Acterna ONT-50
Optical Network Tester

Optical networking

DWDM has proven to be a great enabler of more bandwidth on fiber networks. Since the mid 90's, the long-haul backbone of carrier networks has gone from a single wavelength per fiber up to about 32 wavelengths, with systems capacities well exceeding this number, reaching perhaps 200 wavelengths in 2001. At the same time, faster time-division multiplexed (TDM) systems have also provided room for growth. The SONET/SDH standard has evolved to **10 Gbit/s** for new systems deployed today. In addition, the Internet Protocol (IP), with its near exponential growth rate, has helped to spur on the deployment of DWDM networks. **Packet over SONET/SDH** (PoS) is the enabling technology for alleviating the constraining aspects of TDM line rates for IP packets. Newer technologies are also on the not too distant horizon as we see the emergence of SONET/SDH Multiservice Provisioning Platforms (MSPPs), the next generation of SONET/SDH multiplexers consolidating and grooming metro traffic.

Carrier backbones are being redefined by the whirlwind of activity that DWDM and the Internet have brought.

The Acterna **ONT-50** is ready to stand at the center of these changes, easing system installation and simplifying network troubleshooting. The ONT-50 is a four-slot mainframe test solution with field upgradeable modules designed to reduce the network installation time of DWDM systems, mimic and troubleshoot IP traffic conditions, and simplify the provisioning of MSPPs. Key features are:

- **Multi-application** capability combining digital and optical test modules in one mainframe for simultaneous measurements
- **Multiport capability** for speeding up test times offering
- **4-port SONET/SDH** and **Q-factor** analysis up to **10 Gbit/s**
- **The world's first dual port optical spectrum analysis**. With the flexible hardware and software architecture design, carriers can rest assured that whatever new technologies come along, the ONT-50 is able to grow with their needs.

Features

- *Supports complete DWDM testing (OSA and 10 Gbit/s BERT, Q-factor measurement, PoS)*
- *Multiport up to 10 Gbit/s for BERT and PoS (in preparation)*
- *4-slot modular architecture (customer specifies modular mixture for mainframe)*
- *Slots can function simultaneously and independently*
- *Novel touchscreen, web browser based graphical user interface*
- *Remote controllable via Web browser*
- *Software update via Internet*
- *Field upgradeable*
- *Web browser for direct access to the World Wide Web*

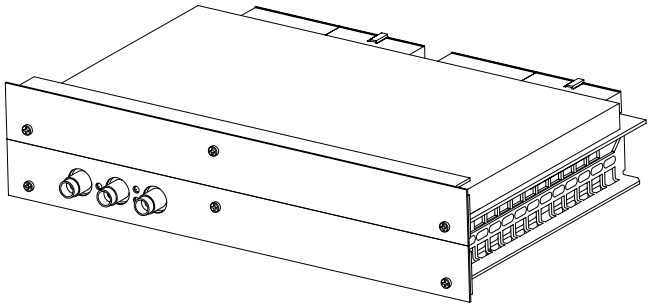
Edition 11/2001

ACTERNA™
The Keepers of Communications

OC-48/STM-16 Module 1-port up to 2.5G

– Physical interface: Tx and Rx
– OC-3 to OC-48, STM-1 to STM-16
– 1310 nm and 1550 nm lasers

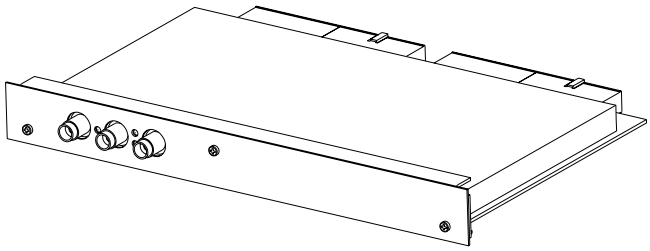
Requires 2 slots



1-port 10G (OC-192/STM-64 Module)

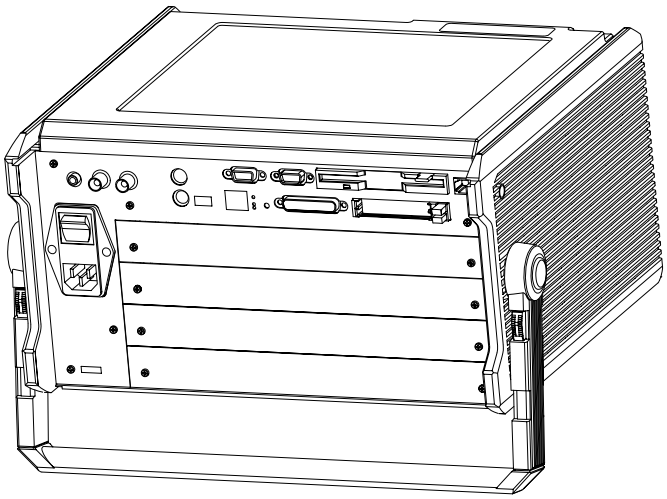
– Physical interface: Tx and Rx
– OC-192/STM-64
– 1550 nm laser

Requires 1 slot



Mainframe

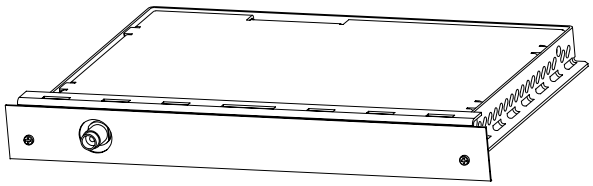
– 4 slots free for configuration
– Floppy disk drive
– PCMCIA port
– Universal serial bus (for printing)
– Parallel port, serial port
– Ethernet (RJ-45)
– VGA connector



