

## Datasheet: DSX-5000 CableAnalyzer™

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*The DSX-5000 CableAnalyzer™ is the copper certification solution and is part of the Versiv™ cabling certification product family. The Versiv line also includes fiber OLTS certification, and OTDR modules. Versiv is designed around the revolutionary ProjX™ management system and Taptive™ user interface. ProjX tracks jobs, to ensure they're done correctly the first time, eliminating rework. With the Taptive user interface, instrument set-up and operation are made so simple, even operators with limited cabling skills can successfully test and troubleshoot a system. Analysis of measurement data and professional test reports are easy using the familiar LinkWare™ management software. This all results in gaining systems acceptance faster – meaning you get paid faster.*



The DSX CableAnalyzer copper test solution enables testing and certification of twisted pair cabling for up to 10 Gigabit Ethernet deployments and will handle any cabling system whether it is a Cat 5e, 6, 6A or Class F<sub>A</sub>. Certifying a cable is one part of a process that starts with system design and ends with system acceptance. The faster that process goes, the more profitable you'll be. Unfortunately, there are a lot of things that slow the process down - setting up the tester incorrectly, testing to the wrong limits, waiting for skilled technicians to analyze and troubleshoot failures, misinterpretation of results, and producing test reports that customers can not understand.

As part of the Versiv cabling certification product family, the DSX CableAnalyzer provides accurate, error-free certification. In the installation business there are multiple teams, varying media types and multiple testing requirements. The difference between profitability is just a few percentage points. The DSX certifies copper cabling, complies with all standards including Level V accuracy, making jobs easier to manage, and getting to system acceptance faster. It's not just for the expert technicians and Project Managers. Individuals of various skill levels can improve the set-up, operation, test reporting, and simultaneously manage diverse projects.

**Unique features:**

- Versiv enables users to accomplish more than ever with a cable tester, by accelerating every step of the testing process
- ProjX management system eases tasks from initial set-up of a job to system acceptance. It eliminates redundant steps, and ensures that all tests are completed correctly the first time, and every time
- Taptive user interface puts advanced data analysis and easy set-up and operation at the fingertips of technicians of all skill levels
- LinkWare management software provides unmatched analysis of test results and professional test reports
- The DSX reduces the time required to fix cabling faults with Dedicated Diagnostics, a simple test that locates the problem



**Performance:**

- Ten second Cat 6A test time contributes to the fastest way to gain certification
- Graphically displays the source of failures including crosstalk and distance to shield faults for faster troubleshooting
- Manage up to 12,000 test results with full graphics
- Capacitive touchscreen allows quick tester setup with easily selectable cable types, standards and testing parameters
- 1 billion links reported on LinkWare management software

**Standards:**

- Compliant with proposed ISO (IEC WG9 Standard IEC61935-1) Level V accuracy requirements to 1000 MHz
- Supports the complete suite of Resistance Unbalance standards needed for Power over Ethernet (PoE) – IEC61935-1 & 11801-1-4, IEEE 802.3af, IEEE 802.3at, ANSI/TIA/EIA-568-C.2
- Next generation balance drafts – IEEE 802.3, TIA TR42.7

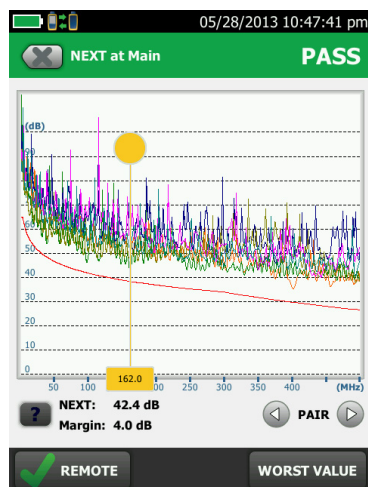
## Versiv Platform is Ready for Today's and Tomorrow's Jobs

### Electrically centered plug design is compliant with proposed ISO (IEC WG9 Standard IEC61935-1) Level V accuracy requirements to 1000 MHz with a future-ready design to support all hardware upgrades

