FLUKE networks

DaVaR™ and DaVaR NetDSL™ Test Systems

More than a single product, DaVaR is a process for collecting information about your plant and updating the support system databases to keep information accurate. A DaVaR program provides both immediate and long term returns. Based on industry data, a DaVaR program can easily return more than $29 million in recovered assets, additional revenue and improved productivity for every million lines tested.

- Bulk pair DSL qualification and records verification

- Single ended testing process determines if a pair is qualified to support POTS, ADSL, ADSL2/2+, or VDSL service

- Detailed electrical tests look for impairments and overall pair quality

- Real-time test results determines speed the line will support - document and update records database and store results to ensure the database is accurate

- Takes the guess work out of conditioning the plant for next-gen services

The DaVaR™ and DaVaR NetDSL™ family of test solutions provides bulk records purification, VDSL qualification and single-pair testing applications. The platform performs testing and sends results back to the DaVaR NetServer to store results and perform automated updates to the loop records database.

The DaVaR NetDSL System allows users to perform single-ended testing on both working and spare lines along with automatically updating the host database for DSL qualified pairs with the DaVaR NetServer. This unique ability to provide quick and accurate service - level qualification on both working and spare pairs allows service providers to identify and target new customers for high-speed service, dramatically reducing customer acquisition costs and generating revenue faster.

Features and Benefits

Complete bulk DSL qualification testing and records verification solution

- "All-in-one" system that performs detailed parametric tests to look for impairments and overall quality of the pair - tests include capacitive and resistive faults, splice, splits, impulse noise, longitudinal balance and load coils

- Automatically qualify both spare and working lines to determine service levels - POTS (voice), ADSL, ADSL2, ADSL2+ or VDSL

- Provides real-time upstream and downstream bandwidth estimates

- Performs critical wideband testing including TDR and wideband noise to 17Mhz

- DaVaR NetServer is a complete management system for coordinating the DSL testing process including results analysis and

DaVaR

detailed reports - reports are automatically updated with integration to the records inventory database

Portable solution can test at any network location

- DaVaR NetDSL comes in a small, lightweight case that is completely battery operated for testing in any network condition - rugged and highly reliable for maximum up-time

- Easy setup due because of portable ETAMs and front tap shoes - saves space in cabinet and Central Office

- Flexible access, either using traditional front tap shoes or new splicing connectors

High performance for rapid bulk (multiple pair) testing

- Configure up to four test heads to test four pairs simultaneously

- Single-ended bulk DSL qualification from-MDF or cabinet using PRAM to isolate distribution pairs for accurate qualification

- Rapid records verifications - up to 2,000 pairs/day (MDF) and 1,200 pairs/day (cabinet) for dual engine configuration

DaVaR and DaVaR NetDSL Test Systems

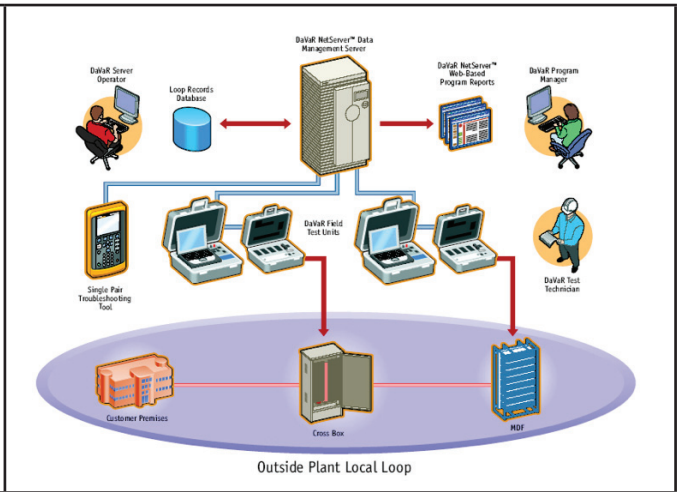**Technical Data**

DaVaR NetDSL Components

DaVaR NetServer™ -
centralized server interfaces with the loop records database, performs automatic database correction updates, generates web reports and facilitates management of the overall program.

DaVaR NetDSL™ Field Controllers - performs high-speed bulk pair testing and DSL qualification of the local loop from the main distribution frame, cross-box or pedestal. Performs VDSL qualification and records verification.

NetTech Fault Location Tool -
downloads fault pair reports from the NetServer and facilitates pair troubleshooting to perform single pair DSL qualification testing.