OQM-200 (Optical Q-factor Module)

– Ultra fast Q measurement (< 60 s)
– Corresponding BER range 10^{-4} to 10^{-40}
– Covering data rates: 2.5 Gbit/s, 10 Gbit/s, FEC (in preparation)
– Suitable for in-service measurements

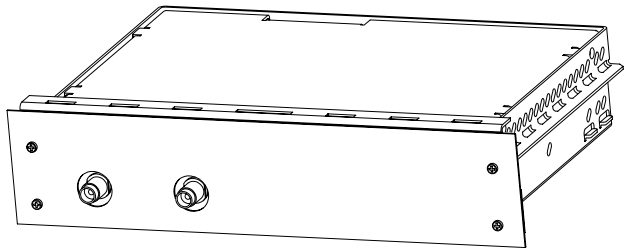
Requires 1 slot



OSA-160/OSA-200 (DWDM Analyzer Modules)

– First dual-port optical spectrum analyzer
– Full spectrum WDM analysis in real-time
– Online wavelength calibration
– Auto PASS/FAIL functions

Requires 2 slots



ONT-50 mainframe

The ONT-50 is a four-slot mainframe test solution with field upgradeable modules designed to reduce the network installation time of optical network elements.

It can be equipped with digital test modules for SDH/SONET and PoS analysis, with optical test modules for Q-factor and optical spectral analysis or with a combination of modules for simultaneous multi-application and multi-port measurement.

With its multi-port structure and flexible hardware and software architecture design, carriers can rest assured that whatever new technologies come along, the ONT-50 is able to grow with their needs.

General specifications

Power supply (nominal range of use)
AC line voltage . . . . . 100 to 240 V
AC line frequency . . . . . 50/60 Hz
Safety class to IEC 1010-1 . . . . . class I

Ambient temperature
Nominal range of use . . . . . +5 to +40 °C/41 to 104° F
Storage and transport range . . . . . –20 to +60 °C/–4 to 140° F

Dimensions (w × h × d) in mm. . . . . approx. 350 × 323 × 211
in inches . . . . . approx. 13.8 × 12.7 × 8.3

Weight . . . . . approx. 10 kg/22 lb
(includes protective cover without modules)

Clock and synchronization
Internal master clock accuracy: ±4.6 ppm
(meets T1.101 stratum 3/3E accuracy)

External synchronization
- 50/75 Ω, unbalanced, BNC jack
  - Reference clock:
    1 MHz, 1.544 MHz, 2.048 MHz, 5 MHz, 10 MHz
  - Reference clock accuracy: ±50 ppm
- 100/120 Ω, balanced, Bantam jack
  - E1 (HDB3) 2.048 Mbit/s,
    DS1 (B8ZS/AMI scrambled) 1.544 Mbit/s
  - Bit rate accuracy: ±50 ppm
- Receive signal

Clock outputs
50 Ω, unbalanced, BNC jack, TTL level
- 1.544 MHz clock
- 2.048 MHz clock

Instrument operation

Interfaces
Parallel port, serial port, universal serial bus (for future use), PCMCIA port, floppy disk drive, Ethernet (RJ-45), VGA connector

Result storage
Captured alarm and error analysis can be stored to internal hard disk or to a floppy disk. Data is stored for review at a later time or report documentation.

Screen copy print
Printing of screen picture via the ONT-50 parallel port.

Power outage function (in preparation)
In the event of an AC line power failure during a measurement, ONT-50 saves all data.
As soon as the AC line voltage is reestablished, the measurement is resumed. Previous results are retained and the time of the power failure is recorded along with other events.

World Wide Web
With the built-in browser you have access to the Internet.

Touchscreen display
Color TFT screen . . . . . 12.1″, 65 536 colors
Resolution . . . . . 800 × 600 pixels (SVGA standard)
The touchscreen allows very easy point and shoot operation.

Remote control via LAN (remote operation)
In a LAN environment, the ONT-50 can be interactively operated via TCP/IP and a standard browser.
The user interface is visible on the local terminal and in parallel on the ONT itself.

Remote control for test automation
The ONT-50 can be controlled via SCPI commands that are sent by customer's program. The possible interfaces are RS232 or LAN (TCP/IP).

QuickBERD Book

The QuickBERD Book is designed to get a quick overview during installation of DWDM or SDH/SONET systems without setting lots of detailed parameters.

It offers the ok/failed results of up to 4 digital links simultaneously on one page.

With the selection of only the bitrate and restart the measurement the overview is immediately available. If more details like errors and alarms are necessary these are offered in other tab pages.

The QuickBERD runs on OC-48/STM-16 and OC-192/STM-64 modules.

It comes with any of the above modules and is free of charge

Transmit side

Error insertion
B1, B2, B3, bit errors: single

Message insertion
Regeneration/section trace (J0), MUX section/line trace (J1)

Receive side

Error measurement
B1, B2, B3, bit errors
REI-L/MS-REI, REI-P/HP-REI

Alarm detection
LOS, LOF and additional standard SDH/SONET alarms

Results
Error seconds, alarm seconds,
Error count, error ratio,
Summary results (user defined),
Message detection (J0, J1)

Bit rates and signal structure

Available bit rates and mappings depend on the configured hardware modules (see OC-48/STM-16 LIM and OC-192/STM-64 module).
The QuickBERD Book supports the following bit rates and mappings.

