

**1st CAT 8 Cable Certifier**

CABLE TESTER OF CHOICE



The WireXpert is the first cable certifier with capability to certify the highest performance cabling systems in enterprise networks and data centers. Cable installers make significant gain in productivity with WireXpert's industry leading test speed and ease of use. With certification testing up to Class FA and CAT8 copper cabling, as well as MPO, SM and MM fiber optic cabling, WireXpert is ready for 40G and beyond. In fact, major cable vendors are using WireXpert in their labs for qualifying CAT8 cabling systems under development.

# WireXpert 4500



## Feature List

- First cable certification up to **2500 MHz** to support new TIA CAT 8 und 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/6/6<sub>A</sub>, and the new draft CAT 8 as well as ISO draft standards Class I and Class II
- Fastest Autotest in less than 9 Seconds
- Accuracy independently verified by ETL
- Exceeds ISO Level V\*, IV and TIA Level IIIe Accuracy requirements
- Endorsed by over 20 cable companies worldwide
- Field upgradable with many options e.g. patchcord testing, Industrial Ethernet, Class F<sub>A</sub>
- Perform extended Fiber certification for 850/1300 MM and 1310/1550 SM Fiber
- First to support MPO Fiber testing for data centers
- Advanced reporting and documentation
- The only certifier supporting all data center, premise cabling and industrial ethernet requirements

\* draft IEC61935-1 ed4



## Easy to Use and ruggedized design

WireXpert comes with an intuitive touch sensitive user interface, featuring bright color LCD screens designed for industrial, heavy duty usage. The Dual Control System (DCS™) – featuring identical devices for remote and main units – makes it really easy to operate the test cycles. Whether coordinated by two technicians or only one, walking time between outlets is minimized.

## Fast and simple for highest productivity

WireXpert completes CAT 6<sub>A</sub> certification test in less than 9 seconds and Class F<sub>A</sub> testing in 15 seconds. It offers intuitive navigation through the screens on the device, and generates professional reports through its PC software ReportXpert.

## Protects 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 novel measurement architecture that achieves extremely wide bandwidth with superior measurement accuracy. Its unique RF measurement engine exceeds level IV and level V requirements throughout the easurement frequency range.

## Proven Accuracy

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



## Vendor Approvals

Most 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 correlate with laboratory equipment. In fact, major cable vendors are using WireXpert in their labs for qualifying CAT8 cabling systems under development.

A complete list of all endorsements is available at [www.psiberdata.com](http://www.psiberdata.com)



# WireXpert 4500

## Testing Cabling Systems CAT6<sub>A</sub> and Beyond

WireXpert, with its industry leading measurement performance, provides adapters for testing cabling systems with higher performance than CAT6<sub>A</sub> (500MHz). For Class F<sub>A</sub> cabling, testing is performed over full standards defined frequency range from 1MHz through 1000MHz. 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 CAT7<sub>A</sub> patch-cords. With measurement bandwidth exceeding 2000MHz, WireXpert is capable of testing CAT8 cabling once the standard is approved.



Kit Includes	Quantity
WireXpert Handheld units	2
Li-Ion Batteries	2
Stylus with Cords	2
Display Protection Covers	2
CAT 6 <sub>A</sub> Permanent Link Interface Adapters	2
CAT 6 <sub>A</sub> Permanent Link Test Cords	2
CAT 6 <sub>A</sub> Channel Adapters	2
USB Thumb Drive incl. Manual and Software	1
Talk Head Sets	2
AC Power Adapters	2
Country Specific Power Cord	2
Calibration Certificate	1
Carrying Case	1
Quick Reference Guide	1





### 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, CAT6<sub>A</sub> and CAT7/7<sub>A</sub> patch-cords.

### Industrial Ethernet cabling test

WireXpert's industrial Ethernet cabling test solution comprise of M12 adapter kits. Both channel and permanent link configurations with M12 industrial Ethernet connector are supported.

Industrial Ethernet kit with X-Coded M12 interface is also available, making it possible to effectively test 10-Gig ready industrial Ethernet cables.

### Coax cable test

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

### Alien Cross-talk

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

### Laboratory Testing of Cables and components

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

### Adapters & Accessories for Copper Cable Certification

Adapters & Accessories
Class E <sub>A</sub> / CAT6 <sub>A</sub> channel adapter kit
Pair of Permanent link certification test cord for Class E <sub>A</sub> / CAT6 <sub>A</sub> and below (wearable part)
Kit for Class F and Class F <sub>A</sub> TERA permanent link testing
Kit for Class F <sub>A</sub> channel adapters with GG45/ARJ45 interface
Pair of coax adapters
Pair of CAT6 <sub>A</sub> patch cord adapters
Hard carrying case
Pair of nylon covers

For more options and accessories, please contact your Psiber Reseller.