Comprehensive test result management

NetDSL's easy-to-use interface gives you a look into a unique and powerful solution for performing detail testing, automating analysis of test results and storing test results.

NetDSL features include:

- User-definable test profiles with a selection of detail electrical tests to perform along with results thresholds

- Powerful local SQL database to ensure maximum storage integrity and management test results - NetDSL stores all test results for reporting and uploading to NetServer.

- Real-time display of test results, fault codes and precisely estimated upstream and downstream bit-rate for ADSL, ADSL2+ and VDSL service

- Displays back-office information associated with each pair, such as terminal location and customer location, if available from loop records database
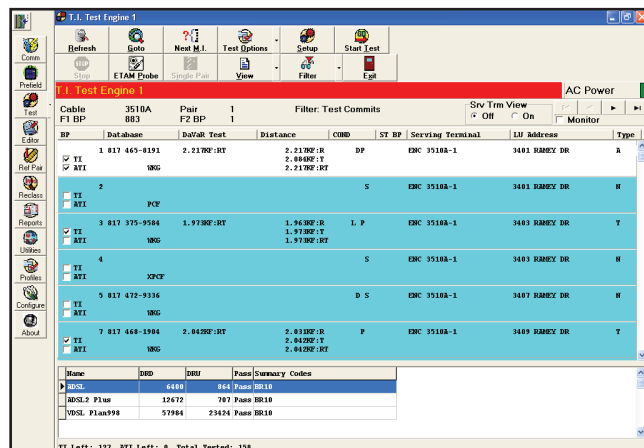
Automated bridge tap detection and location

NetDSL incorporates an advanced TDR-based bridge tap detection algorithms to automatically pinpoint bridge taps on the pair. Bridge taps can significantly affect the performance of the line for higher speed services by reducing the overall strength of the signal.

- Achieves consistent results across different technician skill levels

- Automatically determines proper TDR pulse-widths from 25ns to 5000ns

- Detects bridge taps up to 9,000 feet on 26awg (or equivalent) loops

- Unique bridge tap validation process provides double-end testing to sectionalize the location of the bridge tap
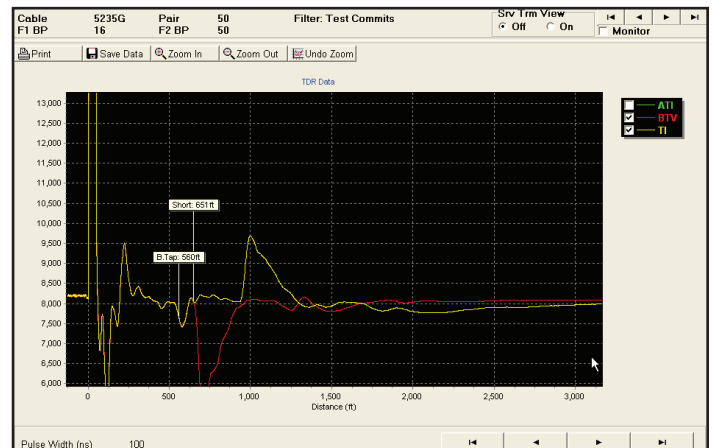

Figure 1 : NetDSL test results engine performs testing, analyzes test results and stores results

Figure 2 : Automatic bridge tap detection

DaVaR and NetDSL Ordering Information

Model	Description
D9290NT-PKG	DaVaR NetTest Single Engine Package – single test engine bulk VDSL records verification. Includes DaVaR single engine (one test head), one ETAM II (200 pair), rugged laptop, DaVaR software for records verification and a printer
D9290DSL-SE-PKG	NetDSL Single Engine Package – single test engine bulk VDSL qualification and records verification. Includes NetDSL VDSL Wideband Dual Engine (one test head), one ETAM II (200 pair), rugged laptop, NetDSL software for VDSL qualification and records verification and a printer
D9290NSD-PKG	SuperDaVaR+ Dual Engine Package - bulk records verification. Includes Super DaVaR + POTS dual engine (2 test heads), two ETAM II (200 pair), rugged laptop, super DaVaR software for records verification and a printer
D9290DSL-PKG	NetDSL Package – Dual engine bulk xDSL qualification and records verification. Includes NetDSL VDSL wideband dual engine (two test heads), two ETAM II (200 pair), rugged laptop, NetDSL software for VDSL qualification and records verification and a printer
D7012	ETAM II – Portable 100 pair access for DaVaR and NetDSL systems
ACCESSVIEW-RU	AccessView Response Unit – number identification responder. Dual channel to support two calls at the same time
D9290DSLEU-PKG	NetDSL Expansion Unit Package – dual engine bulk VDSL qualification and records verification. Includes NetDSL VDSL wideband dual engine (two test heads) and two ETAM II (200 pair). *Note: requires NetDSL base unit and Net DSL software license
NetTech Solutions	
NETTECH-1	NetTech Single Engine with One CopperPro™ II – includes one CopperPro™ Series II VDSL tester, rugged laptop and NetTech software. Add additional CopperPro™ Series II for second test engine. *Note: compatible with DaVaR NetServer for results storage and records database updates
NETTECH-2	NetTech Dual Engine with Two CopperPro™ II – includes two CopperPro™ Series II VDSL tester, rugged laptop and NetTech software. *Note: compatible with DaVaR NetServer for results storage and records database updates

