N1610B
The Service Advisor Toolkit
State-of-the-Art Modular
Test Tools

Agilent Technologies
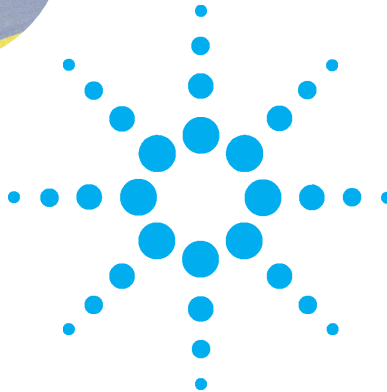
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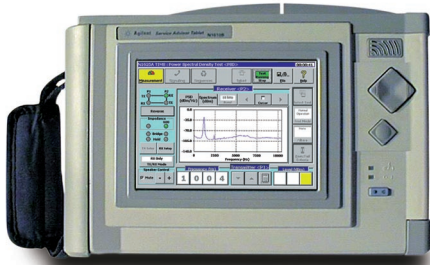
The Modular Test Platform for Comprehensive Services Testing

The Agilent Service Advisor Toolkit is the industry's most comprehensive, modular platform for copper, fiber loop and advanced services testing. From basic line qualification for DSL installations to OC-48/STM-16 fiber testing, the Toolkit provides a complete range of hardware modules and easy-to-use, graphical software measurement and troubleshooting applications for technicians in the field, the central office and the lab.

The Agilent Service Advisor Toolkit speeds and simplifies training and testing by providing one, comprehensive, consistent platform and automating many common test functions. Simple one- or two-button commands can be used to perform tests, and display measurements and results, from simple service verification to advanced diagnostics for high-speed switch installations.

The rugged, lightweight tablet features a new, brighter active matrix color display that facilitates field testing in bright sunlight conditions. Its advanced remote control capabilities enable field personnel to perform unattended test operations or capture events for troubleshooting intermittent problems.

Modules can be pooled, shared and swapped to reduce test equipment costs.

In today's complex voice and data communications environment, rapid, accurate service deployment and speedy problem resolution are the keys to customer satisfaction. The cost-effective Service Advisor Toolkit provides all the elements – accuracy, ease-of-use, flexibility and wide-ranging solutions – required to compete and win in the service provider marketplace.

Applications

Access Testing In the Outside Plant

With its powerful Graphical User Interface (GUI) and its simple and easy operation, the Service Advisor Portable Test Tablet is the ideal tool for the outside plant. Its intuitive user interface allows the operator to quickly install and maintain service. Battery power allows operation where AC power is not available or convenient. Optional software application packages enable technicians to store and recall data and information in databases, spreadsheets and documents. The rugged design of the Service Advisor Portable Test Tablet enables it to stand up to years of demanding field use.

I&M In The Central Office

Central Office (CO) users will find the power and flexibility of the Service Advisor Portable Test Tablet ideal for installing and maintaining services. With flash memory capability, CO personnel can create test suites which can be downloaded into the test set for field testing. Once the data is collected it can then be recalled, analyzed and transferred to a PC.

### Develop And Verify Network Elements In The R&D Environment

Technicians and engineers can use the Service Advisor Portable Test Tablet to develop and verify network elements in the laboratory. Its consistent user interface and modular design help users rapidly switch test tasks. The advanced operating system enables users to develop test sequences which can be rapidly rolled out in the field. With its SCPI command line interface control, users can easily create test sequences which operate the test set from a serial port, a modem or a LAN.
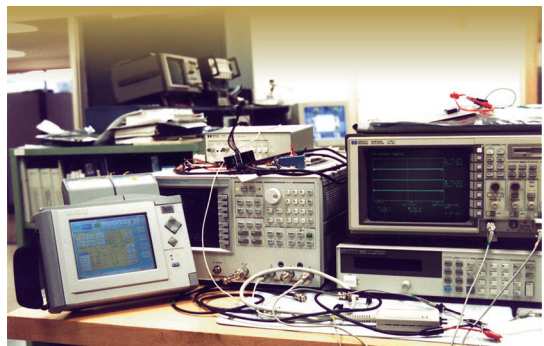
Field Service I&M

The Service Advisor Portable Test Tablet is rugged and lightweight, and is designed for many years of field use. With the ergonomically designed packaging the Service Advisor Portable Test Tablet is easy to carry, use and store.

