23.34	2023/06/05
Fiber Optics	23.34	2023/06/05

#### **OTDR**

Problems Correction

- ExpertOTDR: minor modifications of the setup menus
- Miscellaneous bug fixes and translation corrections

#### FiberComplete PRO / Multi-Fiber Switch

Problem Corrections and Improvements

- Individual report (.txt + .pdf) : remote unit serial number and calibration date now displayed
- Miscellaneous bug fixes and translation corrections

#### OSA/OCC

**Problems Correction and Improvements** 

• Modification of the nanoOSA message when another FO application is selected/running

#### Test Process Automation (TPA) / Job Manager

New Features/ Improvements

- Aligned Metadata sent to StrataSync across instruments
- Miscellaneous bug fixes

#### Inspection

New Features/ Improvements

- Delete tip settings via the Setup menu
- Delete analysis profiles via the Setup menu
- Delete report logos via the Setup menu
- Miscellaneous bug fixes



#### Release date : April 7, 2023

Application	Version	Date
Boot	10.81.4	2023/03/31
Linux Kernel	25.2.2	2022/03/03
File System	23.1.12	2023/04/07
Instrument Setup	23.22	2023/04/07
Microscope	23.22	2023/04/07
Fiber Optics	23.22	2023/04/07

# OTDR

#### Problems Correction

• E41CWDM10U OTDR module no longer crashes with T-BERD/MTS-2000 & 4000v2 Platforms.

#### Improvements

- Combo PM/OTDR Test Results
  - Auto Store disabled. Now possible to add comments, notes or change event type.
  - Power level now included in PDF report.

# FiberComplete PRO / Multi-Fiber Switch

#### New Features

- Analysis & alert messages now displayed if units have different FO SW version
- Alert message displayed if the remote unit has a different laser set than the master unit (for ex. 3 lasers selected on master whereas 2 lasers only are available on remote)

# Problem Corrections and Improvements

- ".sor" savings set up ("one trace" or "one and all traces")
- Results display: IL/ORL tab (IL/ORL Bidir; length, Mode: CW or OTDR)
- Limitations of options selection (SmartAcq, PON & unbalanced FTTH) when TrueBIDIR is selected.
- .pdf report correction
- German translations corrections
- Referencing not possible if on-going testing sequence

# With Multi-Fiber Switch Module:

- Automatic switching sequence with Cable-SLM : set up +messages have been updated
- Polarity & continuity: faster measurement process
- Cable-SLM SW is now an option for FiberComplete + Multi-Fiber switch
- Length measurement fix



# **OSA/OCC**

#### Problems Correction

- OSA A-B cursors info changed to dB instead of dBm
- Software crash when an OCC-4056 module with an SFP transceiver plugged-in is fixed

# Test Process Automation (TPA) / Job Manager

#### New Features/ Improvements

- Added formal support for Android connectivity (smart devices running Android 12 or a newer version recommended)
- Improved support for iOS connectivity with VIAVI Mobile Tech app
- Improved support for Ethernet/Wi-Fi connectivity with VIAVI Mobile Tech app
- Added support for job creation via API
- Added support for job creation via VIAVI Mobile Tech app
- Added support for configuration deployment from StrataSync
- Added support for software option deployment via VIAVI Mobile Tech app
- UX/UI improvements for the instrument-based Job Manager
  - Support for creating jobs locally via templates
  - $\circ$   $\;$  Improved integration with fiber tests
- Miscellaneous bug fixes

# Inspection

#### New Features/ Improvements

- Added support for importing test results from a USB-connected FiberChek probe microscope
- Added support for updating the profiles on a FiberChek probe microscope when deployed from StrataSync
- Added an About screen under Setup
- Improved management of tip settings and profiles when deployed from StrataSync
- Improved popup messages when using Job Manager
- Miscellaneous bug fixes



#### Release date : March 2, 2023

Application	Version	Date
Boot	10.81.3	2023/03/02
Linux Kernel	25.2.2	2022/11/04
File System	23.1.4	2023/03/02
Instrument Setup	23.08	2023/03/02
Microscope	23.08	2023/03/02
Fiber Optics	23.08	2023/03/02

#### OTDR

**Improvements** 

- Enhancement of grouped events pass/fail analysis
- Possibility to add a customized pulse width in the OTDR setup menu
- Default bend detection change to 0.3dB
- ExpertOTDR: Event notes now available standard (no longer requires Super Expert SW license) for Point-to-Point and PON Network Configs
- "Show cursor" setting is now saved in the config file
- SLM/Table update problem when changing event type manually
- "." Symbol added to German keyboard

# LTS (Power Meter/ Source Application)

#### **Improvements**

• Problem with directory management is fixed

# Cable-SLM

**Improvements** 

- Enhanced management of labels
- Acquisition test sequence performed according to presence of optical switch or not
- New Cable-SLM project creation
- FCOMP-PRO job associated to Cable-SLM now pushes configuration into both FCOMP-PRO and OTDR.

