



**1<sup>st</sup>  
CAT8 Cable  
Certifier**

The WireXpert is the first Ethernet cable certifier with capability to certify the highest performance cabling systems in enterprise networks and data centers.

Cable installers maximize productivity with WireXpert, the only platform to offer the Dual Control System™. With certification testing up to Class F<sub>A</sub> and CAT8 copper cabling, as well as MPO, SM, MM and MMEF fiber optic cabling, WireXpert is ready for 40G and beyond.

With Dual Control System™, List-based testing, flexible cable adapters, and the convenience package always included, you will see why WireXpert is called the smart choice.



**IT Networks**

## Ethernet CABLE CERTIFIER

# WireXpert 4500

WireXpert 4500 is the only platform on the market that offers touch screen graphical interface, certification testing, and troubleshooting at both Local and Remote units, standard. This innovative design called the Dual Control System™, simplifies your job and boosts your efficiency to help you get certifications done fast

## Features

- First cable certification up to 2,500 MHz to support new TIA CAT8 and ISO Class I and II draft standard
- Most advanced cable certification for all standards: Class D/E/E<sub>A</sub>/F<sub>A</sub>, Category 5e/6/6A, and the new draft CAT8 as well as ISO draft standards Class I and Class II
- Accuracy independently verified by ETL
- Exceeds ISO Level V, IV and TIA Level III Accuracy requirements
- Endorsed by cable companies worldwide
- Many measuring modules available e.g. patchcord testing, Industrial Ethernet, Class F<sub>A</sub>
- Perform extended Fiber certification for 850/1,300 MM and 1,310/1,550 SM Fiber
- Advanced reporting and documentation with eXport software
- The only certifier supporting all data center, premise cabling, and industrial Ethernet requirements

## Dual Control System™

WireXpert comes with an intuitive touch sensitive user interface, featuring bright color LCD screens designed for industrial, heavy duty usage. The Dual Control System™ features identical displays for Local and Remote units making it easy to operate the test cycles. Whether coordinated by two technicians, and especially when only one technician is on the job, walking time between both ends of the cable is minimized.

## List-based Testing

WireXpert streamlines your work process by allowing you to select the next cable to be tested from a list; it's list-based testing. Your cables are presented to you in a list and color coded. Green is a passed test, red is a failed test, and white is a test that has yet to be run. If a cable fails, choose your next test while the cable is being repaired, and then return to the failed cable to re-run the test when it's convenient to you, without interrupting your flow. List-based testing simplifies your job and maximizes your efficiency in the field.

## Flexible Cable Adapters

WireXpert has small, snap-on cable adapters that attach to the back of the certifier. This design philosophy has allowed Softing to offer our family of WireXpert users new capability, such as the new CAT 8 certification capability, without buying an entirely new platform. WireXpert cable adapters are simply media converters, which means they are smaller, easier to handle, and cost effective which saves you time and money.



# CABLE CERTIFIER

## Protect Your Investment: Beyond 10G

If you are testing 10 Gb/s cabling, WireXpert is the clear choice. If you are thinking beyond 10G, WireXpert is the only choice. Built on a future proof, scalable measurement engine, WireXpert protects your investment in test equipment as the data rates supported by the cabling systems increase. WireXpert employs a unique measurement architecture that achieves extremely wide bandwidth with superior measurement accuracy. Its unique RF measurement engine exceeds level V requirements throughout the measurement frequency range.

## Convenience Package Always Included

Every WireXpert kit always includes a hard carrying case to protect your investment when you transport your certification equipment. The table top stand allows you to prop-up the WireXpert to free-up your hands and still see the screen while in the field. If a table is not available, the hanging cleat on the WireXpert is like a camera strap that allows you to hang the WireXpert to free-up your hands. The shoulder strap makes transporting your WireXpert all day easier for you, and the stylus offers an optional method for screen navigation and data entry for the touch screen just in case this is your personal preference. With Softing, and with every WireXpert, the convenience package is always included. The hard carrying case, hanging cleats, table top stand, shoulder strap, stylus, and everything you need to certify cables is always included as a convenience to you.

## Proven Accuracy

WireXpert has been independently verified by highly respected test laboratories such as ETL.