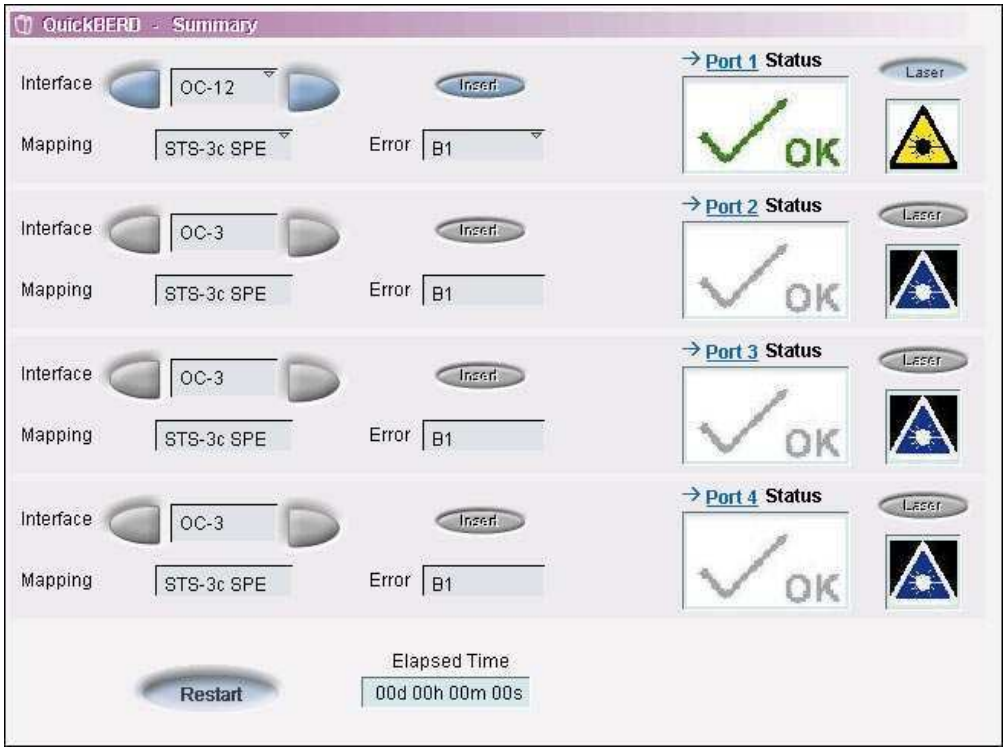
Bit rates
OC-3/12/48/192, STM-1/4/16/64

SONET mappings
STS-1/3c/12c/48c/192c

SDH mappings
AU-3: VC-3, AU-4: VC-4, VC4-4c/16c/64c

Fill patterns
2^{31}–1 (non-inv, non-ITU), 2^{31}–1 (inv, ITU),
2^{23}–1 (non-inv, non-ITU), 2^{23}–1 (inv, ITU),
16 bit user definable word

Background channels
Identically structured and filled



OC-48/STM-16 line interface module

A SONET and SDH module with line interface rates of 2.48832 Gbit/s, 622.08 Mbit/s, 155.520 Mbit/s (OC-48/12/3 and STM-16/4/1). It supports non-concatenated and concatenated sub-rate mappings down to STS-1/STM-1.

In the corresponding output signals it provides signal analysis and manipulation (alarm, error, overhead and pointers) and BER testing.

Both wavelengthes 1310 nm and 1550 nm are available.

General

Line rates . . . . . 2.48832 Gbit/s, 622.08 Mbit/s, 155.520 Mbit/s
Line code . . . . . scrambled NRZ

Average optical input power measurement . . . . . –28 to 0 dBm

Connector types . . . . . FC-PC, SC, ST
(see also configuration guide and ordering information)

Transmitter

Clock generator

Internal, accuracy . . . . . ±4.6 ppm
Offset . . . . . ±50 ppm
Synchronization from ext. signal

Optical interface OC-3/STM-1

The generator meets the requirements of ITU-T Rec. G.957: S-1.x; ANSI T1.105.06: IR-x with 10 dB external optical attenuator

Wavelength . . . . . 1310 nm and 1550 nm
Output level . . . . . –15 to –8 dBm

Optical interface OC-12/STM-4

The generator meets the requirements of ITU-T Rec. G.957: S-4.x; ANSI T1.105.06: IR-x with 10 dB external optical attenuator

Wavelength . . . . . 1310 nm and 1550 nm
Output level . . . . . –15 to –8 dBm

Optical interface OC-48/STM-16

The generator meets the requirements of ITU-T Rec. G.957: S-16.x; ANSI T1.105.06: IR-x

Wavelength . . . . . 1310 nm and 1550 nm
Output level . . . . . –5 to 0 dBm

Receiver

Optical interface OC-3/STM-1

The receiver unit meets the specifications of ITU-T Rec. G.957: S-1.x; ANSI T1.105.06: IR-x

Wavelength . . . . . 1260 to 1360 nm, 1430 to 1580 nm
Sensitivity . . . . . –8 to typ. –28 dBm
Max. input power (destructive power) . . . . . 3 dBm
Offset range . . . . . ±50 ppm