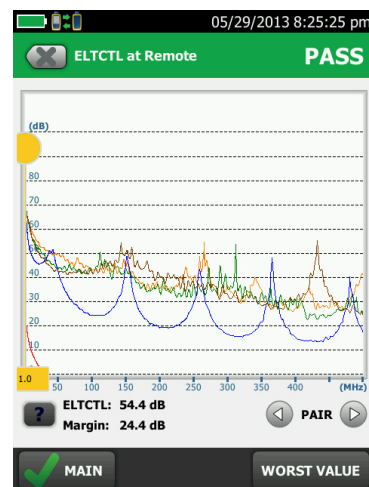
The DSX-5000 CableAnalyzer enables cable testing and certification for 10 Gigabit Ethernet deployments - whether it is an existing Cat 5e, Cat 6, Cat 6A or Class F<sub>A</sub> cabling system, the DSX tests to all industry standards. The electrically centered test plug results in the Level V accuracy designation introduced with IEC to support field testing to Class F<sub>A</sub>, 1000 MHz. The DSX exceeds the IEC Level V specification with less than half the allowable crosstalk margin, assuring you of higher confidence in results over the full frequency range. Higher performance cabling systems like Cat 6A have less tolerance to interference and less noise margin in general. Additionally complex Alien Crosstalk link-to-link certification is simplified by integrating the measurement capability into each copper module for 10GBASE-T testing.

The DSX is the first field tester to support balance measurements including Transverse Conversion Loss (TCL) and Equal Level Transverse Conversion Transfer Loss (ELTCTL). TCL and ELTCTL are important measurements found in the cabling standards. They define a minimum performance for balance, the key parameter to help determine noise immunity. Industrial network owners/operators are especially interested in this property as it is a key parameter to help determine electromagnetic interference (EMI).

Fluke Networks' DSX-5000 CableAnalyzer meets the Intertek (ETL) Certification in accordance with the IEC-61935-1 specifications for accuracy Level IV, the draft accuracy Level V and in accordance with the ANSI/TIA-1152 specifications for Level IIIe.



TLC Graph View

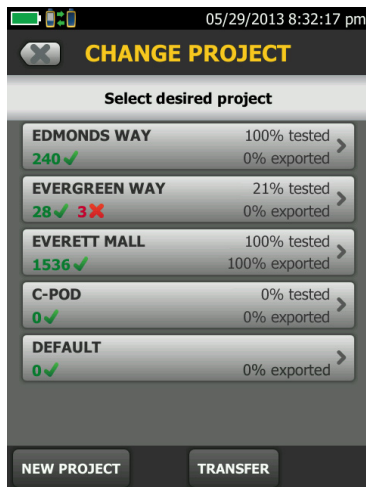


ELTCTL Graph View

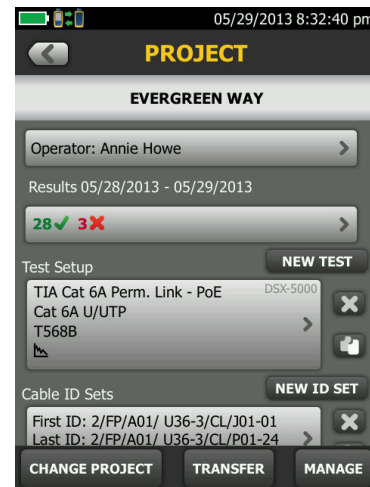
## ProjX Management System Manages Complex Jobs with Ease

### Manage up to 12,000 test results with full graphics

Managing the testing of multiple jobs with multiple teams, testers, and requirements is time consuming and can be hard to manage. Increasingly larger jobs make project organization more important than ever. The new ProjX management system on the DSX- 5000 provides individual project files for all job specific details to be saved under a simple name. Eliminating the need to re-enter job specific details after starting a project. This minimizes set-up errors or lost files when switching from one job to another or utilizing multiple testers on a single job. In addition, it provides test results by cable ID, merges any changes without duplicates and always defaults to the last copper or fiber module installed. ProjX management system provides real time status to completion on each job with a 0-100% scale and gives the operator the option to isolate any test requiring a second look and helps to assure nothing is overlooked. The "Fix Later" selection creates a punch list or automatic to do list for correcting any workmanship. ProjX enables project managers and crew leaders to be truly efficient.