Test Configurations
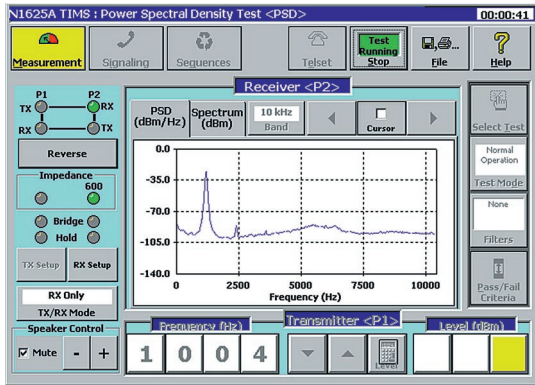
DSL TIMS - (N1625A / N1626A)

Agilent Technologies' N1625A / N1626A DSL TIMS module for the Service Advisor Tablet and Telecom Toolkit is an advanced 2 MHz transmission impairment measurement set (TIMS) that provides comprehensive line qualification testing for subscriber loop circuits. The DSL TIMS module's easy-to-use graphical interface and array of powerful line performance tools makes it the craftperson's ideal choice for DSL, POTS, and ISDN service testing.
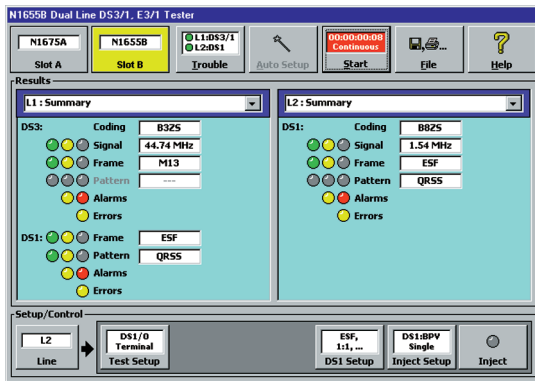

DS3/1 and E3/1 - (N1655B)

With the demand for new voice and data services growing at an unprecedented rate, Agilent's N1655B Dual Line DS3/1, E3/1 Test Module for the Service Advisor is the ideal tool to quickly develop, install and maintain DS3, E3, DS1 and E1 services. Whether it's a clear channel DS3, E3, DS1 or E1 data service or a V/F DS3/1/0, DS1/0, DS3/E1/0, E3/1/0 or E1/0 voice service, or a multiplexed DS3/1, DS3/E1 or E3/1 voice/data service the N1655B test module meets the test requirements as they arise.
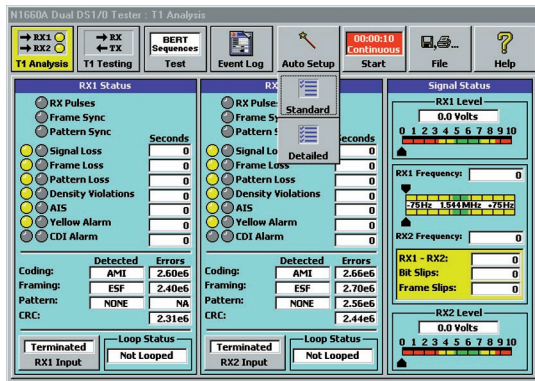
DS1/0 - (N1660A)

Agilent's N1660A Dual DS1/0 Test Module for the Service Advisor Tablet and Telecom Toolkit simplifies T1 and DS0 testing by providing complete analysis of line conditions and status in both directions, with the touch of a single button. One color-coded summary screen displays simultaneous results on both sides of the circuit, providing a complete status view on all channels and highlighting possible trouble conditions. The optional signaling software allows users to test and troubleshoot voice services and PBX equipment, while an integrated SCPI command line interface supports development of automated test routines.
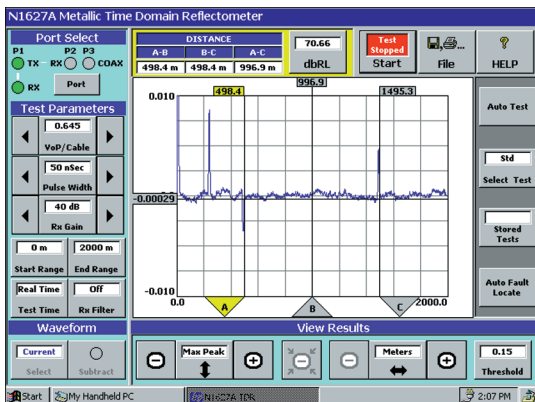
TDR - (N1627A)

Agilent's N1627A Time Domain Reflectometer (TDR) module for the Service Advisor Tablet and Telecom Toolkit provides a wide range of easy-to-use, accurate tools for locating faults or measuring span length for any type of metallic cabling, including copper twisted-pair, coaxial or Category 5/6 LAN wiring. The module's advanced, user-friendly software simplifies TDR testing, while advanced return pulse performance features allow measurements up to 6 km on copper twisted pairs and greater distance on coaxial cable.

