

ONT Optical Network Tester

Release 16.0.2, March 2012

Release Information



Please direct all enquiries to your local JDSU sales company.
The addresses can be found at:
www.jdsu.com/test

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Release Information ONT

Software Release 16.0.2

Recommended for all updates

Congratulations on choosing the ONT Optical Network Tester.

With its 3-slot, 6-slot, and 12-slot design the units offer true multi-port operation running tests on each of the modules simultaneously and independently. Modules are available for Ethernet / OTN / SDH / SONET / DSn / PDH / Fiber Channel / Jitter and Wander for the rates 111G (OTU4) down to 1.5M (DS1). With its deep digital and analog analysis capabilities the ONT sets the pace of testing new technologies. As all modules are plug-ins, easy upgrade makes the ONT the ideal choice to grow with your future needs. Focus has been given to easily integrate ONT into automated environments. Support of Tcl/Tk, C and LabWindows libraries, and Ethernet on the connectivity side and the Linux operating system minimize efforts controlling ONT remotely. Additional features of the ONT include multi-user access, open architecture for further applications, and rack mount ability.

Content

- Compatibility Information
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- History

JDSU is continuously working on improvements and enhanced functions to provide you with the most reliable test solution for optical and next generation network elements and networks.

Please visit our web site for more information about the ONT.

<http://www.jdsu.com/ont>

Software Update

The new software can be ordered using the following order number:

ONT-5xx update set (disk + USB stick) BN 3061/95.01 (free of charge).

ONT-600 update set (disk) BN 3076/95.01 (free of charge).

Important Operating Considerations

Please read chapter 4 'Getting started' of the ONT Mainframe User Manual carefully before installing or operating the software.

Compatibility Information

This section describes important changes in the test-set behavior which should be considered before upgrading the software of a test-set.

Release 15.0.2

- [Remote Control](#)
***IDN?**
The instrument's response to "*IDN?" has been harmonized.
- [Module E \(low-rate capable\)](#)
4.25G unframed bitrate
Module E does no longer support 4.25G unframed.

Release 13.0.2

- [General](#)
OSA Module no longer supported
The OSA Module is no longer supported. Please do not update a mainframe containing an OSA Module to software release 13.
- [Remote Control](#)
GPIB no longer supported
Remote control via GPIB is no longer supported.
- [General](#)
10GigE LAN / WAN Module (Module A) no longer supported
The 10GigE LAN / WAN Module (Module A) is no longer supported. Please do not update a mainframe containing a 10GigE LAN / WAN Module (Module A) to software release 13.

Release 12.0.2

- [General](#)
Reloading of previously (with older firmware versions) stored OTN containing applications may lead to error logger messages
Due to many feature enhancements compared to previous firmware versions, older applications may not be loadable anymore. In case of an error logger occurring while an old setup is loaded, the reloaded application may be corrupted and should be deleted.
- [100GE / 40GE](#)
MAC/IP: Traffic is now enabled by default
Traffic is now enabled by default.
- [Jitter / Wander \(ONT-5xx only\) - TIE - MTIE / TDEV Analyzer \(BN 3068/95.21\)](#)
Change of TIE data format requires new Wander Analysis software (BN 3061/95.98)
A new disk-space optimized TIE data format is implemented for 10 / 11G and 40 / 43G Wander applications. The new TIE format cannot be read by TIE - MTIE / TDEV Analyzer (BN 3068/95.21) software. For PC-based TIE analysis, the new Wander Analysis software (BN 3061/95.98) Release 2.0.0 or later is required for reading the new data format. See the Tools page on the Value Disc for details.

Release 10.0.2

- [100GE / 40GE](#)

Software downgrade requires service assistance

100G modules once updated to 10.x.y can't be downgraded without service assistance. Those modules will not work in mainframes running software releases < 10.0.2.