## Vendor Approvals

Leading cable manufacturers have extensively tested WireXpert and have approved the instrument for field certification and associated warranties of their structured cabling solutions. Laboratory testing and comparisons against vector analyzers have proven that WireXpert has excellent accuracy and measurements correlated with laboratory equipment. In fact, major cable vendors are using WireXpert in their labs for qualifying CAT8 I & II cabling systems under development.

## Testing Cabling Systems, CAT6A and Beyond

WireXpert, with its industry leading measurement performance, provides adapters for testing cabling systems with higher performance than CAT6A (500MHz). For Class F<sub>A</sub> cabling, testing is performed over the full standards defined frequency range from 1MHz through 1,000MHz. Both TERA and GG45/ARJ45 interfaces are available through WireXpert test adapters. Both channel and permanent link testing are supported. Adapters are also available for testing CAT7A patch cords. With measurement bandwidth exceeding 2GHZ, WireXpert is capable of testing CAT8 cabling.

## Expansion Kits

WireXpert provides numerous options for field and laboratory usage options including patch cord testing, Industrial Ethernet (M12), VNA, and bare wire tested and endorsed by various cable manufacturers for product development. Perform Alien Cross Talk testing efficiently with two sets of WireXpert without the use of special adapters, equipments or laptops. Test multiple parameters in a single execution.

## eXport Project Management Software

Manage test results and generate professional reports and warranty documents. Export results into graphical PDF reports in detail or summary, or CSV for data analyzing using the PC based software called eXport.



# WireXpert 4500

## WireXpert Optical Loss Test Kit

WireXpert optical loss test kit supports all of the latest standards from TIA 568 C.3 to ISO 14763-3 standard. By automatically calculating the loss budgets, WireXpert saves you the trouble of having to perform cumbersome calculations and plugging in data for individual connectors and splices for different standards.

### Features

- Perform Tier 1 certification for ISO/IEC and TIA 568 C.3 standards
- Measures and certifies length and loss for singlemode at 1,310nm and 1,550 nm and multimode EF cabling at 850nm and 1,300nm
- Seamlessly integrates copper and fiber reports. Generate professional warranty and certification test reports
- Double your productivity with Dual Control System™ technology by using your remote unit as an independent optical certifier



### Multimode and Singlemode Kits

WireXpert optical loss kits are available for both Multimode and Singlemode fiber networks. The modular solution allows testing both types of networks on the same WireXpert unit with interchangeable adapters. Each module lets you perform very accurate loss and length measurements at two wavelengths meeting all the various standard requirements. Both kits support certification of horizontal as well as back-bone cabling by supporting dual wavelength measurement on each adapter.

### MPO Testing Kits

WireXpert's versatile MPO testing solution enables datacenter IT Managers to get quick and accurate assessment of the quality of MPO links. Additionally, it helps in performing incoming inspection of MPO components like cassettes. The key feature of this solution is a 5-second Autotest that includes a detection of fiber connection map and measurement of loss on each channel.

### EF Compliant Multimode Kits

Certification of Multimode fibers has often been a contentious issue due to the inherent uncertainties in the measurement process. ISO/IEC and TIA have recently adopted a Encircled Flux (EF) standard that standardizes the launch condition for the light sources used in Multimode test equipment. To comply to the new standards, Softing has launched the new EF compliant Multimode test adapters and kit.

## Optional Test Adapters

### Copper Patch Cord Testing with WireXpert

WireXpert offers an efficient way for quickly identifying and recording the performance of patch cords. With its fast and accurate dual-ended testing, WireXpert's patch cord test kits are suitable for both manufacturing testing, as well as for incoming inspection at end user premises. WireXpert patch cord test kits are available for testing CAT5e, CAT6, CAT6A, and CAT7/7A patch cords.