*Project Menu screen shows percent complete per job*



*Project specific screen shows up to the minute project details*

## Taptive User Interface Simplifies Set Up, Eliminates Errors and Speeds Troubleshooting

### Capacitive touchscreen allows quick tester setup and supports all standards

Taptive user interface is easy enough for even the newest technician to perform tests across multiple media types and testing requirements. The capacitive Taptive user interface makes all jobs easily accessible from the menu screen. Touch the job you're working on and the large display confirms the test that needs to be performed, animated instructions simplify setting the tester configuration making correct testing assured.

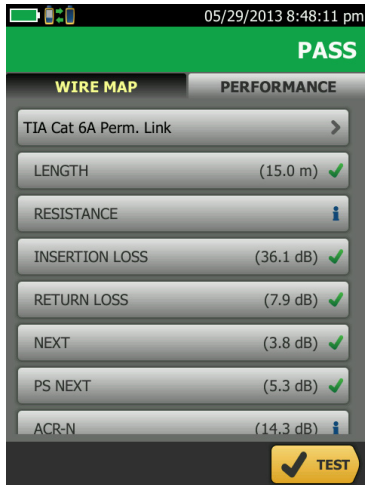


*Simple Set up*

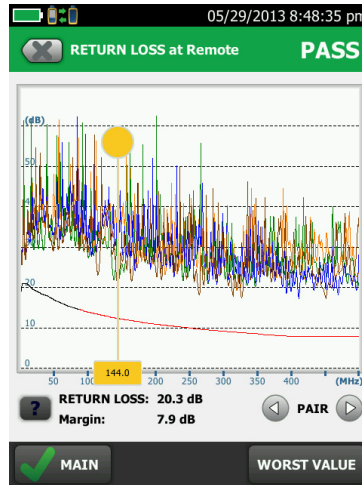
## Performs with Unsurpassed Speed

### Ten second Cat 6A test time and the fastest way to submit your certification results

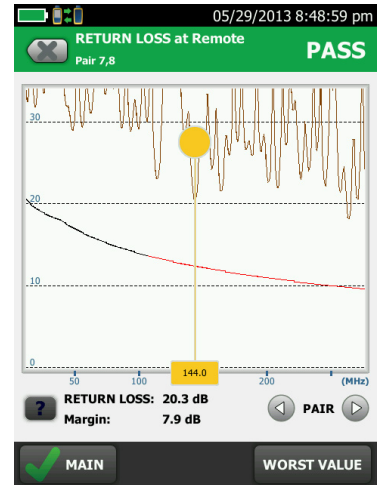
No tester offers so much speed for so many tests. Complete copper certification to Cat 6A in 10 seconds or certify two fibers at two wavelengths in both directions in just 3 seconds. Endorsed by cabling vendors worldwide assures that Versiv is the fastest way to project completion and system acceptance. Quickly get a Pass or Fail result and easily review individual test parameters by value or drill into specific area on a graph.



Passing test result



Return loss graph

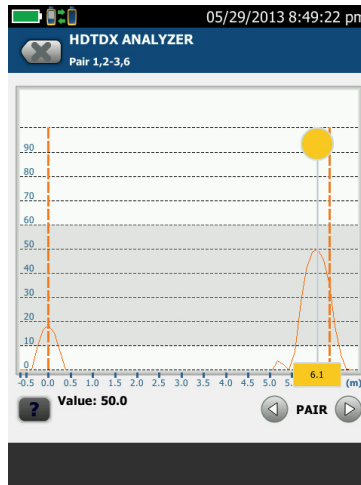


Pinch and zoom for more detail

## Troubleshoot Like an Expert

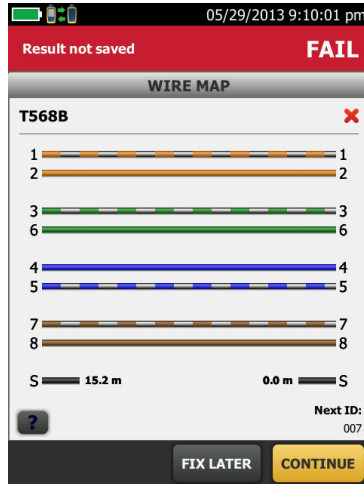
### Graphically displays the source of failures including crosstalk and distance to shield faults for faster troubleshooting

