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# N1627A
# Time Domain Reflectometer (TDR)
## Specifications



### GENERAL SPECIFICATIONS

The Agilent N1627A Time Domain Reflectometer module provides highly accurate, general purpose metallic cable TDR capability to the Service Advisor family. It's easily used for short and long distance applications on any type of cable network including twisted pair, coaxial, and LAN.

### RELEVANT STANDARDS

UL 3111.1, UL 1950
89/336/EEC, 72/23/EEC
EN55011
CE
ISO 9001

### TEST SIGNAL CHARACTERISTICS

**Velocity of Propagation (VoP)**
- **Range and Resolution:** User selectable from 0.010 to 0.999 in 0.001 or 0.01 steps

**Test Signal Output:** 3 to 25 Vpp
**Pulse Widths**
- Ten selectable widths from 5 nanoseconds to 5 microseconds
- **Twisted Pair:** 5, 10, 20, 50, 100, 200, 500, 1000, 2000, 5000 nsec
- **Coaxial:** 5, 10, 20, 50, 100, 200, 500, 1000 nsec

### TEST CONNECTORS

**Input Protection:** ± 400 V DC and AC
**Output Connectors**
- **Balanced:** dual bantams
- **Unbalanced:** BNC

**Output Impedance**
- **Balanced:** 100 ohms
- **Unbalanced:** 50 Ohms

### MEASUREMENT CHARACTERISTICS

**Dynamic Range:** Greater than 70 dB
**Horizontal Resolution**
- 0.026 m at VoP 0.999
- 0.039 m at VoP 0.660

**Maximum Range:** 20,000 m at any VoP, depending on cable type and condition
**Distance Accuracy:** 0.1 % ±200 ps ± VoP uncertainty ± cursor resolution
**Cursor Resolution:** 0.28% of selected range
**Display Range:** start and stop range independently selectable
**Vertical Sensitivity:** >65 dB
**Vertical Resolution:**
- Up to 16 effective bits depending on test setup
- 241 pixels (vertical) displayed

**Return Loss Measurement**
- **Auto dBRL:** Two digit calculation at cursor set

**Crosstalk Measurement:** two digit calculation at cursor set
**Noise Filter:** Adaptive noise filtering based on test settings

### RESULTS ANALYSIS

**Measurement Modes**
- **Unbalanced:** transmit/receive on single BNC port
- **Balanced:** single port transmit/receive; dual port transmit/receive

**Event Marking:** three horizontal cursors; one vertical cursors
**Waveform Comparison:** compare current and stored waveform; display both waveforms and difference
**Threshold Selection:** available using vertical cursor
**Horizontal Scale:** meters, feet, or seconds
**Magnifications:** horizontal and vertical zoom
**Compute Distances:** to cursors, between cursors
**Waveform Storage:** 50 waveforms
**Cable Characteristics Database**
- Includes factory programmed cable characteristics
- Provides for user entry of new cable types

**Test Configuration Database**
- Store up to 50 test configurations for instant recall, plus expansion via PCMCIA card
- Clone test configurations for service organization

**Display:** (in Service Advisor tablet) 640 x 480 pixel color VGA LCD with touchscreen. Backlighting with contrast control

### DATA AND FILE MANAGEMENT

- **Maintenance:** software field upgradeable using companion PC
- **Remote File Access:** results data accessible using companion PC

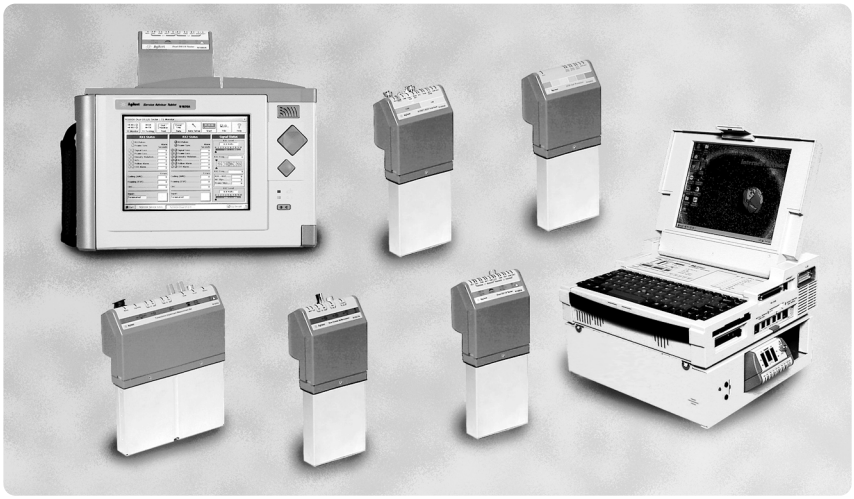
### GENERAL

**Power:** (from Service Advisor Tablet)
- Battery portable with internal battery charger
- NiMH 10.8 Vdc smart battery with charge indicator
- AC/DC power converter included
- Vehicle power converter available

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# Related Products



All Agilent test modules, including the TDR Module, can be used interchangeably with both Agilent's Service Advisor portable test tablet and Internet Advisor PC platforms. Modules plug directly into the Service Advisor tablet or Agilent's Service Advisor Undercradle, which attaches to the Internet Advisor network analyzer.

**N1610A Service Advisor Test Tablet**

Agilent's Service Advisor Test Tablet is a lightweight, portable platform that supports a complete range of installation and maintenance testing requirements. The battery-powered tablet features a color touchscreen, and accepts all of the single and dual-slot application modules listed below.

**N1700A Service Advisor Undercradle**

The Service Advisor Undercradle attaches to Agilent's Internet Advisor network analyzer, allowing Internet Advisor users to share use of single and dual-slot plug-in testing modules. The undercradle allows field organizations to combine physical network and service deployment testing with the Internet Advisor's powerful, higher-layer protocol analysis capabilities.

**N1660A Dual DS1/0 Test Module**

Agilent's Dual DS1/0 Test Module for the Service Advisor platforms simplifies DS1 and DSO testing by providing complete analysis of line conditions and status in both directions with the touch of a single button.

**N1640A ATM Cell Processor Test Module**

Combined with the SONET/SDH Test Module, the ATM module provides complete SONET/SDH ATM BER, QoS and VPI/VCI testing capabilities at up to 155 Mbp/s line rates.

**N1645A SONET/SDH Test Module**

This line interface module provides connectivity and physical layer SONET and SDH testing for OC-1, OC-3c, STM-0 (optical) and STM-1(optical) lines.

**N1625A/N1626A xDSL TIMS Test Module**

The double-slot TIMS Test Module supports a complete range of Transmission Impairment Measurements (TIMS) related to line qualification and troubleshooting for a wide range of services from POTS to ADSL.

## Ordering Information

**N1627A Time Domain Reflectometer (TDR) Test Module**

**N1610A Service Advisor Portable Test Tablet**
**opt 500:** Remote Services

**N1700A Service Advisor Undercradle**

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