Summary Specifications : NetDSL D9290DSL Series

Physical	
Size – H x W x D	17.5 in (L). x 13.2 in (W) x 7.7 in.(H) (Including Top Lid)
Weight -	18lbs (without Laptop)
Test Leads	Single Pair Test Probe ; Ground
Speaker	Internal mounted speaker for Dial-Set Functionality
Connectors	9 pin D Serial Port AC Power Jack RJ-11 ETAM connector Single Pair Test Probe
Ruggedized Laptop	(optional)
Display & Graphics	12" Diagonal ; Touch-Screen; sunlight readable
Display Graphics	1024x768 XGA

Environmental	
Storage Temperature	-25 to +60°C (-13°F to 140°F)
Operating Temperature	-12 to +42°C (10°F to 107°F)
Humidity	95 % (Non-condensing)
Operating Altitude	0 to 15,000 ft.

Powering	
Battery	Internal Dual 3500 mAH NiMh Pack (one pack per Test Head)
Battery Run Time (Normal usage)	6 - 8 Hours Typical
Low Battery Indicator	Hardware indicator light
Battery Charge Modes	100-240 VAC, LED Indicator
Re-charge Time (max.)	3 – 4 Hours

Test Features	
AC Voltage Measurement	0 to ± 240Vrms ; ± 1% ; ± 1V
DC Voltage Measurement	0 to ± 300VDC ; ± 1% to 5%
Distance Measurement	0 to 80 Kft ; ±1% to 5%
Resistance	0 to 100 Meg Ohm ; ±1% to ±3% per Resistive Fault
Leakage Testing	Yes; 2Kilo Ohms to 999 Meg Ohms
VF Loss	Yes ; -40 to +10 dBm
VF Metallic Noise	Yes; 0 to 100 dBrn
VF Power Influence	Yes ; 40 to 120 dBrn
1.4065 in	Yes ; 200 to 2500 Hz ; 0 to 70dB
Special Circuit Detection	Yes - Voltage and Wideband Noise mask
Wideband Noise	0 to 18 Mhz Measures DMT ADSL frequency bins 0 to -140 dbrn
Wideband Loss Single End	Yes ; 138Khz to 17Mhz ; ADSL and VDSL bin spacing
TDR	Yes ; 6 pulse widths; up to 12Kft on 24 awg
Bridge Tap Detection and location	Yes; up to 10kft on 26 awg
Signature Recognition	Yes - Wideband Signature Analysis to detect Special Services energy
Quick Load-Coil Detection Spare & Working lines	Yes - Detection of 1 or more H88 or D66 Loads. Up to 6 loads
Number Verification	Yes - via DaVaR SmartPro , AccesView Response Unit, or Switch based DTMF
Double Ended Testing	Yes – Requires Fluke Networks TN2100 Terminator

Software Features	
Software Version	NetDSL v9 Qualification Software (Optional Verification and Qualification)
DSL Qualification Analysis	Yes. Single Ended analysis of Wideband and TDR data to determine estimated upstream and downstream ADSL, ADSL2, ADSL2+, VDSL bandwidth
Test Working (CO Switch) Lines	Yes.(Requires NetServer, DATU, or Switch drop battery support).
Real Time Test Result Display	Yes. Display and Dynamic Classification of Test Results
Customer configurable Database status codes and testing rules	Yes. DaVaR Reclass feature provides customizable Database Status codes and tables editing is via easy-to-use interface for maximum flexibility.
Real Time Test Results Editor	Yes. Test Results Editor can be used while background testing occurs to improve productivity.
Relational Database	Yes. True Relational Database system ensures data integrity.
User definable test profiles	Yes. User definable test options and test profiles
Export Reports	Yes. to Excel, Comma Separated, Tab separated, and text file.