The DSX reduces the time required to fix cabling faults with Dedicated Diagnostics, a simple 1 button test runs all tests and saves all data. The graphical results screen allows you to look down the cable to see exactly where any cross talk, return loss or shield faults are happening on any given link. Previous testers had frequency limits of their diagnostic capabilities of up to 250 MHz only, but the DSX CableAnalyzer has no limitation. This common view is easily interpreted by novice and expert users alike to isolate and act on any failed results quickly and is stored with the test result for remote analysis.



*High Definition Time Domain Cross talk (HTDTX) shows the far end connection is clearly the issue*

Shield continuity historically is a direct current- DC measurement -with no distance to fault available. The DSX CableAnalyzer is the first field tester to report distance to shield integrity issues using a patented A.C. measurement technique. This is especially important in datacenters. Other testers will show the shield connected even when it isn't, because the racks in a datacenter are common grounded. Other testers may tell you there is a break in a shield, but not pinpoint the exact location giving no indication of where to start rework.



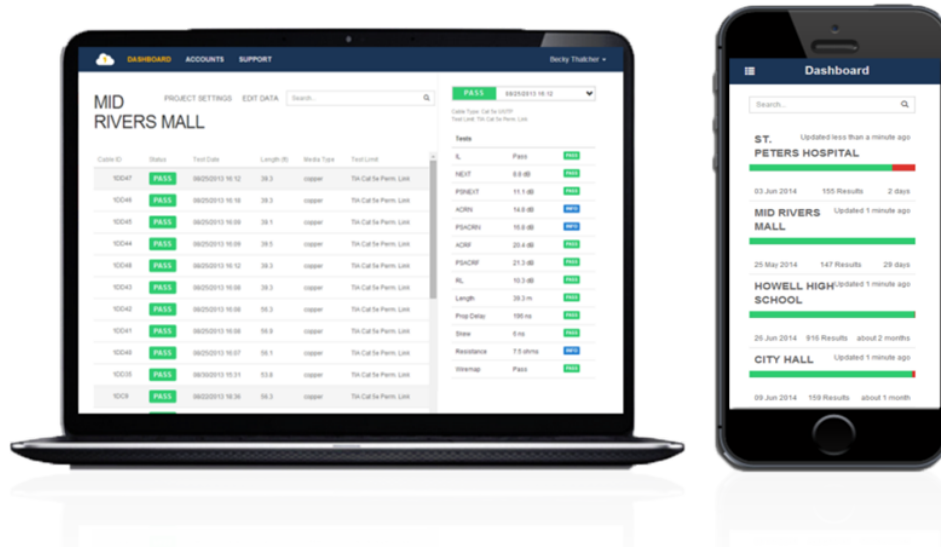
Wiremap – shows distance to fault, break and short



## LinkWare Live

LinkWare Live is a Software as a Service from Fluke Networks for cabling professionals managing multiple projects that quickly, easily and affordably provides unmatched job visibility and superior project control from anywhere at anytime.

LinkWare Live provides an easy to read dashboard that shows an overview of the project status and a project activity to ensure projects are completed on time. It removes the hurdles in data management by giving the ability to directly upload and consolidate test results from multiple testers. You can quickly validate projects and test results in real-time with browser based ease to avoid any future rework due to incorrect testing or missing test results. Use any smart device with a browser to validate and check projects or test results. LinkWare™ Cable Test Management Software also connects to the LinkWare Live service enabling you to download test results into the LinkWare Cable Test Management Software to generate professional reports in a common format.