Release 9.0.2

- [40 / 43G](#)

ODU2 default stuffing when multiplexed into OPU3 has been changed

Starting with software version 9.0.2 the ODU2 default stuffing when multiplexed into OPU3 has been changed according to the current G.709 standard. An additional setting "legacy stuffing" has been added to the multiplexing configuration pages to allow mappings prior to G.709/Y.1331 (2003) Corrigendum 1.

Release 7.1.2

- [General](#)

Save/Load - Results Manager

Currently, the software offers two ways to deal with settings and results:

- Using the application internal Results Manager accessible via the 'Save/Load' chapter
- Using the 'Applications ...' part of the ONT-5xx main menu

Please be aware of the fact that using the 'old style' Results Manager is deprecated. The chapter is going to disappear in the course of time. In order to preserve old style settings and results, please load using the 'Save/Load' chapter and save via the main menu.

- [Remote Control](#)

Information about modified/deprecated remote commands

Remote Commands may have been changed or are deprecated with this software release.

==> Please correspond to the appendix of the Application Command Reference documentation for details about changed/deprecated commands.

- [Module E - RFC 2544](#)

Opening a user application created with a software version < 7.1.2

As some result graphics are added in version 7.1.2 and did not exist in earlier software versions the data is not completely available when a user application created with a software version < 7.1.2 is loaded. The graphics may then look somewhat unusual and may not display the result data in optimal scaling. Please refer to the table results.

Release 6.0.2

- [40 / 43G - Test automation](#)

40 / 43G Drivers

In order to harmonize drivers, names of driver function names (C / CVI and Tcl) have been modified by changing the instrument prefix / name space from 'ont' to 'ont_'.

Additionally some function names - especially in the OTN layer - have been modified. Please refer to the driver documentation.

- [DSn / PDH \(ONT-5xx only\) - Test automation](#)

PDH Driver

In order to harmonize drivers, names of driver function names (C / CVI and Tcl) have been modified by changing the instrument prefix / name space from 'ont' to 'ont_'.

Additionally some function names have been modified. Please refer to the driver documentation.

ONT - New Features

The following enhancements are included in the new software release.

General

- **ONT-5xx**
New Java application added to allow a centralized software update of multiple ONT-5xx mainframes from a normal desktop PC.
- **ONT-5xx**
Improved robustness in case of network problems

100GE / 40GE

- **New option (BN 3061/94.71): MAC/IP packet capture for the client service board**
MAC/IP packet capture for the client service board. Capture buffer size is 1 GBytes.
- **New hardware (BN 3076/92.70): CFP Module for production test**
100/40G CFP compatible module with production test optimized feature set.
- **New hardware (BN 3076/92.60): Client Service Board for ONT-600 chassis**
The 100/40G client service board is now available for the ONT-600 chassis.
- **STM-256 / STS-768 over STL**
Support of STM-256/STS-768 over STL. Full SDH/SONET layer functionality including higher order mappings VC-3/STS-1 to VC-4-256c/STS-768c. Full featured service disruption measurement.

Module E

- **OTN-ODU Multichannel Enhancements**
The multichannel application now supports mixed mappings of ODU0, ODU1, and ODUFlex containers including multi-stage multiplexing with OTU2-ODU1-ODU0 structures with free timeslot allocation. Multiple usability enhancements.

Module E - Jitter / Wander

- **New option (BN 3061/90.63): Jitter support for Fiber Channel 10G**
This option is available for Jitter 10G-E modules.
- **Support of G.812 and GR1244 TDEV result masks**
The new masks are available for Jitter 2.5G-D, Jitter 10G-D and Jitter 10G-E modules where the corresponding Wander option (BN 3061/93.92 for 2.5G Jitter or BN 3061/93.95 for 10G Jitter) is set.
- **All rates Jitter with one Module E for ONT-5xx platform**
The new module combines a single Module E with a Jitter 2.5G-D and Jitter 10G-E module.
- **Jitter 10G-E module available for ONT-600 platform**
- **Jitter 2.5G-D module available for ONT-600 platform**
- **All rates Jitter with one Module E for ONT-600 platform**
The new module combines a single Module E with a Jitter 2.5G-D and Jitter 10G-E module.