SONET / SDH Module for OC-48/STM-16 - (N1680A)

The N1680A OC-48/STM-16 SONET/SDH Test Module will provide 2488/622Mbps SONET / SDH rates for both transmit and receive. This module, the latest enhancement to the already extensive Service Advisor toolkit, will support clear channel BERT at OC-48c/STM-16 (AU4-16c). The N1680A also includes section, line and path overhead and pointer analysis.

## SONET / SDH Module for OC-12/STM-4 - (N1675A/1676A)

The N1675A and N1676A 622/155Mbps SONET / SDH Test Modules provide highly integrated test capabilities to design, commission and maintain today's newest networks. These modules are available with industry standard single mode 1310nm Intermediate Reach (IR) 622/155Mbps optics, which enable users to test OC-12 and OC-3 SONET or STM-4 (AU4-4c) and STM-1 (AU-3) SDH line interfaces either concatinated or channelized.

The N1676A features 51Mbps/B3ZS test capabilities enabling users to test at STS-1 SONET or STM-0e (AU-3) SDH line interfaces and to synchronize to standard T1-BITS (Building Integrated Timing Source) or E1-MTS (Maintenance Timing Source) reference timing sources.
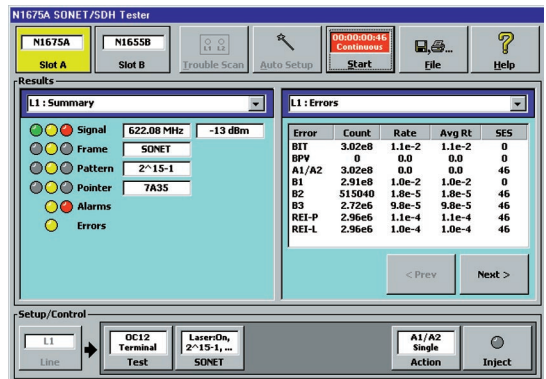
STM-4/OC-12 SDH/SONET Test Module - (N1677A)

The N1677A STM-4/OC-12 SDH/SONET Module provides comprehensive STM-4/OC-12 and STM-1/OC-3 optical and electrical test capabilities. Available with industry standard single mode 1310nm Intermediate Reach (IR) 622/155Mbps optics for testing at STM-4 and STM-1 SDH or OC-12 and OC-3 SONET rates. The module also features 52Mbps and 155Mbps electrical interfaces providing STM-0e and STM-1e SDH or STS-1, STS-3c and STS-12c SONET interfaces and E1-MTS or T1-BITS reference timing sources. Functionality includes clear channel BERT, drop and insert programmable and pseudo-random bit sequences with pass-through of other sub-rate channels into SDH/SONET hierarchy.
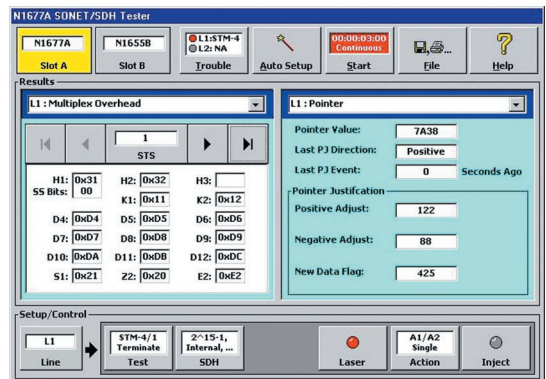
Datacom - (N1690A)

The Agilent N1690A Datacom Test Module for the Service Advisor Tablet and Telecom Toolkit allows technicians to quickly and easily test datacom interfaces. Whether it is used to emulate a network element, or to passively monitor a complex network circuit, the Datacom module's High-Speed Serial Interface (HSSI), RS-232, RS-449, V.35, X.21, EIA-530, and EIA-574 interfaces make it one of the most complete, easy-to-use tools for testing datacom interfaces.
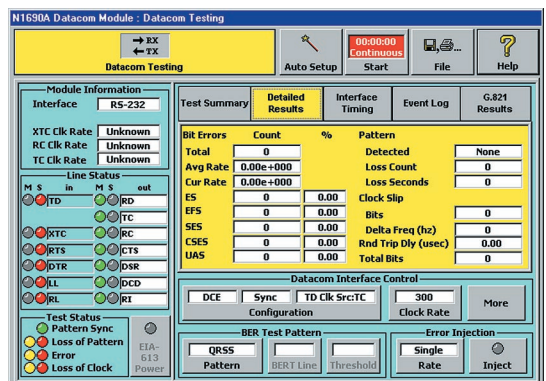
Features