Optical interface OC-12/STM-4

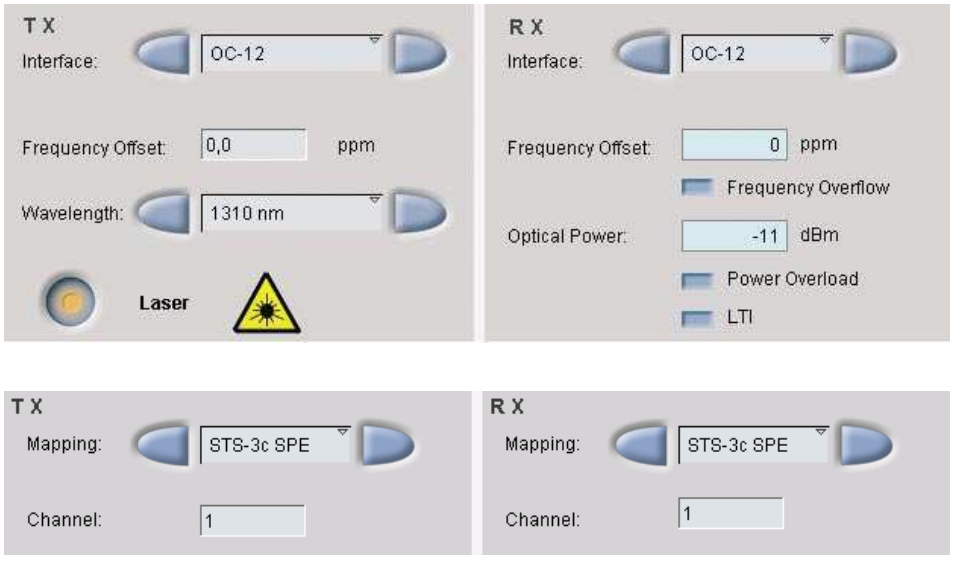
The receiver unit meets the specifications of ITU-T Rec. G.957: S-4.x; ANSI T1.105.06: IR-x

Wavelength . . . . . 1260 to 1360 nm, 1430 to 1580 nm
Sensitivity . . . . . –8 to typ. –28 dBm
Max. input power (destructive power) . . . . . 3 dBm
Offset range . . . . . ±50 ppm

Optical interface OC-48/STM-16

The receiver unit meets the specifications of ITU-T Rec. G.957: S-16.x; ANSI T1.105.06: IR-x

Wavelength . . . . . 1260 to 1360 nm, 1430 to 1580 nm
Sensitivity . . . . . 0 to –18 dBm
Max. input power (destructive power) . . . . . 3 dBm
Offset range . . . . . ±50 ppm



OC-192/STM-64 module (1-port 10G)

A SONET and SDH module with line interface rate of 9.95328 Gbit/s (OC-192/STM-64) at 1550 nm. It supports non-concatenated and concatenated sub-rate mappings down to STS-1/STM-1.

In the correspondent output signal it provides signal analysis and manipulation (alarm, error, overhead and pointers) and BER testing.

General

Line rate . . . . . 9.95328 Gbit/s
Line code . . . . . scrambled NRZ

Measuring optical input power . . . . . –14 to 0 dBm

Connector types . . . . . FC-PC, SC, ST
(see also configuration guide and ordering information)

Transmitter OC-192/STM-64

The generator meets the requirements of ITU-T Rec. G.691: S-64.2b; Telcordia GR 253 (former GR 1377) Core: IR-2

Optical interface

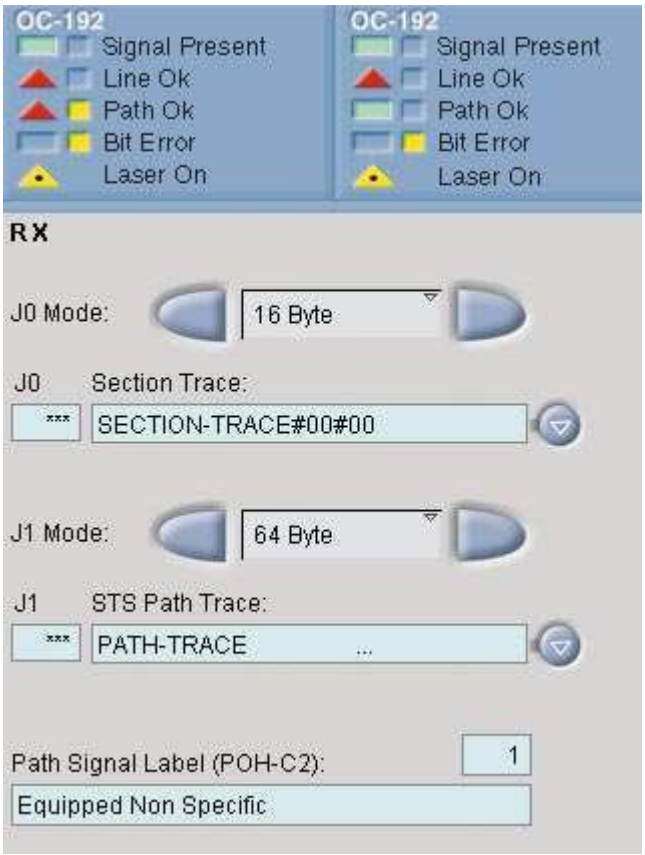
Wavelength . . . . . 1550 nm
Output level . . . . . –3 to +2 dBm

Receiver OC-192/STM-64

The receiver unit meets the requirements of ITU-T Rec. G.691: S-64.2b; Telcordia GR 253 (former GR 1377) Core: IR-2

Optical interface

Wavelength . . . . . 1530 to 1565 nm
Sensitivity . . . . . –3 to –14 dBm
Max. input power (destructive power) . . . . . 2 dBm



SDH Expert Book

The SDH Expert Book is an application that runs on the OC-48/STM-16 and OC-192/STM-64 module. It is a complete test set for extended SDH testing and includes the basic functionality of the QuickBERD Book. In addition to this, the SDH Expert Book also enables users to perform indepth analysis (performance measurements, pointer analysis, overhead analysis and generation).