# WireXpert 4500

## WireXpert Optical Loss Test Kit

Modern network infrastructure involves installing both copper and fiber cabling within the same premises. With the increasing demand for bandwidth, certification plays a crucial role for guaranteed data rates. Certification requires characterizing each fiber link to the desired standards in measuring the insertion loss (attenuation) and length of the fiber link. WireXpert provides you with a fast, easy and accurate way of determining the pass/fail criteria of the installation across ISO/IEC or TIA standards.

- Performs autotest in less than 6 seconds
- Perform Tier 1 Certification for ISO/IEC and TIA 568 C.3 Standards
- Measures and certifies length and loss for single-mode at 1310nm and 1550 nm and multi-mode cabling at 850nm and 1300nm
- Seamlessly integrates copper and fiber reports.  
Generate professional warranty and certification test reports
- Double your productivity with DCS™ technology by using your remote unit as an independent optical certifier



## Test Limits and Link validations

WireXpert optical loss test kit supports all the latest standards from TIA 568 C.3 to ISO 14763-3 standard. By automatically calculating the loss budgets the WireXpert saves you the trouble of having to perform cumbersome calculations and plugging in data for individual connectors and splices for different standards. In certain scenarios where end-to-end loss is required to be measured and documented, WireXpert provides with a customized link validation workflow that lets you define end-to-end loss and perform the certification.

## Multi-mode and Single-mode kits

WireXpert optical loss kits are available for both Multi-mode and Single-mode 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 Kit

WireXpert's versatile MPO testing solution enables data center 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.

WireXpert cable certification tester enables testing of MPO/MTP links when used with MPO adapters. A typical test setup consists of WireXpert local unit with MPO power meter adapter, and the remote unit with MPO light source adapter attached. Alternatively, a multimode fiber adapter can be attached to WireXpert local unit for testing individual fibers in MPO link.

This solution provides a fast and accurate measurement of MPO link loss and testing against user configured limit.

## Adapters & Accessories for Fiber Cable Certification

Adapters & Accessories
Multimode Fiber adapter kit
Singlemode Fiber adapter kit
MPO test kit

For more options and accessories, please contact your Psiber Reseller.

## Professional ReportXpert

Manage your results and generate professional reports and warranty documents. The WireXpert certification solution includes ReportXpert, a PC based reporting software that produces full color graphical reports in summary or detail.



Parameter	Specification
<b>Copper testing</b>	
Certification Testing	TIA 568-C.2 CAT 5e, 6, 6 <sub>A</sub> , 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, 6 <sub>A</sub> , 7, 7 <sub>A</sub> and patch-cord
Autotest time - CAT6A	9 sec
Autotest time - Class F <sub>A</sub>	15 sec
Max cable length for dual ended Autotest	500m
Insertion Cycles	Channel: 10,000 typical Permanent link: 5,000 typical
TEST PARAMETERS	As specified in TIA 1152, IEC 61935-1
Wiremap	
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	-25 to 85 dB, ±0.5 dB
Advanced Diagnostics	Time-domain fault Locator for RL and NEXT
Measurement Accuracy	Exceeds TIA 1152 Level IIIe, IEC 61935 level IV
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
TEST PARAMETERS	
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</b>	
Wavelengths	850nm, 1300nm
Autotest Time	6 seconds for dual ended test
Connector Type	SC
Test Standard	TIA 568 C.3, IEC 14763-3
TEST PARAMETERS	Loss
Loss	0 to 24 dB, ±0.2 dB
Length	0 to 2,000m, ±1.5m
Encircled Flux Compliance	through external mode conditioner
Dynamic Range	24 dB
Output Power	-4dBm to -10dBm
Receiver Sensitivity	-34 dBm
<b>General Specifications</b>	
Interfaces	Probe Interface, RJ-45 Ethernet, USB host and device, talkset, power jack
Display	6" 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 <sup>3</sup> (9.1 X 5.0 X 3.4 inch <sup>3</sup> )
Weight	Approx. 1.4 kg (3.0 lb) / unit
Supported Languages	Chinese, Czech, English, Finnish, French, German, Italian, Japanese, Korean, Polish, Portuguese, Russian, Spanish, Swedish, Turkish
Calibration period	1 year
<b>Environmental</b>	
Operating Temperature	0 to 40 °C
Storage Temperature	-20 to 60 °C
Relative humidity	10% to 80%

For more information please contact:



project advising

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