### Industrial Ethernet Cabling Test

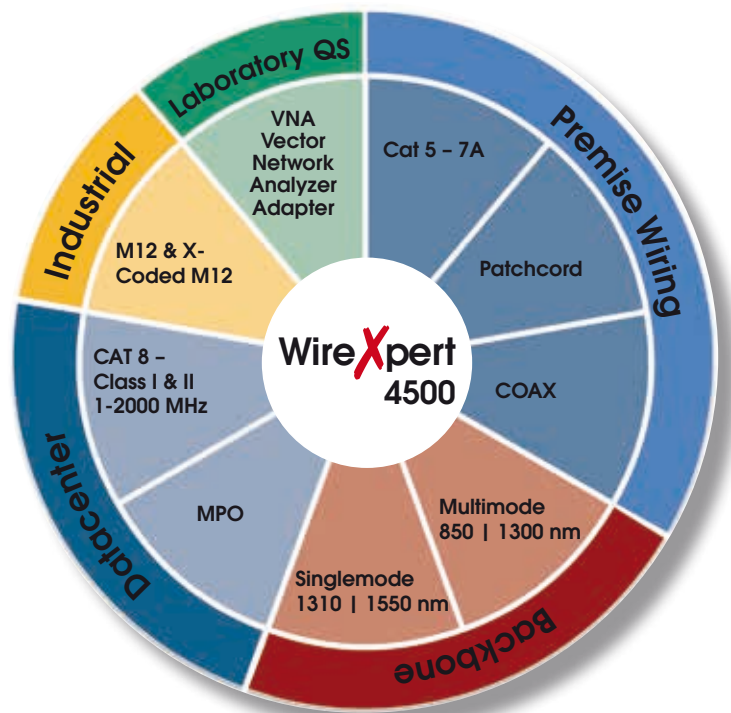
WireXpert's industrial Ethernet cabling test solution is comprised of M12 adapter kits. Both channel and permanent link configurations with M12 industrial Ethernet connectors are supported. Industrial Ethernet kit with X-Coded M12 interface is also available, making it possible to effectively test 10G ready industrial Ethernet cables.

### Coaxial Cable Test

With coaxial test adapters, WireXpert supports testing of coaxial cables for attenuation and return loss over a wide frequency band.

### Laboratory Testing of Cables and Components

WireXpert features extremely versatile adapters that enable the lab technicians to replace expensive vector network analyzers with WireXpert for performing differential S-parameter measurements over 1MHz to 2,500MHz. Contact Softing for more information on these adapters.