Built-in test functions allow automatic PASS/FAIL evaluation based on selected limits.

Measurement types

Error insertion
B1, B2, B3, bit errors and additional standard SDH errors
Count, Ratio, Seconds

Alarm generation
LOS, LOF and additional standard SDH alarms: on/off

Pointer processing
- Increment, decrement, new value
- Pointer sequences
- Pointer mode: single, periodical, alternating

Message evaluation
Insertion and analysis of regenerator section trace (J0), MUX section trace (J1), signal label (C2)

SOH and POH evaluation
- Manipulation and analysis of all accessible overhead bytes (including K1/K2, C2, J0/J1).
- SOH and POH display

Error measurement
B1, B2, B3, bit errors and additional standard SDH errors

Alarm detection
LOS, LOF, LOP and additional standard SDH alarms
Resolution: 100 ms

Result display
The results can be displayed in 3 modes:
numerical display, graphical display or an event list.

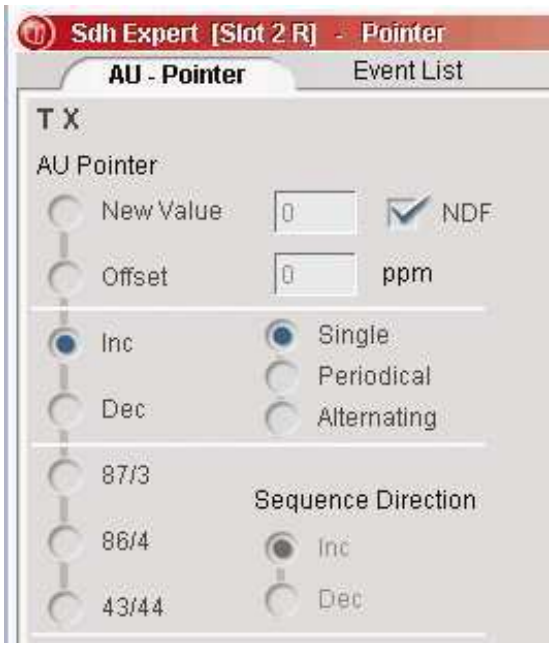
Performance monitoring
Display of ES, EFS, SES, UAS (G.826)

Signal structure

SDH mappings
AU-3: VC-3, AU-4: VC-4, VC4-4c/16c/64c

Fill patterns
2^{31}–1 (non-inv, non-ITU), 2^{31}–1 (inv, ITU),
2^{23}–1 (non-inv, non-ITU), 2^{23}–1 (inv, ITU),
16 bit user definable word

Background channels
Identically structured and filled



SONET Expert Book

The SONET Expert Book is an application that runs on the OC-48/STM-16 and OC-192/STM-64 module. It is a complete test set for extended SONET testing and includes the basic functionality of the QuickBERD Book. In addition to this the SONET Expert Book also enables users to perform indepth SONET analysis (performance measurements, pointer analysis, overhead analysis and generation).

Built-in test functions allow automatic PASS/FAIL evaluation based on selected limits.

Measurement types

Error insertion
B1, B2, B3, bit errors and additional standard SONET errors
Count, Ratio, Seconds

Alarm generation
LOS, LOF and additional standard SONET alarms: on/off

Pointer processing
- Increment, decrement, new value
- Pointer sequences
- Pointer Mode: single, periodical, alternating

Message evaluation
Insertion and analysis of section trace (J0), line trace (J1), signal label (C2)

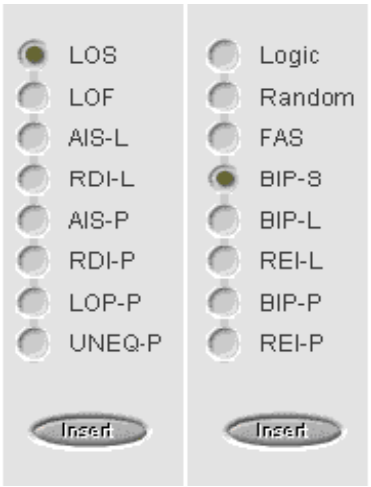
TOH and POH evaluation
- Manipulation and analysis of all accessible overhead bytes (including K1/K2, C2, J0/J1)
- TOH and POH displays

Error measurement
B1, B2, B3 and additional standard SONET errors

Alarm detection
LOS, LOF, LOP and additional standard SONET alarms
Resolution: 100 ms

Result display
The results can be displayed in 3 modes:
numerical display, graphical display or an event list.