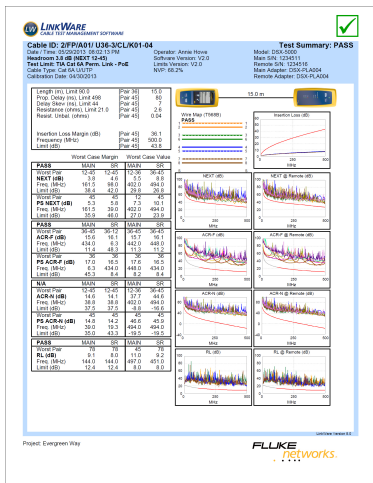
DSX-5000 cable analyzer connects to the LinkWare Live Service to directly upload results from the tester which provide access to test-results in real-time from anywhere.

### LinkWare Management Software

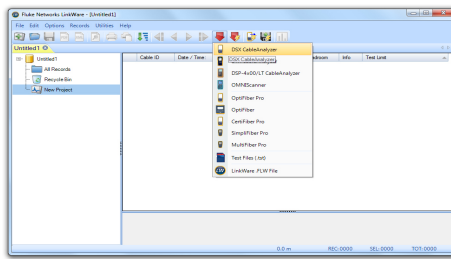
Leveraging the popular and multi-featured LinkWare management software application, DSX-5000 CableAnalyzer users can easily access the ProjX management system data, generate reports, and upgrade the software in their testers. Project Managers have full capabilities to manage workflow and consolidate test results. Users can provide the finishing touch by adding their company logo to the report and offer it unaltered to their customers for system acceptance purposes. Keep your business tools simple, no matter which Fluke Networks copper or fiber tester you are using, LinkWare is the software package that reports it all

Now with LinkWare stats, the new automated statistical report option, you can move above and beyond the page-per-link report and see your entire cabling infrastructure. It analyzes and transforms LinkWare test results data into charts and diagrams that reveal your cabling plant performance; this report summarizes your entire cabling infrastructure in a compact, graphical format that makes it easy to verify margins and to spot anomalies.

### LinkWare Report



LinkWare Stats summarizes all project data



*New versions of LinkWare are always backwards compatible with previous versions, so you can stay current and always integrate tests from different testers into 1 test report.*



## DSX-5000 CableAnalyzer Specifications

Cable Types	
Shielded and unshielded pair LAN cabling	TIA Category 3, 4, 5, 5e, 6, 6A: 100 Ω ISO/IEC Class C, D, E, EA, F, and FA: 100 Ω and 120 Ω
Standard Link Interface Adapters	
Permanent link adapters	Plug type: shielded RJ45
	Optional Plug type: Tera
Channel Adapters	Jack type: shielded RJ45
	Optional Jack type: Tera
Test Standards	
TIA	Category 3, 4, 5, 5e, 6, 6A per TIA 568-C.2
ISO/IEC	Class C and D, E, Ea, F, FA certification per ISO/IEC 11801:2002 and amendments
Maximum frequency	1200 MHz
General Specifications	
Speed of Autotest	Full 2-way Autotest of Category 5e or 6/Class D or E: <b>9 seconds</b> Full 2-way Autotest of Category 6A/Class EA: <b>10 seconds</b>
Support test parameters (The selected test standard determines the test parameters and the frequency range of the tests)	Wire Map, Length, Propagation Delay, Delay Skew, DC Loop Resistance, Insertion Loss (Attenuation), Return Loss (RL), NEXT, Attenuation-to-crosstalk Ratio (ACR-N), ACR-F (ELFEXT), Power Sum ACR-F (ELFEXT), Power Sum NEXT, Power Sum ACR-N, Power Sum Alien Near End Xtalk (PS ANEXT), Power Sum Alien Attenuation Xtalk Ratio Far End (PS AACR-F)
Input protection	Protected against continuous telco voltages and 100 mA over-current. Occasional ISDN over-voltages will not cause damage
Display	5.7 in LCD display with a projected capacitance touchscreen
Case	High impact plastic with shock absorbing overmold
Dimensions	Main Versiv unit with DSX-5000 module and battery installed: 2.625 in x 5.25 in x 11.0 in (6.67 cm x 13.33 cm x 27.94 cm)
Weight	Main Versiv unit with DSX-5000 module and battery installed: 3 lbs, 5oz (1.28 kg)
Main unit and remote	Lithium ion battery pack, 7.2 V
Typical battery life	8 hours
Charge time*	Tester off: 4 hours to charge from 10 % capacity to 90 % capacity
Languages supported	English, French, German, Spanish, Portuguese, Italian, Japanese and Simplified Chinese
Calibration	Service center calibration period is 1 year