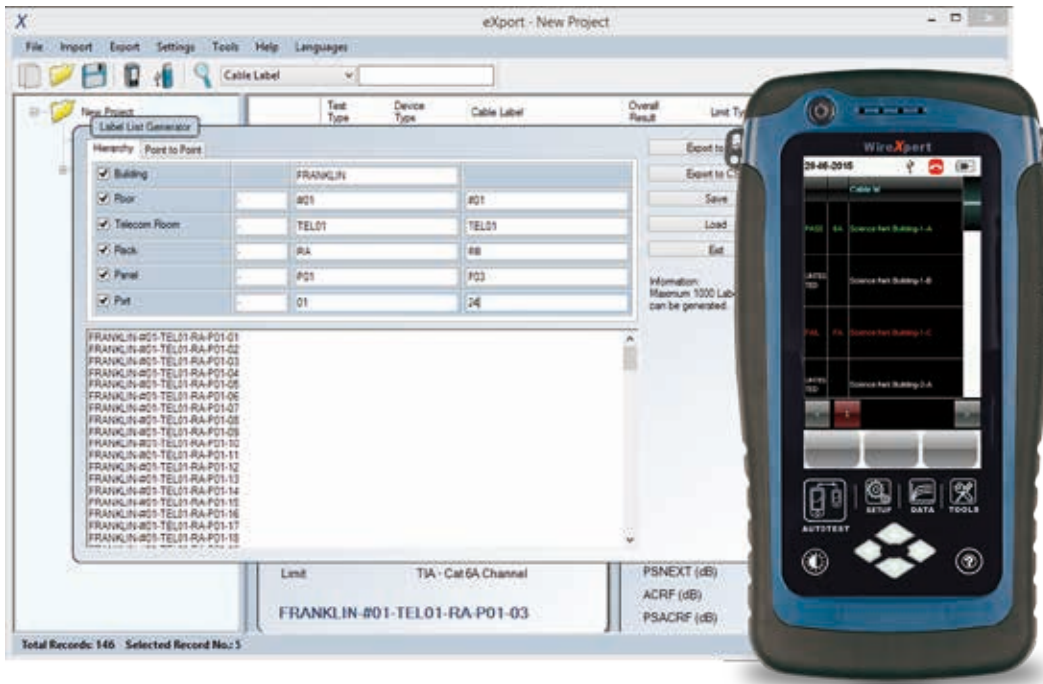


WireXpert 4500 applications with optional test adapters



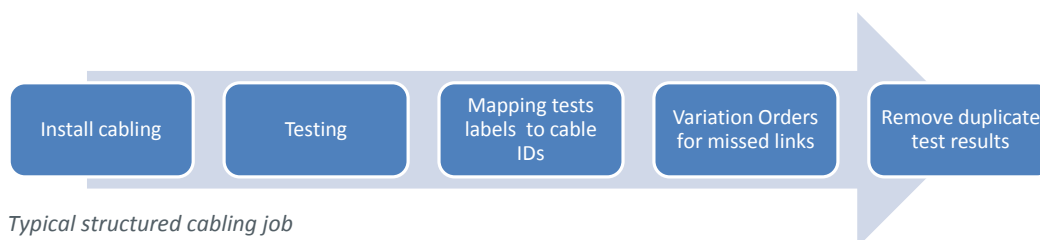
### Alien Cross Talk

Alien Cross Talk testing with WireXpert is performed using two WireXpert sets. This means there are no special adapters and no need for carrying a laptop into the field for data analysis.



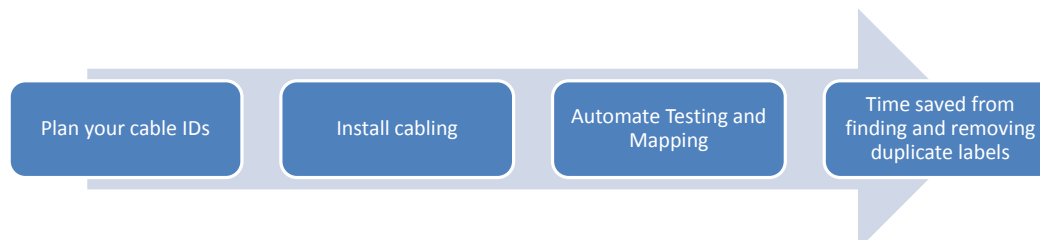
## List-Based Testing

List-Based Testing (LBT) is the world's first to adopt customized hierarchical cable labeling scheme. LBT changes how cable testing are conducted from entering and saving a label after each test to simply choosing which label from the preloaded list to conduct the test.



*Typical structured cabling job*

The LBT is ideal for project managers who have preference on how cables should be labeled. LBT creates flexibility for on site testers to conduct tests in non-sequential order by choosing, skipping, and returning to the untested points. When the site is completed, the project managers performs minimal sorting and searching from his/her preferred list, saving time, thus increasing productivity.



*Better labeling strategy with List-Based Testing*

## New and Improved Report Generating Software: eXport



*eXport is project management software designed to work seamlessly with WireXpert, FiberXpert, and NetXpert providing a complete platform from generating customized labels to results analysis on your workstation.*

### Project Management and Reporting

- List-Based Testing generates customized cable labels efficiently by simply inputting building, floor, telecom room, racks and panel names or numbers
- Creates a project based environment to allow easy management of saved results such as searching, sorting (by test type, cable label, pass/fail, limit type, etc), renaming and deleting
- Generates detailed or summarized field reports in PDF or CSV formats with your company's logo
- Provides detailed view of saved results with graphical interpretation in separate tabs
- Magnify plots for pin-point accuracy for analysis and studies
- Easy connection between device and workstation via USB cable or USB flash drive
- Remote control via USB cable connection for presentation or education purposes
- Supports importing of OTDR's \*.SOR format and exporting to PDF format
- Available in 11 languages and expanding

### Kit Includes

**WireXpert 4500 LAN Cable Certifier –  
Class D, E, E<sub>A</sub>, F, F<sub>A</sub> and CAT 5, 6, 6A, 7, 7A & 8  
Frequency Range up to 2500MHz**

Ready for CAT8 and Class I & II up to 2000 MHz  
Includes two measurement units: local and remote,  
2 x CAT 6A channel adapters,  
2 x CAT 6A link adapters,  
2 x headsets,  
Li-Ion batteries,  
power supplies,  
USB drive,  
soft carry case,  
calibration certificate