# FTTH-SLM

**Improvements** 

- 4100A module: With FTTH-SLM Base License, the selection and analysis of 2 splitters is now available
- Correct splitter measurement with Launch cable directly connected
- Event code on top of existing splitter icon is correct when reloading .csor file



# FiberComplete PRO

## New functionalities

• High acquisition time with manual OTDR set up (3min)

**Improvements** 

- Faster switching time for MPO switch
- Switch port selection now possible with Cable-SLM project/ label/ Simplex fiber
- Enhancement of the stop function in FCOMP-PRO while running a test sequence

MPO SWITCH MODULE:

- Set up option "switch sequence" no longer accessible in the HMI when a project has been opened via Cable-SLM (option remains possible in manual switching mode only)
- Set up option "MPO 20/24 & MPO 24/24" no longer accessible in Cable-SLM project/ label list/ multifiber connectors/fiber count
- Set up option "Report/ consolidated option" no longer accessible with Cable-SLM project opened

FCOMP-PRO:

- Pdf report now includes OTDR traces after "replay TrueBidir" is performed
- Time-out between products in both extremities is fixed
- 4100A module now compatible with TrueBidir & Loopback SW options
- Simultaneous project creation either on ExpertOTDR or FCOMP-PRO with Job manager

# OSA/OCC

# **Improvements**

- Configuration table functionality is now available with WDM expert license new GUI
- In Grid Mode "Manual" the marker can jump to wrong channel if clicking WDM table line is fixed

# **Job Manager**

Improvements

• Possibility to handle job template files coming from StrataSync or MTA

# TPA

# **New Functions**

• Integration of a full StrataSync/Mobile Tech App process with Job Manager

#### Inspection

**New Functions** 

• User interface refresh

- Allows probe microscope firmware updates via host instrument
- Now possible to add new inspection tip settings via a USB drive or StrataSync
- Now possible to add new test profiles via StrataSync
- End face image now saved/embedded within the saved JSON results

Release date : July 21, 2022

Application	Version	Date
Boot	10.81.1	2022/07/21
Linux Kernel	25.1.0	2022/05/31
File System	23.0.7	2022/07/22
Instrument Setup	22.52	2022/07/21
Microscope	22.52	2022/07/21
Fiber Optics	22.52	2022/07/21

# Mainframe / Base Unit

New functionalities

- Integration of password protection at turn up. Optional license (EPASSWORDPROTECT) Improvements
- Management of exclusivity when 2 OTDR modules housed on the same machine
- P5000i Inspection Probe Asset Management in StrataSync
- Increase number of characters in comment field (up to 99)
- Improvement of boot up process with color transition

# Problem corrections

- Special characters ( "-" and "\_" ) added on German alphabetic keyboard
- Display error on upgrade screen corrected
- Files with a space in the name can now be uploaded to MTA (iOS only)
- Japanese: Application no longer crashes while saving pdf report

#### **OTDR**

#### New functionalities

• Predefined G654E specifications added to the list of fiber parameters (IOR, backscattered...)

#### **Improvements**

- Improved Touchscreen calibration for TRACE TABLE SLM selection
- Events table redesigned for better legibility
- Ability to hide trace in Expert OTDR addition
- New A & B cursor management
- Update launch cable" menu labelling now Test Cable

#### Problem corrections

# VIAVI

- OTDR Assistant (SmartTEST, FTTH-SLM): incorrect field in page "record information"
- No longer cut task naming shorter than 100 characters
- Launch cable management if incorrect length entered
- Problem of event detection after fiber end on short links now fixed
- Labelling of splice detection when manually set to 0.05dB always shows "Auto"
- Mini linear view correction when switching direction with an .msor file
- Correction of SmartLinkMapper refresh in OTDR tab after FiberComplete acquisition
- "Copy file/link to all" doesn't copy job id to the SLM-Enterprise menu
- OTDR Expert Cursors remain hidden even in Analysis when set to "No"
- Trace info correction of linear attenuation between A&B cursors
- Issues with mini linear view when many events detected