### Environment Specifications

Operating Temperature	32° F to 113° F (0° C to 45° C)
Storage Temperature	-4° F to +122° F (-20° C to +50° C)
Operating relative humidity (% RH without condensation)	0% to 90%, 32° F to 95° F (0° C to 35° C)
	0% to 70%, 95° F to 113° F (35° C to 45° C)
Vibration	Random, 2 g, 5 Hz-500 Hz
Shock	1 m drop test with and without module and adapter
Safety	CSA 22.2 No. 61010, IEC 61010-1 2nd Edition + Amendments 1, 2
Operating altitude	13,123 ft (4,000 m)
EMC	EN 61326-1

### Ordering Information

Model	Description
DSX-5000	DSX-5000 CableAnalyzer
DSX-5000Qi	DSX-5000 with OLTS Quad and Fiber Inspection
DSX-5000QOi	DSX-5000 with OLTS Quad, OTDR Quad and Fiber Inspection
DSX-5000Mi	DSX-5000 with OLTS Multimode and Fiber Inspection
DSX-5000-PRO	Versiv Professional Kit with OLTS Quad, OTDR Quad, Fiber Inspection and a full complement of product accessories.
DSX-ADD-R	DSX-5000 Add-on Kit with Remote
DSX-CFP-Q-ADD-R	DSX-5000 with OLTS Quad Add-on Kit with Remote
DSX-OPF-Q-ADD	DSX-5000 with OTDR Quad Add-on Kit
DSX-ADD	DSX-5000 Add-on Kit
DSX-5000/GLD	DSX-5000 CableAnalyzer with 1 year Gold Support
DSX-5000Qi/GLD	DSX-5000 with OLTS Quad and Fiber Inspection with 1 year Gold Support
DSX-5000QOi/GLD	DSX-5000 with OLTS Quad, OTDR Quad and Fiber Inspection with 1 year Gold Support
DSX-5000Mi/GLD	DSX-5000 with OLTS Multimode and Fiber Inspection with 1 year Gold Support
DSX-5000-PRO/GLD	Versiv Professional Kit with OLTS Quad, OTDR Quad, Fiber Inspection and a full complement of product accessories with 1 year Gold Support
DSX-PLA004S	DSX CAT 6A/CLASS EA PLA Set
DSX-PLA011S	DSX TERA CAT 7A/CLASS FA PLA Set
DSX-CHA004S	DSX CAT 6A/CLASS EA CHA Set
DSX-CHA011S	DSX TERA Cat 7A/CLASS FA CHA Set
VERSIV-ADP-WIFI	WiFi Adapter for Versiv Mainframe. (Available in the following countries.)
Versiv-TSET	VERSIV Headphones
VERSIV-BATTERY	VERSIV Battery
VERSIV-ACUN	VERSIV Charger
VERSIV-STRP	VERSIV Hand Strap
VERSIV-STND	VERSIV Demo Stand



**Gold Support**

Model	Description
GLD-DSX-5000	1 year Gold Support DSX CableAnalyzer
GLD-DSX-5000Qi	1 year Gold Support DSX w/ Quad OLTS INSP
GLD-DSX-5000QOi	1 year Gold Support DSX w/ Quad OLTS OTDR INSP
GLD-DSX-Mi	1 year Gold Support DSX w/ Multimode OLTS INSP
GLD-DSX-5000-PRO	1 year Gold Support DSX Professional Kit w/Quad OLTS OTDR INSP



For a complete list of models, options, accessories and specifications please visit [www.flukenetworks.com/dsx](http://www.flukenetworks.com/dsx).