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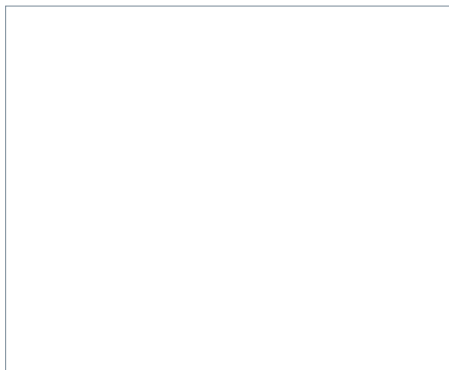
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Parameter	Specification
<b>COPPER TESTING</b>	
Certification testing	TIA 568-C.2 CAT 5e, 6, 6A, draft CAT 8 ISO/IEC 11801, EN 50173 Class D, E, E <sub>A</sub> , F, F <sub>A</sub> Draft Class I and Class II Permanent link and channel CAT 5e, 6, 6A, 7, 7 <sub>A</sub> and patch-cord
Max cable length for dual-ended Autotest	500m
Insertion cycles	Channel: 10,000 typical Permanent link: 5,000 typical
<b>TEST PARAMETERS</b>	
Wiremap	As specified in TIA 1152, IEC 61935-1
Loop Resistance	0 to 40 Ω, ±0.1 Ω
Length	0 to 500m, ±0.5m (dual-ended testing)
Propagation Delay and Delay Skew	0 to 5000 ns, ±1 ns
Attenuation	0 to 70 dB, ±0.1dB
Pair-to-Pair and Power-Sum NEXT	0 to 85 dB, ±0.2 dB
Pair-to-Pair and Power-Sum ACRF	0 to 85 dB, ±0.2 dB
Return Loss	0 to 40 dB, ±0.2 dB
ACRN, PSACRN	0 to 85 dB, ±0.5 dB
Advanced diagnostics	Time-domain fault Locator for RL and NEXT
Measurement accuracy	Exceeds TIA 1152 Level III, IEC 61935 level IV, draft level V
Measurement frequency range	1- 2,500 MHz
<b>FIBER TESTING - SM</b>	
Wavelengths	1310nm, 1550nm
Autotest time	6 seconds for dual ended test
Connector type	SC, LC (optional adapter needed)
Test standard	TIA 568 C.3, IEC 14763-3
<b>TEST PARAMETERS</b>	
Loss	0 to 31 dB, ±0.2 dB
Length	0 to 20,000m, ±1.5m
Output power	-5 dBm to -9dBm
Receiver sensitivity	-40dBm
<b>FIBER TESTING - MM / MMEF</b>	
Wavelengths	850nm, 1300nm
Autotest time	6 seconds for dual ended test
Connector type	SC / FC-SC
Test standard	TIA 568 C.3, IEC 14763-3
<b>TEST PARAMETERS</b>	
Loss	0 to 24 dB, ±0.2 dB
Length	0 to 2,000m, ±1.5m
Dynamic range	24 dB / 12dB
Output power	-4 dBm to -10 dBm / -16 dBm to -20 dBm
Receiver sensitivity	-34 dBm / -40 dB
Encircled-Flux (EF) compliance	IEC 61280-4-1 (MMEF)
VFL wavelength	650 μm (MMEF)
Power	0 dBm (MMEF)
<b>GENERAL SPECIFICATIONS</b>	
Interfaces	Probe Interface, RJ-45 Ethernet, USB host and device, talkset, power jack
Display	5" industrial LCD, touch sensitive area on both units
Enclosure	Ruggedized plastic with rubber over-mold, withstands 1.5m drop test on hard surface
Remote unit abilities	View test results, save tests, start autotest
Power supply	AC 100-240V to 12V, 3A power adapter
Input over-voltage protection	Protected against Telco voltages
Battery	Removable and rechargeable Li-Ion
Battery capacity	>8 hours continuous operation
Internal storage capacity	2000 copper test results with full plot information
External storage	USB Flash Drive
Dimensions	232 X 126 X 87 mm (8.7 X 4.3 X 2.1 inch)
Weight	Approx. 1.4 kg (3 lb) / unit
Supported languages	tw, cs, en, fi, fr, de, it, ja, ko, pl, pt, ru, es, sv, tr
Calibration period	1 year
<b>ENVIRONMENTAL</b>	
Operating temperature	0 to 40 °C
Storage temperature	-20 to 60 °C
Relative humidity	10% to 80%
<b>MINIMUM SYSTEM REQUIREMENTS FOR REPORTING SOFTWARE</b>	
	Microsoft Windows XP/7/8, 32 or 64 bits
	Intel Core 2 Duo, 2GHz
	200MB of free disk space
	1GB RAM
	Microsoft.NET Framework 4.0