MTM 4s4x

- **New option (BN 3076/63.28): OTN ODU standard multiplexing (2.5G timeslots) of ODU1 into OTU2**
New MTM option to support 2.5G timeslot based (payload type 20) ODU1 multiplexing into OTU2. Also supports SDH/SONET client if enabled.
- **New option (BN 3076/63.32): ODUflex multiplexing into OTU2**
New MTM option to support ODUflex bulk mapping into ODUT2.ts (with ts = 1 to 8 timeslots) into OTU2.
- **New option (BN 3076/63.44): OTN STM-1/4 or STS-3/12 client into ODU0 container**
New MTM option to support mapping/demapping of GMP mapped STM-1/4 or STS-3/12 client into ODU0 container.
- **New option (BN 3076/63.30): Dual-stage ODU0-ODU1-OTU2 multiplexing**
New MTM option to support ODU0 into ODU1 into OTU2 signal generation and analysis with selectable 1.25G timeslots.
- **MTM single-port only support**
New MTM options added to enable cost effective reduced 1 port only functionalities:
 - New Option (BN 3076/63.11): Single Port 10GigE LAN for MTM.
 - New Option (BN 3076/63.33): Single Port OTN 10.7/11.05/11.1G for MTM.
 - New Option (BN 3076/63.43): Single Port OC 192/STM-64 BERT for MTM.
 - New Option (BN 3076/63.69): Single Port 1G Ethernet for MTM.
 - New Option (BN 3076/63.70): Single Port 155M or 2.5G SONET/SDH for MTM.
 - New Option (BN 3076/63.71): Single Port OTU1 for MTM.

History

This section provides information related to the past releases.

Module E (low-rate capable) - Jitter / Wander	Feature enhancement
Added Wander TDEV evaluation masks G.812 Output wander for Types II and III node clocks	
Module E (low-rate capable) - Jitter / Wander	Feature enhancement
Added Wander Transfer mask GR1244 Stratum 2 & 3E, Stratum 3 and Stratum 4E & 4	

Release 15.0.x

2011-12-16, Recommended for all updates

General	Feature enhancement
ONT-600 Mainframes	
General	Feature enhancement
ONT-603D, ONT-606D	
General	Feature enhancement
ONT-603H, ONT-606H	
General	Feature enhancement
ONT-603B, ONT-606B	
100GE / 40GE	Feature enhancement
Signal degrade and signal failed monitoring	
100GE / 40GE	Feature enhancement
40G Ethernet Client Transcoder enhancements	
40 / 45G	Feature enhancement
Signal degrade and signal failed monitoring.	
Module E (low-rate capable)	Feature enhancement
Signal degrade and signal failed monitoring	
Module E (low-rate capable) - Jitter / Wander	Feature enhancement
Jitter/Wander 2.5G-D (155/622M, 1.25/2.5/2.7G)	
Module E (low-rate capable) - Jitter / Wander	Feature enhancement
Jitter/Wander 1G SyncE (1.25G)	
Module E (low-rate capable) - Jitter / Wander	Feature enhancement
New MTIE transients generator masks	
MTM 4s4x	Feature enhancement
Enable the MTM SFP Ports with selected bitrates	
MTM 4s4x	New option (BN 3076/63.60)
1G Ethernet dual-port support as physical Signal	
MTM 4s4x	New option (3076/63.61)
Enable dual-port lower rate SDH/SONET signals	

Release 15.0.x

2011-12-16, Recommended for all updates

MTM 4s4x	New option (3076/63.62)
Enables the dual-port OTU1 Frame	
MTM 4s4x	New option (3076/63.31)
ODU0 single stage multiplexed in OTU2 and OTU1	
MTM 4s4x	New option (3076/63.29)
Enhanced Multiplexing for MTM	
MTM 4s4x	New option (3076/63.26)
1G Ethernet support as ODU0/GFP-T Client Signal	