Performance monitoring
Display of ES, EFS, SES, UAS and SEFS (GR 253, T1.231)
ESA, ESB

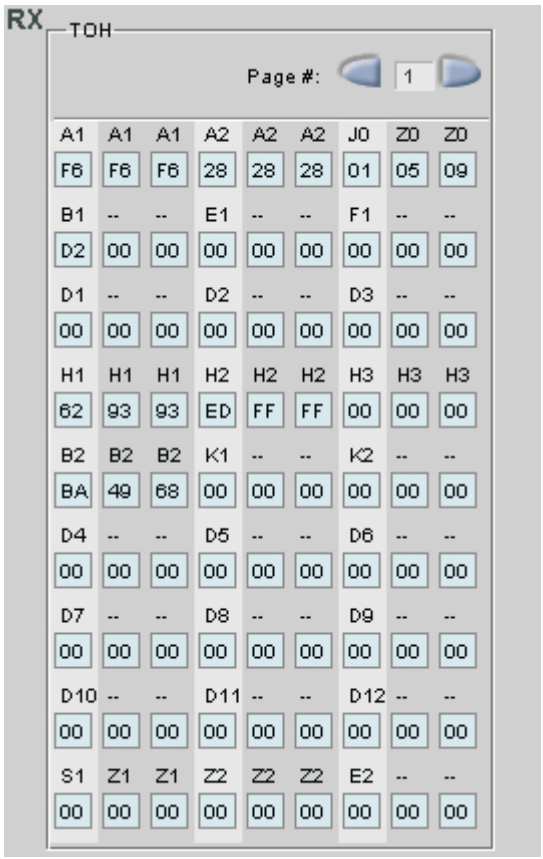


Signal structure

SONET mappings
STS-1/3c/12c/48c/192c

Fill patterns
2^{31}–1 (non-inv, non-ITU), 2^{31}–1 (inv, ITU),
2^{23}–1 (non-inv, non-ITU), 2^{23}–1 (inv, ITU),
16 bit user definable word

Background channels
Identically structured and filled



IP/PoS Book

The IP/PoS Book is an application that runs on the OC-48/STM-16 module and is a complete test set for extended packet over SONET/SDH testing. It also provides the user with the ability to check the physical layer (SONET/SDH) as well as the traffic in IP networks with HDLC/PPP like framing.

SONET/SDH measurement types

Error insertion
B1, B2, B3, bit errors and additional standard SONET errors
Count, Ratio, Seconds

Alarm generation
LOS, LOF and additional standard SONET alarms: on/off

Pointer processing
- Increment, decrement, new value
- Pointer sequences
- Pointer mode: single, periodical, alternating

Message evaluation
Insertion and analysis of regenerator/section trace (J0), MUX section/line trace (J1), signal label (C2)

TOH/SOH and POH evaluation
- Manipulation and analysis of all accessible overhead bytes (including K1/K2, C2, J0/J1)
- TOH/SOH and POH displays

Error measurement
B1, B2, B3, bit errors and additional standard SDH/SONET errors

Alarm detection
LOS, LOF, LOP and additional standard SDH/SONET alarms
Resolution: 100 ms

Result display
The results can be displayed in 3 modes:
numerical display, graphical display or an event list.

Signal structure

SONET mappings
STS-1/3c/12c/48c

SDH mappings (in preparation)
AU-3: VC-3, AU-4: VC-4, VC4-4c/16c

Fill patterns
HDLC/PPP like framing (RFC 1662)

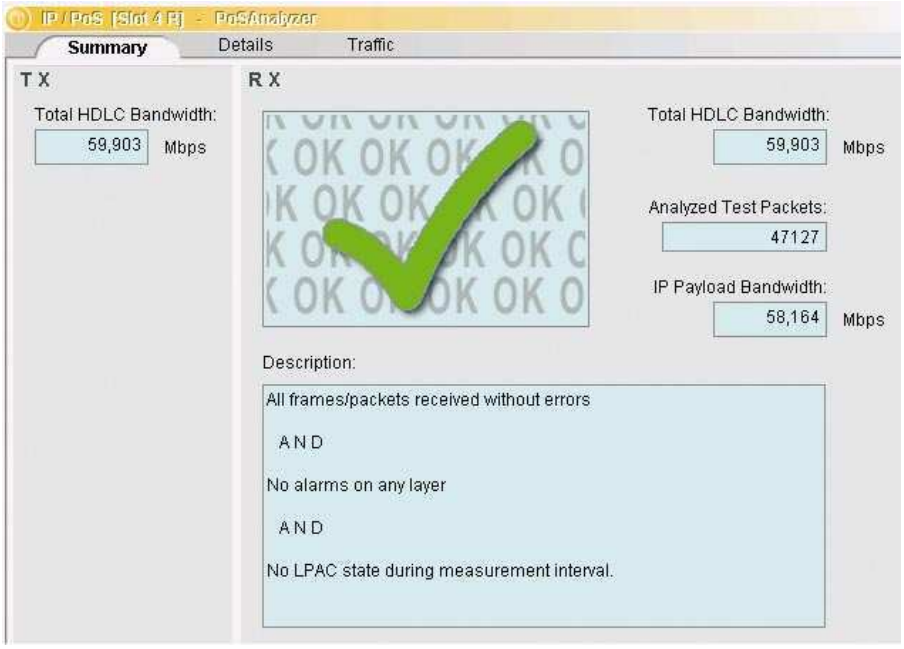
IP/PoS measurement types

Traffic parameters on transmit side
- Frame size
- Sustained bandwidth

Traffic analysis on receive side
- Frame rate, total frames received, analyzed test frames
- Average delay, delay variation
- Link bandwidth, link utilization

PoS error generation and measurement
FCS error, invalid frame, lost packets

Results
The results are displayed in count and ratio.
A summary result gives a clear GO/NOGO indication.



OSA-160/OSA-200

The OSA-160 and OSA-200 modules are the forerunners to a new family of DWDM spectrum analyzers for the ONT platform.