Specifications

MODULAR

Supports 2 single modules or 1 dual test module
Hot swappable

DISPLAY

6.4" diagonal 640 x 480 color VGA backlighted Active
matrix LCD

USER INTERFACE

Graphical User Interface
Touchscreen
Stylus
Navigation Keys: Direction ($\uparrow$ $\downarrow$ $\leftarrow$ $\rightarrow$), Enter,
Display/Audio
LEDs: On/Off (green), Charging/Battery Low (green,
red)

MEMORY

RAM: 16MB
Flash-ROM: 12MB

OPERATING SYSTEM

Microsoft Windows® CE
Flash File System for non-volatile results and
configuration storage

REMOTE CONTROL

Remote Services provides SCPI command line
interface and remote GUI (option)

PC-CARDS SUPPORTED

Type-I and II
V.90 56K Modem PC Card (option)
10BaseT Ethernet LAN PC Card (option)
10MB Flash-ROM PC Card (option)

DATA AND FILE MANAGEMENT

Local
 • Store and recall results
 • Store and recall configurations and test suites
Remote
 • via Service Advisor Companion software
   (compatible with Windows® 95/98, Windows NT®
   3.51 or later)
 • Upload results
 • Upload and download configurations and test
   suites
 • Download program Flash-ROM updates

BATTERY CHARGER

Built-in charger
External battery charger (option)

USER I/O

Parallel Port: DB-25s
Serial Port: DB-9p (DTE)
Headphone: 3.5mm mono
Internal mylar speaker

POWER

In: 18VDC
DC Connector
 • 2.5mm center positive
 • Rechargeable NiMH Smart Battery 10.8VDC,
   3.4AHr (included)
 • AC Power Adapter 90-264VAC 50/60Hz (included)
 • 12VDC Vehicle Power Adapter (option)
Power Consumption: 15W operating, 30W while
charging

GENERAL

Physical: (W × H × D) 11.25" × 8.2" × 3.0" (286mm ×
208mm × 76mm)
Weight: 5.4lbs (2.45 kg)
Operating Temp: 0 to 40°C (+32 to +104°F)
Storage Temp: -20 to 60°C (-4 to +140°F)
EMC: CISPR 11 Class A
Safety: UL/CSA/TUV, CE
Mechanical: Agilent Handheld Class B1

N1610B Service Advisor Portable Test Tablet

The N1610B Service Advisor Portable Test Tablet is Agilent's newest state-of-the-art test platform. The versatile platform provides enormous test flexibility with its modular design for telco, residential access and qualification applications. With its modular architecture, the platform provides a cost effective solution that allows the user to easily expand into future test technologies. The consistent user interface across test technologies helps users rapidly switch between a wide range of test tasks.

Interchangeable Test Modules
The N1610B accommodates 2 single or 1 dual width test modules.

User Interface
The N1610B has 6.4" 640x480 color VGA, Active matrix LCD.

Operating System
The N1610B uses the advanced Windows® CE operating system.

Remote Control
The N1610B works in tandem with Windows® based PCs.

Battery Powered
The N1610B is powered by a NiMH smart battery.

Multiple Interfaces
The N1610B has a Type II PCMCIA slot for a Modem, 10Base-T or Flash ROM PC-Card.

Accessories

N1611A: NiMH Battery

N1612A: AC Power Adapter

N1613A: External Battery Charger (requires N1612A or N1614A)

N1614A: 12VDC Vehicle Power Adapter

N1615A: Soft Carrying Case; **N1616A:** Hard Carrying Case

N1618A: 56K/v.90 Modem PC Card
N1620A: 10BaseT Etherent LAN PC Card
N1621A: Compact Flash and PCMCIA Adapter

Related Literature

N1680A OC-48/STM-16 Test Module
    Pub# 5988-3103EN
N1675A/N1676A OC-12/STM-4 SONET/SDH Test Modules
    Pub# 5988-3215EN
N1677A STM-4/OC-12 SDH/SONET Test Module
    Pub# 5988-4443EN
N1655B Dual Line DS3/1, E3/1 Test Module
    Pub# 5988-4567EN
N1660A Dual Line DS1/0 Test Module
    Pub# 5968-5477E
N1625A/N1626A xDSL TIMS Test Modules
    Pub# 5968-9467E
N1627A Time Domain Reflectometer Test Module
    Pub# 5968-5896E
N1690A Datacom Test Module
    Pub# 5980-0854E

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