Release 14.0.x

2011-10-17, Recommended for all updates

100GE / 40GE	Feature enhancement
Reset & Initialize CFP	
100GE / 40GE	Feature enhancement
Tx Frequency Variation	
100GE / 40GE	Feature enhancement
Stress Test	
Module E	New option (BN 3061/93.61)
OTN ODU Multichannel (OTU2 rates)	

Release 13.0.x

2011-07-27, Recommended for all updates

100GE / 40GE	New module (BN 3061/92.60)
100G Module CFP with Extension Module	
100GE / 40GE	Feature enhancement
Dual port 100G / 40G solution - wrapper / dewrapper	
100GE / 40GE	New option (BN 3061/94.72)
STL-256 bulk	
100GE / 40GE - MAC Layer	Feature enhancement
Ethernet / IP packet capture	
100GE / 40GE - PHYS Layer	Feature enhancement
Stress test user selectable pattern mode	

Release 12.0.x

2011-04-27, Recommended for all updates

100GE / 40GE	New option (BN 3061/92.96)
QSFP+ Adapter	
100GE / 40GE	Feature enhancement
New unframed 100G bitrates	
100GE / 40GE	Feature enhancement
User selectable CAUI/XLAUI lane for Rx frequency offset measurement	
100GE / 40GE	Feature enhancement
User offset list in physical layer stress test	
100GE / 40GE	Feature enhancement
Physical layer stress test supports layer stacks with OTN / Ethernet	
100GE / 40GE	Feature enhancement
Multiple Ethernet / IP traffic profiles	
100GE / 40GE	Feature enhancement
Ethernet traffic profile enhancements	
100GE / 40GE	Feature enhancement
Automated Ethernet preamble transparency test	
100GE / 40GE	Feature enhancement
Automated throughput test	
100GE / 40GE	Feature enhancement
Support for 5 MPLS labels	
100GE / 40GE	Feature enhancement
User defined MAC SFD	
100GE / 40GE	Feature enhancement
User defined MAC preamble	
100GE / 40GE	Feature enhancement
User defined MAC/IP payload	
100GE / 40GE	Feature enhancement
MAC/IP framed BERT Intermediate results	
100GE / 40GE	Feature enhancement
QOS measurement: Option to disable NFTF alarm	
100GE / 40GE	Feature enhancement
Invalid SFD Error Generation	
100GE / 40GE	Feature enhancement
MAC/IP: Optimized flow editor GUI for single flow mode	
100GE / 40GE	Feature enhancement
MAC/IP: Coupled flow mode	

Release 12.0.x

2011-04-27, Recommended for all updates

100GE / 40GE	New option (BN 3061/94.66)
OTN SDH/SONET client into ODU2/1 container	
100GE / 40GE	Feature enhancement
OTN enhanced multiplexing for OTU4	
100GE / 40GE	Feature enhancement
OTN multi-stage multiplexing for OTU4	
100GE / 40GE	Feature enhancement
OTN Performance analysis measurements	
100GE / 40GE	Feature enhancement
OTN Multiplexing: free port number assignment to ODUs in tributary slots added	
100GE / 40GE	Feature enhancement
OTN Bulk transfer delay measurement added	
100GE / 40GE	Feature enhancement
OTN ODU1 bulk clients can be GMP mapped now	
100GE / 40GE	Feature enhancement
OTN allows TCM-BIP generation to be switched OFF now	
100GE / 40GE	Feature enhancement
OTN TX stuffing range of AMP mapped clients enhanced	
100GE / 40GE	Feature enhancement
OMFI alarm/error insertion and measurements for OTU4	
40 / 43G - Jitter / Wander	Feature enhancement
New compact Wander TIE data format (*.chrd)	
40 / 45G	Feature enhancement
OTN Performance analysis measurements	
40 / 45G	Feature enhancement
OTN Multiplexing: free port number assignment to ODUs in tributary slots added	
40 / 45G	Feature enhancement
OTN ODU1 bulk clients can be GMP mapped now	
40 / 45G	Feature enhancement
OTN allows TCM-BIP generation to be switched OFF now	
40 / 45G	Feature enhancement
OTN TX stuffing range of AMP mapped clients enhanced	
Module E	New option (BN 3061/93.63)
SyncE ESMC G.8264 (1GE, 10GE)	
Module E	Feature enhancement
Support of Tunable DWDM XFP Lasers	