As the **first dual-port** DWDM analyzer, the OSA-200 enables simultaneous measurements at two different points in DWDM systems. Besides the patented dual-port version, a standard single-port (OSA-160) is also available. All of the OSA modules offer high test speed plus **internal wavelength calibration** which is possible, for the first time ever, without interrupting an ongoing measurement.

For use during installation of multichannel DWDM systems in the wavelength range **1280 to 1650 nm,** graphical and tabular display formats can be chosen. Built-in test functions allow automatic PASS/FAIL evaluation based on selected limits.

Operating modes

Graph: WDM spectral mode
Full-spectrum graphic display
Functions . . . . . zoom, cursor and marker capabilities
Auto Mode (FOX) . . . . . auto evaluation of DWDM signals with passed/failed indication
Averaging Mode

Tabel: WDM system mode
Tabular display (scrolling) . . . . . up to 26 ch (simultaneously)
Display parameters . . . . . wavelength, optical power, OSNR and parameter deviations (statistics)

Summary: auto evaluation mode
Evaluation of DWDM signals against customer selectable limits with indication of passed failed result

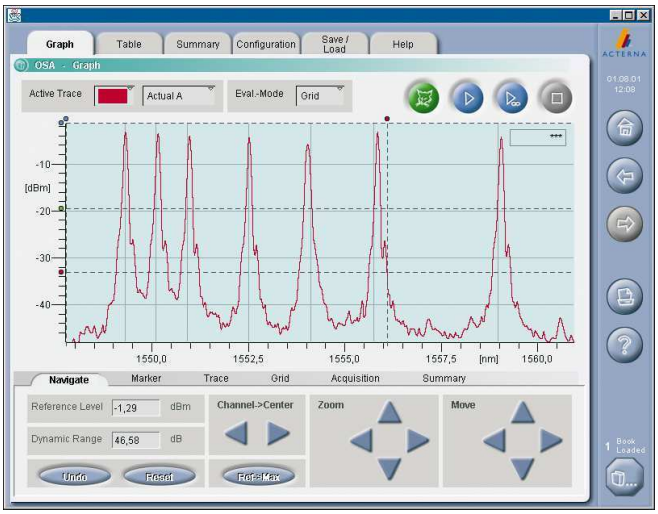
Optical ports (physical contact interfaces)
Input ports . . . . . 2 × SM/1 × SM

Interface . . . . . Universal
Optical return loss . . . . . > 30 dB
Max. allowable total power . . . . . +23 dBm

Spectral measurement ranges
No. of optical channels 256
Wavelength range . . . . . 1280 to 1650 nm
Wavelength accuracy[1] . . . . . ±40 pm
Readout resolution . . . . . 0.01 nm
Resolution bandwidth (FWHM)[1] . . . . . 70 pm ±10 pm
Optical rejection ratio[2]
at ±25 GHz (±0.2 nm) . . . . . > 33 (typ. 35) dBc
at ±50 GHz (±0.4 nm) . . . . . > 40 (typ. 45) dBc
at ±100 GHz (±0.8 nm) . . . . . > 45 (typ. 50) dBc

Power measurement ranges
Dynamic range (per ch power) . . . . . −65 to +15 dBm
Absolute accuracy[1] . . . . . ±0.6 dB
Linearity[3] . . . . . ±0.10 dB
Readout resolution . . . . . 0.01 dB
Scanning time (1280 to 1650 nm)[4] . . . . . < 1000 ms
Video update rate . . . . . < 1.5 s

1) temp. range: 18 to 28 °C, wavelength range: 1520 to 1570 nm
2) Within C-band
3) At power levels between −45 to +10 dBm, within temp. range of +5 to +40 °C
4) Scanning time of one input signal



OQM-200

The OQM-200 Optical Q-Factor Meter is the first instrument for in-service measurement of signal quality independent of transmitted data format. The Q-Factor Meter can be used for quickly optimizing DWDM systems during installation, maintenance and troubleshooting. The module offers unrivalled test speed with less than 30 seconds required to determine Q factors in the range from 4 to 13 (corresponding to a theoretical bit error rate of 10^{-4} to 10^{-40}).

Unlike a BERT, the Q-Factor Meter can also be used with in-service systems, making the OQM-200 very useful for monitoring purposes.

Operating modes

Scanning mode ..... single/continuous
Optimize ..... real time mode

Optical input port

Fiber type ..... single-mode
Interface ..... universal
Optical return loss ..... > 30 dB

