

Guide to Choosing the Right Cable Test Tool to Meet Your Testing Needs

Network teams and contractors responsible for cabling infrastructure, whether they work in a hospital, bank, data center or office environment or an installer supporting these sites are expected to perform their work faster and more efficiently than ever before. As a result, it's important to know the distinction between the different cable test categories so they can choose the tester that truly performs the tasks needed.

Cable testers are designed with a variety of focused feature sets for particular tasks. Depending on what task the test tool performs, they can be classified into one of three broad hierarchical categories: certification, qualification, or verification.

While some features overlap between test tools, each group answers a unique question:

- Certification testers: Does the installed cabling link comply with industry standards (TIA/ISO)?
- Qualification testers: Can this existing cabling link support the desired network speed or technology?
- Verification testers: Is this cable connected correctly?



OUR TOOLS WILL HELP YOU REDUCE MACHINE START-UP TIME AND PRODUCTION DOWNTIME



	MicroScanner™ PoE	CableIQ™	DSX CableAnalyzer™ *
	Check cable continuity & interrogates PoE switch	Troubleshoots network speed or technology	Certifies to TIA/ISO & advanced troubleshooter
Certify to international standards			√
Parametric tests on cable and connectors			√
PoE Detection	√ (class & power)	√ (appears as voltage between pairs)	
Shield integrity test to find connections impacting EMC/EMI			√
Continuity, length and tone generation	√	√	√
Documentation of test results for commissioning	None	Basic with CableIQ Reporter Software	Complete results in tester, PC and Cloud
User interface	Monochrome	Monochrome	Large color "gesture-based" touch screen
Network speed		10BASE-T, 100BASE-TX, 1000BASE-T, VoIP	10BASE-T, 100BASE-TX, 1000BASE-T, 2.5/5/10BASE-T
Connector support	RJ45	RJ45 & Coax	RJ45, M12-D, M12-X, Tera, GG45 & Coax (with adapters)
Fiber optic tests			√ (requires optional fiber modules)

*The DSX CableAnalyzer Series consists of the following 3 models: DSX-602 (500 MHz), DSX2-5000 (1 GHz) and DSX2-8000 (2 GHz)

SERVICE AND SUPPORT



Gold Support members enjoy many privileges

Our tools are only the start. Get the support you need from the leader in cable testing solutions.

- Gold support for your tester provides a premium level of support to minimize business downtime and ensure a high return on your investment
- A knowledge base featuring over 1,000 articles on cable testing topics
- Hundreds of hours of videos including product training, troubleshooting tips, and more
- Worldwide service and training
- A support team with over 150 years of cable testing experience

For a complete view of cable testing technology and standards information please visit: <https://www.flukenetworks.com/expertise/learn-about/cable-testing>

Contact us: www.flukenetworks.com/contact

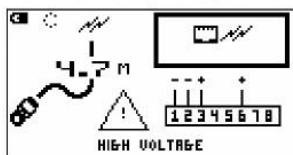


WHEN DO YOU NEED A QUALIFICATION TOOL?

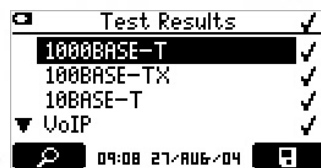
If you are a network technician, and have undocumented cabling and need to see if it will support your Ethernet network up to 1000 Mbps, a qualification tool is the right choice. If you have an existing network and are doing small adds, moves, and changes, or you are setting up a temporary network and just need to qualify it for a specific network technology, a qualification tool is a good option.

Qualification testers determine if an existing cabling link can or cannot support certain network speeds and technologies (like VoIP and Gigabit Ethernet) and allow you to quickly isolate cabling problems from network problems. They also provide reports for each cable.

Qualification tools are more powerful than verification tools, but do not perform the battery of tests required to be considered a certification tool.



PoE appearing as voltage between pairs 1-2 and 3-6



CableIQ™'s 4-second Autotest clearly indicates with a check mark which speeds and applications the tested cable can run



CableIQ™ Qualification Tester

WHEN DO YOU NEED A VERIFICATION TOOL?

Verification tools are typically used by any technician who pulls and terminates cable or performs basic moves, adds and changes. These tools are used as a first line of defense in finding connection and wire-pairing faults.

They perform basic continuity functions, including wiremap and toning. A powerful Time Domain Reflectometer (TDR) function helps to determine the length of the cabling link or the distance to a break or a short circuit in the link-under-test. Verification tools typically also detect and report that the cable under test is connected to an active device such as a hub or switch. Unlike qualification and certification tools, verification tools do not provide documentation of results.

The MicroScanner™ PoE Cable Verifier graphically displays length, wiremap, opens/shorts and distance to fault. In addition it detects the class (0-8) from PoE, PoE+ and PoE++ (802.3at, af, and bt) switches.



A CLOSER LOOK AT CERTIFICATION

Certification is the most rigorous of all cable testing. Used primarily by commercial datacom contractors and network owners, certification tools are the only tools that provide “Pass” or “Fail” information, in accordance with TIA and ISO standards.

A certification test tool makes many types of measurements across predefined frequency ranges and compares the detailed results to standards. The results from these measurements determine if a link is compliant with a category or Class of cable (for example, Cat 5e, 6, 6A, 8 or Class E, E_A, F, F_A). Certification is the final step required by structured cabling manufacturers to grant their warranties for properly certified projects. Certification test tools provide advanced graphical diagnostics and offer feature-rich project management and documentation capabilities.



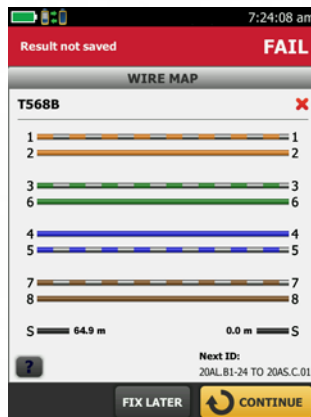
DSX CableAnalyzer™

WHEN DO YOU NEED A CERTIFICATION TOOL?

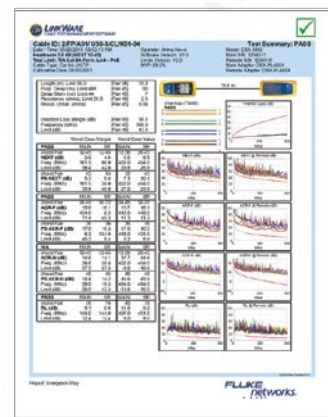
If you're an installer who needs to prove to the network owner that all cabling has been installed correctly, and meets TIA or ISO link specifications, you must certify it. If you are a network owner who wants to check third party installations, a certification tool is your only option. If you are in a troubleshooting environment, and need to show unequivocally that the link under test is failing category 5e, 6, 6A or 8 performance requirements according to the industry standard, your only choice is a certification tool. Certification tools are vital if there is ever any discrepancy or debate with a cabling supplier or installer regarding the performance of installed cabling.



DSX CableAnalyzer home screen



Open shield found at the remote side, 64.9 m from the DSX main unit (DSX checks for shield connectivity at BOTH ends of a link)



An example of a LinkWare™ PC certification report