Release 12.0.x

2011-04-27, Recommended for all updates

Module E	Feature enhancement
OTN Performance analysis measurements	
Module E	Feature enhancement
OTN Multiplexing: free port number assignment to ODUs in tributary slots added	
Module E	Feature enhancement
OTN ODU1 bulk clients can be GMP mapped now	
Module E	Feature enhancement
OTN allows TCM-BIP generation to be switched OFF now	
Module E	Feature enhancement
OTN TX stuffing range of AMP mapped clients enhanced	
Module E	Feature enhancement
SDH/SONET intrusive through mode	
Module E - Jitter / Wander	Feature enhancement
New compact Wander TIE data format (*.chrd)	

Release 11.0.x

2010-12-14, Recommended for all updates

General	Feature enhancement
Measurement restart button of layered applications moved to new location	
Remote Control - Driver	Feature enhancement
Driver libraries adapted to current releases	
100GE / 40GE	New option (BN 3061/94.53)
OTN 111.8G with 100GE Client	
100GE / 40GE	New option (BN 3061/94.60)
OTN 43G with transcoded Client	
100GE / 40GE	Feature enhancement
User settable xAUI/OTL output level, pre-emphasis and slew rate	
100GE / 40GE	Feature enhancement
Lambda groups assignment with "include bit error" option	
100GE / 40GE	Feature enhancement
Automated Physical Layer stress test	
100GE / 40GE	Feature enhancement
New Ethernet PCS layer Tx error "User lane ID"	
100GE / 40GE	Feature enhancement
Physical Layer GUI Enhancements	

Release 11.0.x

2010-12-14, Recommended for all updates

100GE / 40GE	New option (BN 3061/94.61)
OTN enhanced multiplexing	
100GE / 40GE	New option (BN 3061/94.62)
OTN multi-stage multiplexing	
100GE / 40GE	New option (BN 3061/94.63)
OTN generation/analysis of ODU0 container	
100GE / 40GE	New option (BN 3061/94.64)
ONT generation/analysis of ODUFlex container	
100GE / 40GE	New option (BN 3061/94.65)
OTN STM4/1 or STS-12/3 client into ODU0 container	
100GE / 40GE	Feature enhancement
OTN Transfer delay measurements added for GMP mapped clients	
100GE / 40GE	Feature enhancement
OTN Client Signal Fail (CSF) alarm added	
100GE / 40GE	Feature enhancement
Quick start guide added to documentation	
40 / 43G	Feature enhancement
OTN Client Signal Fail (CSF) alarm added	
40 / 45G	New option (BN 3061/93.15)
OTN enhanced multiplexing	
40 / 45G	New option (BN 3061/93.16)
OTN multi-stage multiplexing	
40 / 45G	New option (BN 3061/93.17)
OTN generation/analysis of ODU0 container	
40 / 45G	New option (BN 3061/93.18)
ONT generation/analysis of ODUFlex container	
40 / 45G	New option (BN 3061/93.23)
OTN STM4/1 or STS-12/3 client into ODU0 container	
40 / 45G	Feature enhancement
OTN Transfer delay measurements added for GMP mapped clients	
40 / 45G	Feature enhancement
OTN Client Signal Fail (CSF) alarm added	
40 / 45G	Feature enhancement
OTN BULK mapping/demapping into OTU3e2	
40 / 45G	Feature enhancement
OTN mapping/demapping of ODUE2 BULK container into OTU3	