Supported data rates

Standard rates 2.5 and 10 Gbit/s OC-48/STM-16, OC-192/STM-64

Measurement ranges

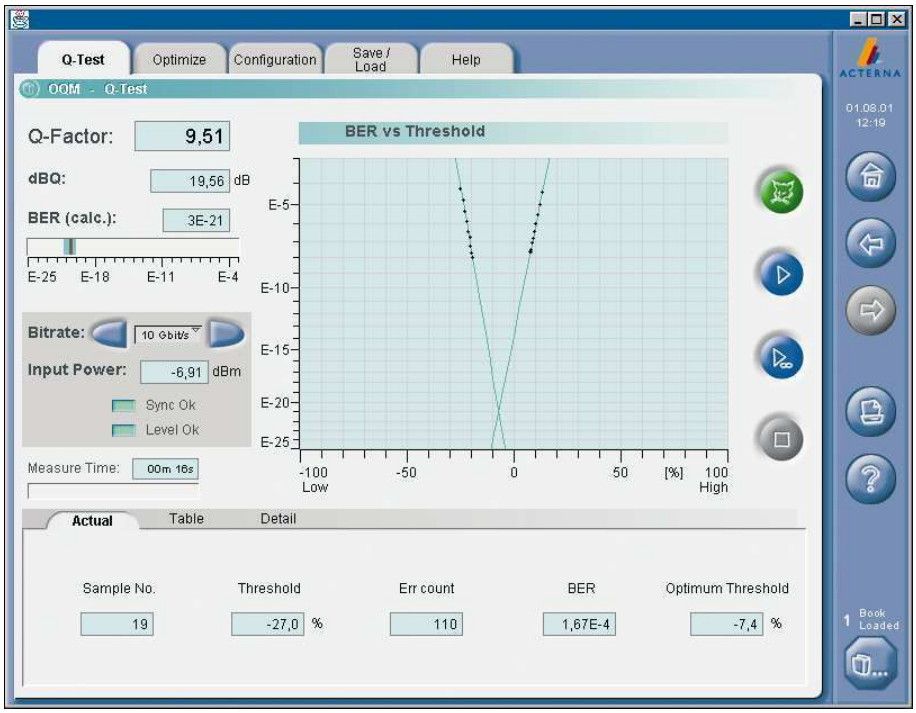
Wavelength range ..... 1280 to 1620 nm
Q-Range ..... 4 to 13
corresponding BER range ..... 10^{-4} to 10^{-40}

Max. optical input power ..... 0 dBm
Dynamic range ..... –14 to –4 dBm

Optical power meter (integrated)

Power range ..... typ. –28 to –3 dBm

Measurement time (independent of data-rates)
for Q-range 4 to 13 ..... typ. < 30 sec (without synchr.)



Ordering Information

ONT-50 Optical Network Tester

BN 3070/01

(mainframe with 4 free slots available for configuration, manual in English, with color TFT display touch screen)

Optical connectors ONT-50

Measuring adapter FC, FC-PC, FC-APC (NTT) BN 2060/00.51
Measuring adapter SC, SC-PC, SC-APC (NTT) BN 2060/00.58
Measuring adapter ST Type (AT&T) BN 2060/00.32

Hardware modules

One **must** be ordered. A maximum of 4 slots can be fitted. Combination of different modules are possible in one mainframe. Select one type from optical connectors BN 2060/00.xy as listed before.

Optical modules

OSA-160 Single port DWDM analyzer* BN 3070/91.01
2 slots

OSA-200 Dual port DWDM analyzer BN 3070/91.03
2 slots

OQM-200 Optical Q-Factor meter 10G* BN 3070/92.01
2 slots

Digital modules

One port (SDH/SONET) means a physical interface including Tx and Rx. Modules come along with SDH and SONET expert book

1-port up to 2.5G
OC-48/12/3 & STM-16/4/1, 1310/1550 nm, BN 3070/90.05
2 slots

2-port package up to 2.5G
OC-48/12/3 & STM-16/4/1, 1310/1550 nm, BN 3070/90.10
4 slots

1-port 10G
OC-192 & STM-64, 1550 nm, 1 slot BN 3070/90.01

2-port package 10G
OC-192 & STM-64, 1550 nm, 2 slots BN 3070/90.02

4-port package 10G
OC-192 & STM-64, 1550 nm, 4 slots BN 3070/90.04

All optics package 10G
OC-192/STM-64, 1550 nm and
OC-48/12/3 & STM-16/4/1, 1310/1550 nm, BN 3070/90.11
3 slots

* Additional optical adapters are available on request

ONT-50 configuration guide

Ordering number	Modules	Slots required	Select
BN 3070/01	Mainframe ONT-50		
Select one adaptor type			
BN 2060/00.51	Adapter FC-PC		
BN 2060/00.58	Adapter SC-PC		
BN 2060/00.32	Adapter ST		
Select one or more hardware modules *Combination of different modules are possible in one mainframe*			
BN 3070/91.01	OSA-160 single port	2	
BN 3070/91.03	OSA-200 dual port	2	
BN 3070/92.01	OQM-200	1	
BN 3070/90.05	1-port up to 2.5G	2	
BN 3070/90.10	2-port up to 2.5G	4	
BN 3070/90.01	1-port 10G	1	
BN 3070/90.02	2-port 10G	2	
BN 3070/90.04	4-port 10G	4	
BN 3070/90.11	All optics 10G	3	
Select software option			
BN 3070/93.03	PoS book		
Select Accessories			

Software options

BN 3070/93.03

IP/PoS Book

Optical attenuators

FC-PC, 10 dB, 1310/1550 nm BN 2239/90.30
SC, 10 dB, 1310/1550 nm BN 2239/90.38

Calibration report

BN 3070/94.01

(Calibration is carried out in accordance with quality management system certified to ISO 9001.)

Accessories

Carrying case for ONT-50 with rolls BN 3070/92.45
Soft carrying case for ONT-50 BN 3070/92.46

OLA-15 Optical Attenuator (variable) BN 2239/01

One application of the OLA-15 is in the line-up of optical links, where line interruptions are simulated for bit error testing. The device is also useful when measuring the sensitivity of optical receivers. With its wide variable attenuation range and highly accurate and reproducible attenuation settings, the OLA-15 is an ideal companion for the ONT.

Calibrated at ..... 1310 nm and 1550 nm
Attenuation range ..... 3 to 60 dB
Resolution ..... 0.05 dB

See OLA-15 data sheet for details.

Note: Specifications, terms and conditions are subject to change without prior notice.

TP/EN/D180/0901/AE, repl. D137

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