# FTTH-SLM

# Problem corrections

• Correction of incorrect trace recombination in multi-pulse acquisition

# FiberComplete PRO

New functionalities

- FiberComplete-PRO MPO reference management
- CABLE-SLM integration and management into FCOMP-PRO

# **Improvements**

- FCOMP-PRO now saves msor file with AB and BA multi-wavelength OTDR traces and distributed events (sor storage to be selected in Expert)
- Enable loss and ORL results display with TrueBIDIR only
- Add loss, ORL and length in summary table when performing TruBIDI only test
- High fiber count cable Workflow with FCOMP-PRO
- Launch cable management in Bi-dir IL/ORL only test configuration
- Do not allow START/Real Time OTDR when FCOMP/FCOMP PRO is active
- CABLE-SLM integration and management into FCOMP-PRO
- OTDR/FCOMP/FCOMP-PRO: Contextual help for ORL & total Loss
- OTDR loopback: change the JSON loopback extension file from ".fcpro.json" to ".bidir.json".
- New FCOMP-PRO connectivity icon.
- Add fiber number in FiberComplete PRO Loopback Summary table.
- Add section/slope selection in the SmartLink view.
- Adapt reference process graphic to MPO connector.

Problem corrections

- FCOMP-PRO: Wrong format type displayed in the file explorer.
- B to A slope values are not stored correct in the TrueBIDIR json files



- Incorrect Cable-SLM target storage folder when set up as "dir/current" different than disk
- In cable view, long labels are truncated- Now possible to scroll left and right

# OSA/OCC

Problem corrections

- OCC pdf report now matches results table
- Wait period with nanoOSA (41OSA) now working
- Open OSA trace without autozoom and keep zoom defined at storage
- OCC drift function brought back

#### Version ID : 220740

#### Release date : February 17<sup>th</sup>, 2022

Application	Version	Date
Boot	10.81.0	2022/01/28
Linux Kernel	21.8.2	2021/12/17
File System	21.10.2	2022/02/17
Instrument Setup	22.02	2022/02/17
Microscope	22.02	2022/02/17
Fiber Optics	22.02	2022/02/17

#### Mainframe / Base Unit

#### New functionalities

• Management of the new 4100 A-Series OTDR module

#### **Improvements**

- Improved and simplified software upgrade messages and softkeys (via Ethernet/WiFi)
- Test set calibration date added to all .pdf reports
- Improved readability in the About page of modules long part number and serial number

#### Problem corrections

• Merge of multiple .pdf in the File Explorer

#### Microscope

#### New functionalities

• Microscope function put in live mode when coming from the job manager

#### LTS (Light source & power meter)

# Problem corrections

• Proper management of the power meter zero offset

#### OTDR

#### New functionalities

• Fiber ID added to Fast Report setup menu

#### **Improvements**

- Key and menu labels updates:
  - File setup changed into Report
  - File softkey changed into File Explorer
- User interface updates:
  - $\circ$  Zoom buttons position moved to the top right corner of the graph
  - Setup menu: Test Cables section added. It contains Launch, Receive and Loopback cable settings
  - SmarLink Mapper: ability to select a section/slope
  - SmartLink Mapper: enhancement of the event detail description (splitter description with FTTH-SLM Base license, pass/fail criteria & threshold values)

#### FTTH-SLM

New functionalities

• Job ID added to .csor PDF report

**Improvements** 

- When Job Manager pushes FTTH config file, it updates the "Config." setup field inside FTTH-SLM Problem corrections
- When the first event corresponding to the first standard splitter (of an unbalanced splitters network) is detected at position < 0m, the event is not detected/interpreted as splitter but as launch cable.