Release 11.0.x

2010-12-14, Recommended for all updates

40 / 45G	Feature enhancement
OTN mapping of ODUe2 BULK container into OTU3e2	
Module E	New option (BN 3061/93.33)
OTN STM4/1 or STS-12/3 client into ODU0 container	
Module E	Feature enhancement
Wrapper/Dewrapper for multi-stage ODU0 with 1GigE client	
Module E	Feature enhancement
OTN Transfer delay measurements added for GMP mapped clients	
Module E	Feature enhancement
OTN Client Signal Fail (CSF) alarm added	
Module E - Jitter / Wander	New module (BN 3061/90.75)
New Jitter 10G-E module	
Module E - Jitter / Wander	New module (BN 3061/90.76)
New Jitter 10G-E module - dual wavelength	
Module E - Jitter / Wander	New option (BN 3061/90.77)
Differential electrical interface	
Module E - Jitter / Wander	New option (BN 3061/90.79)
OTU2 overclocked bitrates (11.049G and 11.095G)	
Module E - Jitter / Wander	New option (BN 3061/90.81)
OTL3.4 bitrate (10.755G)	
Module E - Jitter / Wander	New option (BN 3061/90.99)
OTL4.10 bitrate (11.181G)	
Module E - Jitter / Wander	Feature enhancement
Parallel filters	
Module E - Jitter / Wander	Feature enhancement
Generation of MTIE phase transients	
Module E (low-rate capable) - Jitter / Wander	Feature enhancement
Combination with the new BERT module	

Release 10.1.x

2010-10-27, Recommended for all updates

General - OTN / ODU Layer	Feature enhancement
TCM enhancements in OTN / ODU layers	
Module E	Feature enhancement
GFP mapped 1GE client support into multi-stage OTN multiplexing (optional)	

Release 10.1.x

2010-10-27, Recommended for all updates

Module E	Feature enhancement
Wrapper/Dewrapper applications for 1GE line-rate and ODU0 clients (optional)	
Module E - Jitter / Wander	New option (BN 3061/90.87)
Support of 10.755G Jitter/Wander generation and analysis	
Module E (low-rate capable) - Jitter / Wander	Feature enhancement
The low-rate capable Module-E now works together with Jitter-D	

Release 10.0.x

2010-09-16, Recommended for certain customers only

General - All layered applications	Feature enhancement
Enhanced usability for layered applications (tabs on left-hand side; tabs include alarm LEDs)	
General - All layered applications	Feature enhancement
Enhanced visibility of current and history alarm/error information	
General - All layered applications	Feature enhancement
Short cut to over-all layer summary status	
General - All layered applications	Feature enhancement
Restart measurement button	
General - All layered applications	Feature enhancement
Graphical event list shows only currently evaluated alarms/errors now	
General - Mainframes	Feature enhancement
Clock-Module reference clocks (64kHz, 64kHz composite clock, 6.3MHz)	
General - Mainframes	Feature enhancement
Manual pages of the web-site of the ONT-5xx-testset improved	
100GE / 40GE	New option (BN 3061/94.55)
OTN 112G Bulk (incl. OTL4.10)	
100GE / 40GE	New option (BN 3061/94.57)
OTN 43G Bulk (incl. OTL3.4)	
100GE / 40GE	New option (BN 3061/94.58)
OTN 44.57G line-rate	
100GE / 40GE	New option (BN 3061/94.59)
OTN 44.58G line-rate	
100GE / 40GE	Feature enhancement
MDIO control of CFP transponder enabled	
100GE / 40GE	Feature enhancement
MDIO dump functionality	

