Validator™ and Validator-NT™
Ethernet Network Management Tools

Key Features

- Conducts Bit Error Rate (BER) testing to speed certify Ethernet data transmission speed up to 1000BASE-T (1 Gb/s)

- Measures Signal-to-Noise Ratio and Skew to uncover impairments to Ethernet data transmission

- Tests for opens, shorts, split pairs, miswires, and reversals and measures distance to opens and shorts—supports all network, telco, and coax cables

- Identifies cable termination on active Ethernet ports with hub flash

- Performs port discovery to detect advertised Ethernet speed and displays capabilities of network devices (Validator-NT)

- Pings network devices to verify connectivity to active equipment (Validator-NT)

- Includes Plan-Um® software to create network layout, document cable tests, show network topology, and record moves, adds, and changes

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FROST & SULLIVAN

Global Communications
Test & Measurement
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Applications
- Verify proper operation of Ethernet cable runs
- Certify speed capability of cable runs to support 10/100/1000 Mb/s Ethernet applications
- Ensure configuration of and connectivity with active network devices
- Document network topology including moves, adds, and changes

The Validator™ series of Ethernet Network Management Tools—Validator and Validator-NT™—offer a complete solution to test and speed certify the data-carrying capabilities of Ethernet network cables up to 1 Gb/s by testing for noise in the network, detecting faults in the cabling wiring, and ensuring that cables are able to support the speed capabilities of active equipment.

To certify Ethernet speed performance of cable runs, the Validator series handheld testers conduct Bit Error Rate (BER) tests by sending data packets down specified cable runs at defined data rates to check for errors at the maximum throughput of the link. Both Validator and Validator-NT also report on signal quality that can impact high-speed data transmission by measuring signal-to-noise ratio (SNR). Skew measurements report on the signal time delay between pairs that can impact Ethernet data transmission. Finally, the Validator series units provide continuity testing that detects opens, shorts, miswires, split pairs, reversals, and high-resistance faults while accurately measuring distance to faults and total cable length.

The Validator-NT includes a comprehensive set of features to test the active network capabilities of a network: port discovery for speed and capability detection of active devices up to 1 Gb/s; ping test to verify connectivity to IP hosts on or off the local network; and discovery of network devices using Cisco Delivery Protocol (CDP).

![Test-Um TEST SOLUTIONS BY JDSU]

Plan-Um® software

Cabling Installation and Planning Software

Validator and Validator-NT include the powerful Plan-Um® planning and reporting software for planning network architectures and organizing cable information and test results. Plan-Um helps set-up each job, defines scope of the job, aids in testing cable runs, and produces reports for the installer and customer. The Network Tools feature provides a quick way to see the network architecture and a way to document moves, adds, and changes.

Used in conjunction with Plan-Um, Validator and Validator-NT provide confidence in the physical properties of cable runs and the overall capability of the network.

Define the job, conduct speed and continuity tests, and document results.

1) Layout

- Create custom floor plans or import existing AutoCAD or Visio files
- Show specific ports: network, telephone, cable
- Indicate cable runs
- Print or e-mail layout for approval
- Save layouts for future jobs
- Automatically create cable test schedule
- Cable list shows run start and end points
- Each cable run is displayed for cross-checking

Cable list screen

2) Speed Certification and Continuity Test

- Certifies Ethernet transmission speed up to 1 Gb/s using full Bit Error Rate (BER) test by sending data packets across cable runs
- Conducts measurements to detect noise and delay that affect data transmission: Skew and overall SNR

Wiremaps individual runs to locate and identify cable routes

Tests telephone, network, coax, and security/alarm cables for continuity, proper temination, and polarity

Testing underway

Skew and SNR results shown on faulty cables

Measures cable length and distances to opens and shorts using advanced TDR technology

Shows the actual error rate in the BER test

Displays test results

3) Document and Archive

- Verifies all tests are done against the plan
- Shows PASS/FAIL, cable length, and speed rating
- Provides end-of-job report for billing purposes
- Stores finished jobs for reference to support moves, adds, and changes
- Has the option to store data on a PC or the included removable flash memory card

Specifications

General

Display	Color back-lit liquid crystal display (LCD)
Operating System	Linux
Keypad	Full navigations set with alphanumeric data entry and soft-key functions

Interfaces
– USB device port
– Compact flash card (included)

Test Connectors
– 8-position shielded modular jack (data)
– 6-position modular jack (telephone)
– F-coax (video) and dual banana jack (security, speaker, etc.)

Cable Types
– Shielded or unshielded twisted pair
– Telephone, coax, speaker wire, security, fire, and alarm

Cable Length
Maximum cable length for testing for split pairs is up to 457.2 m (1,500 ft), depending upon cable type

Electrical

Power source	AC adapter/lithium ion rechargeable, removable batteries

Environmental

Operating temperature	0 to 50℃ (32 to 122°F)
Storage temperature	−20 to 70℃ (−4 to 158°F)
Humidity	10 to 85%, non-condensing

Physical

Main Unit

Size	22.9 x 11.4 x 5.3 cm (9 x 4.5 x 1.8 in)
Weight	710 gms (1 lb 9 oz) with battery

Remote

Size	14.2 x 11.2 x 4.4 cm (5.6 x 4.4 x 1.8 in)
Weight	341 gms (12 oz) with battery

Ordering Information

Validator Ethernet Speed Certifier Kit
(Choose the model with the appropriate AC adapter cables)

North America	NT950
Australia	NT950-AUS
Europe	NT950-EURO
Italy	NT950-ITAL
United Kingdom	NT950-UK
Without AC adapter cables	NT950-WOAC

Validator-NT Ethernet Speed Certifier and Active Network Tester Kit
Performs all Validator functions, includes set of 8 cable test remotes, and adds the following active network test features: discovers advertised speed and capabilities of active network devices to 1 Gb/s and pings network devices to verify connectivity to active equipment.
(Choose the model with the appropriate AC adapter cables)

North America	NT955
Australia	NT955-AUS
Europe	NT955-EURO
Italy	NT955-ITAL
United Kingdom	NT955-UK
Without AC adapter cables	NT955-WOAC

– **Validator and Validator-NT** each includes smart remote, two lithium ion rechargeable batteries (NT93), two AC adapter/charger units, 1.83 m (72 in) USB cable assembly (NT94), compact flash card, two 19 cm (7.5 in) RJ12 to RJ12 cables for no-fault connection to RJ11 or RJ45 jacks (TP20), two F-connector plug to BNC jack adapters (TP62), two 30.48 cm (1 ft) patch cables with RJ45 connectors (TP55), two 60.96 cm (2 ft) RJ45 to 8 alligator clips cord sets (TP68), two sacrificial cables for RJ45 mod plug (TP74), Plan-Um cabling installation and planning software (NT940), and deluxe carrying case.

Accessories

Lithium ion rechargeable battery	NT93
1.83 m (72 in) USB cable assembly	NT94
Cable speed certified labels, roll of 100	NT95
Smart remote for Validator	NT925
Smart remote for Validator-NT	NT928
19 cm (7.5 in) RJ12 to RJ12 cable for no-fault connection to RJ11 or RJ45 jacks	TP20
30.48 cm (1 ft) patch cable with RJ45 connectors	TP55
F-connector plug to BNC jack adapter	TP62
60.96 cm (2 ft) RJ45 to 8 alligator clips cord set	TP68
Sacrificial cable for RJ45 mod plug	TP74
Plan-Um cabling installation and planning software	NT940

Validator-NT and smart remote

Validator and smart remote

Validator Ethernet Speed Certifier Kit (NT950)