#### FiberComplete PRO

New functionalities

- Fiber number increased to 9999
- Cable-SLM management to create project/cable view and simplify the management of high fiber count testing:
  - New button Manage Project and setup popup window: import label list, create simplex or MPO cable structure
  - Fully automated test sequence for up to 12 fibers (with integrated MPO switch)
  - o Pass/fail status of tested fibers/labels in Cable tab
  - o Creation of a .prj file that contains labels / structure and pass/fail status
  - When a Cable-SLM project closes, a summary .pdf report is generated. It contains the average loss, worst ORL, length and pass/fail status per tested labels/IDs and wavelengths.
  - Switch port used for the current measurement is displayed in the **Process** tab
- Length of the fiber under test, displayed in the **Process** tab on the **synoptic**, does not include the launch and receive cables length

**Improvements** 

- Suppression of launch and receive cable management by event position
- Enhancement of bi-directional OTDR (Loopback mode) slope measurement
- Pass/fail event thresholds made available for the bi-directional OTDR Loopback mode
- Better management of custom jobs coming from StrataSync



- Fault Finder results only visible in the Fault Finder tab
- OTDR Loopback mode allowed when changing setup from IL/ORL and/or TrueBIDIR/BiDir OTDR

## Problem corrections

- Fault Finder results only visible in the Fault Finder tab
- When using Expert OTDR settings, the file naming of the OTDR results missed the wavelength field (if OneTrace/.sor). To make sure the file name in understandable, underscores are added between the fields.
- Improved length measurement with 4100 MA3-FCOMP

# OSA/OCC

#### **Improvements**

• Nano OSA: better management of the splitter compensation function

#### Version ID : 214750

#### Release date : Dec 01, 2021

Application	version	Date
Boot	10.80	2021/10/08
Linux Kernel	21.8.2	2021/09/27
File System	21.9.11	2021/11/26
Instrument Setup	21.62	2021/11/26
Microscope	21.62	2021/11/26
Fiber Optics	21.62	2021/11/26

#### Mainframe / Base Unit

#### New functionalities

• Improvements and corrections of the new user interface

**Improvements** 

- German translation errors
- PDF report now better highlights failed results

#### Problem corrections

• Home page text overlap in Portuguese language

#### OTDR

#### **Improvements**

- TrueBIDIR function can now be activated on any 4100 series B & C OTDR modules
- Management of different extremities

Problem corrections

• TrueBIDIR now works when directory name contains space



# FCOMP-PRO/FiberComplete

#### **Improvements**

- TrueBIDIR function now activates on any 4100 series B & C OTDR modules
- Management of different extremities

# Problem corrections

• Setup exchange now possible even if talk set or cloud connection enabled between both test sets



#### Release date : Oct 08, 2021

Application	Version
Boot	10.80
Linux Kernel	21.8.2
File System	21.9.2
Instrument Setup	21.50
Microscope	21.50
Fiber Optics	21.50

#### Mainframe / Base Unit

#### New functionalities

- Improvements and corrections of the new user interface
- Addition new license TrueBIDIR: ETRUEBIDIR-FCOMP-PRO

#### **Improvements**

- PDF reports always include cursors A&B on graph
- Ability to do a screenshot from the Results page with new UI
- Translation updates (Chinese, German, Hungarian and others) <u>Problem corrections</u>
- T-BERD/MTS4000 random lock up at turn-up (White screen)

#### Microscope

#### **Improvements**

• Test report settings always kept at product turn off

#### **OTDR**

#### New functionalities

- New TRUEBIDIR functionality allowing performing automated bi-directional OTDR measurements with setup and results transfer through the fiber under test
- Add 25GHz channel grid for DWDM OTDR application

#### **Improvements**

- Better management of 3-splitter clusters in PON architecture with FTTH-SLM
- Optimized test time vs. pulsewidth in high split ratio (>1x64)

#### Problem corrections

- The launch cable integrated into the OTDR modules is correctly managed
- Average loss value different between pdf report and SLM Test Process Automation (TPA)

#### New functionalities

- Management of FiberComplete workflow into StataSync, MobileTechApp and Job Manager
- Management of new FCOMP-PRO results and jobs (workflow process availability pending official Stratasync software version 13.0 and MobileTechApp 4.6)



• Send and receive FCOMP-PRO config files to/from Stratasync

#### **Improvements**

- Add metadata to Bidir IL/ORL pdf reports for Stratasync
- Inspection scope + OTDR process flow better managed Problem corrections
- Factory sync of purchase order number and date

#### OSA/OCC

#### New functionalities

- New OSA module for T-BERD/MTS 2000/4000/5800 and ONA-800 mainframes
- New OSA user interface

# FCOMP-PRO/FiberComplete

#### New functionalities

- New TRUEBIDIR functionality allowing performing automated bi-directional OTDR measurements with setup and results transfer through the fiber under test
- Ability to sequence automated bi-directional IL/ORL and TrueBIDIR OTDR Improvements
- MPO switch management sequencing 12 FiberComplete measurements and auto-detecting MPO cable polarity type.