Release 10.0.x

2010-09-16, Recommended for certain customers only

100GE / 40GE	Feature enhancement
CFP optical power measurement	
100GE / 40GE	Feature enhancement
Per optical lane LOS measurement and generation	
100GE / 40GE	Feature enhancement
PRBS15 and inverted PRBS15 test pattern	
100GE / 40GE	Feature enhancement
Improved Ethernet/IP QoS evaluation	
100GE / 40GE	Feature enhancement
Improved Ethernet/IP service disruption measurement	
100GE / 40GE	Feature enhancement
PCS/MLD, OTL and MAC/IP GUI Enhancements	
40 / 45G	New option (BN 3061/93.16)
OTN multi-stage multiplexing of ODU1 into ODU2 into OTU3	
Module E	New module (BN 3061/92.05)
Low-rate capable Module-E	
Module E	New module (BN 3061/92.09)
Low-rate capable Module-E with internal optics	
Module E	New option (BN 3061/93.34)
Lower rates SDH / SONET (STM1,4,16; OC3,12,48)	
Module E	New option (BN 3061/93.43)
1G Ethernet	
Module E	New option (BN 3061/93.57)
Lower rates OTU1 (2.7Gb/s)	
Module E	New option (BN 3061/93.58)
OTN generation/analysis of ODU0 container	
Module E	New option (BN 3061/93.59)
ONT generation/analysis of ODUFlex container	
Module E	New option (BN 3061/93.55)
OTN enhanced multiplexing with payload type 21	
Module E	New option (BN 3061/93.56)
OTN multi-stage multiplexing of ODU0 into ODU1 into OTU2	
Module E	New option (BN 3061/93.44)
GFP-T	
Module E	Feature enhancement
OTN GFP-F mapped MAC/IP into ODUFlex (optional)	

Release 10.0.x

2010-09-16, Recommended for certain customers only

Module E	Feature enhancement
New unframed rate 10.755 Gb/s (OTL3.4)	
Module E - Jitter / Wander	Feature enhancement
Additional MTJ/MTW sensors for SyncE Jitter/Wander	
Module E - Jitter / Wander	Feature enhancement
Switch Laser On before starting JTF calibration or measurement	
Module E - Jitter / Wander	Feature enhancement
Improved feedback during Automated Measurement Sequences (AMS)	

Release 9.1.x

2010-03-17, Recommended for all updates

General	New option (BN 3061/93.98)
External wander analysis software on PC	
100GE / 40GE	Feature enhancement
Fast Auxiliary output supports CFP monitor clock output	
100GE / 40GE	Feature enhancement
PRBS7 and inverted PRBS7 test pattern for unframed BERT and PCS layer BERT	
100GE / 40GE	Feature enhancement
Interim results in unframed BERT	
100GE / 40GE	Feature enhancement
Unframed BERT table view results support count and ratio mode	
100GE / 40GE	Feature enhancement
CFP power and current measurement with maximum hold function	
100GE / 40GE	Feature enhancement
Lambda groups in PCS layer	
100GE / 40GE	Feature enhancement
Virtual lane swap alarm in PCS layer indicates occurrence of virtual lane swapping events	
100GE / 40GE	Feature enhancement
Live traffic evaluation mode in unframed BERT, PCS- and MAC/IP-layer	
100GE / 40GE	Feature enhancement
RFC 2544 support for MAC, VPLS, PBB/PBT, IPv4 and IPv6	
100GE / 40GE	Feature enhancement
Scaled mode for MAC/IP traffic generation	
40 / 45G	New module (BN 3061/91.86)
40G SDH/SONET NRZ V2B	

Release 9.1.x

2010-03-17, Recommended for all updates

40 / 45G	New option (BN 3061/93.20)
Overclocked OTU3e1 (44.57G)	
40 / 45G	New module (BN 3061/91.85)
43G OTN with bulk client DPSK V2	
40 / 45G	Feature enhancement
DPSK transponder interoperability mode (e.g. Opnext with Mintera)	
Module E - Jitter / Wander	Feature enhancement
10.3G (SyncE) wander enhancements	
Module E - Jitter / Wander	New option (BN 3061/93.97)
Frequency offset (fine) in ppb for line rates and sync signals	
Module E - Jitter / Wander	New option (BN 3061/90.74)
Signal interruptions for sync signals	
Module E - Jitter / Wander	Feature enhancement
Continuous measurement of frequency offset (in ppb) and frequency drift rate	
Module E - Jitter / Wander	New option (BN 3061/90.74)
Wander measurements on clock signals	
Module E - Jitter / Wander	New option (BN 3061/90.74)
Support of pps (pulse-per-second)	
Module E - Jitter / Wander	New option (BN 3061/90.74)
New wander reference clocks	

Release 9.0.x

2009-12-16, Recommended for all updates

General - Report creation	Feature enhancement
A company logo can be integrated as part of the report header	
General - Report creation	Feature enhancement
The name of the report file appears as part of the report header	
General	Feature enhancement
Configuration information as CSV file	
General - OTN / ODU Layer	Feature enhancement
Access to FTFL operator specific field added to user interface	
100GE / 40GE	New module (BN 3061/92.50)
100G base unit with 103.12G (unframed, Ethernet), 111.81G (unframed)	
100GE / 40GE	New option (BN 3061/94.51)
Additional rates 39.81G (unframed), 41.25G (unframed, Ethernet), 43.018G (unframed), 44.5G (unframed)	

Release 9.0.x

2009-12-16, Recommended for all updates

100GE / 40GE	New option (BN 3061/92.52)
Physical layer validation application	
100GE / 40GE	New option (BN 3061/94.56)
Skew variation generation application	
100GE / 40GE	New option (BN 3061/94.54)
IP/multi stream application	
100GE / 40GE	New module (BN 3061/92.98)
Electrical access CFP with CAUI access	
40 / 43G - Jitter / Wander	New module
Jitter-B hardware with enhanced optical sensitivity	
40 / 43G - Jitter / Wander	Feature enhancement
RX eye clock output (recovered clock)	
40 / 45G	New module (BN 3061/91.81)
V2 hardware NRZ	
40 / 45G	New option (BN 3061/93.29)
Through mode on V2 hardware	
Module E	New option (BN 3061/93.39)
10GigE via GFP in VCAT mapped into STM-64/OC-192	
Module E	New option (BN 3061/93.39)
10GigE via GFP in VCAT mapped into OTU2 - STM-64/OC-192	
Module E	New option (BN 3061/93.39)
10GigE via GFP in VCAT mapped into OTU2 - ODU1 - STM-16/OC-48	
Module E - Jitter / Wander	New option (BN 3061/93.95)
Wander generation and analysis	
Module E - Jitter / Wander	New option (BN 3061/93.97)
Wander expert	
Module E - Jitter / Wander	Feature enhancement
Improved MTJ sensors	
Module E - Jitter / Wander	Feature enhancement
SCPI remote control	
40 / 45G	New module
V2 hardware pre-release	

Release 8.0.x

2009-05-06, Recommended for all updates

General - Layered applications	Feature enhancement
Interactive abbreviation help	
General - Layered applications	Feature enhancement
Enhanced edit of the signal structure	
40 / 43G	Feature enhancement
GCC capture for OTU3 (part of OTN option)	
40 / 43G	New option (BN 3061/91.55)
OTU3 43G NRZ-DPSK (V1 hardware)	
40 / 43G - SDH / SONET Layer	Feature enhancement
Delay compensation for different mapping types optimized	
40 / 43G - Electrical only interface	Feature enhancement
Access to threshold and phase optimization GUI page added.	
40 / 43G - Jitter / Wander	Feature enhancement
Check for sufficient harddisk space added	
Module E	New option (BN 3061/93.45)
GFP-F into OTU2	
Module E	Feature enhancement
10G WAN	
Module E	Feature enhancement
Multi-Channel High Order with Service Disruption (part of MC option)	
Module E	Feature enhancement
Multi-Channel High Order as an ODU1 client	
Module E	Feature enhancement
GCC capture for OTU2 (part of OTN option)	

ONT Optical Network Tester

Release Information

Release 16.0.2

March 2012

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