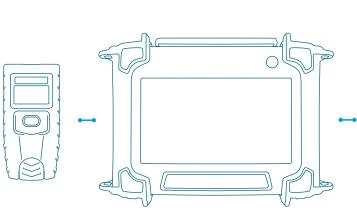
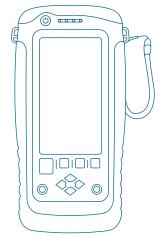


optimize! softing

## PRODUCTS AND HIGHLIGHTS

Certification, qualification, verification & troubleshooting of network infrastructure







9 WiFi

### FOREWORD

**Softing IT Networks** is a manufacturer of measurement equipment for verifying, qualifying, and certifying the cabling infrastructure of IT systems and is one of three business segments of Softing AG, headquartered in Haar, Germany. Our measurement equipment is an indispensable tool for installers around the world to measure and document the quality of a cabling installation, but it is equally important for the operation of an IT system. Problems in the IT cabling can be troubleshooted quickly and reliably to prevent dreaded network downtime and quickly remedy network outages if they occur.

Never before in the age of information technology has structured building cabling seen such a rapidly growth as in this decade in both data rates and number of new applications. While a few years ago Cat 6A/Class  $E_A$  up to 500MHz was state-of-the-art for 10Gigabit Ethernet, today we speak of Cat 8/Class I & II cabling up to 2,000MHz. These new cabling types support 40Gbit/s over a channel length of 30m and are expected to transmit 25Gbit/s over at least 50m in future.

However, not only transmission speeds are growing dramatically but also the number of applications run over copper and fiber cabling. The common channel and permanent link configurations are complemented by new variants, such as end-to-end cabling and direct attach or MPTL (Modular Plug Terminated Link).

Ethernet as a common communications protocol is becoming increasingly accepted outside office and home cabling and is now used as the standard protocol in many areas of industrial and automotive environments as well. Relevant keywords are Internet of Things (IoT) and Internet of Everything (IoE). Here requirements are not extremely high data rates but rather specific cabling configurations, connector types, and ambient conditions.

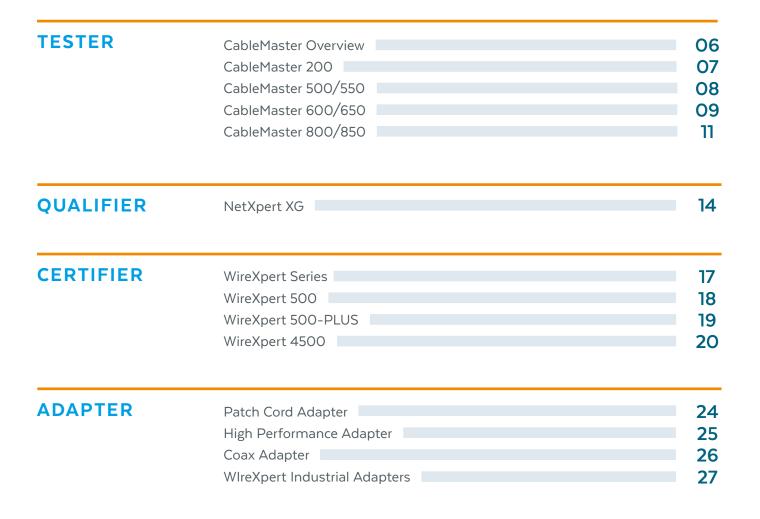
For you as an installer or user, this development comes with new challenges. You may have to cope, for example, with many more applications than ten years ago, and for this purpose you will need higher performing, more flexible measurement equipment that can be adapted to the new applications in the best possible way.

As a manufacturer of measurement equipment, we make sure to provide products that comply with the highest technological standards. In our latest catalogue you will find exciting innovations around the latest developments on the market of measurement technology!

Your Softing IT Networks Team

#### CONTENT



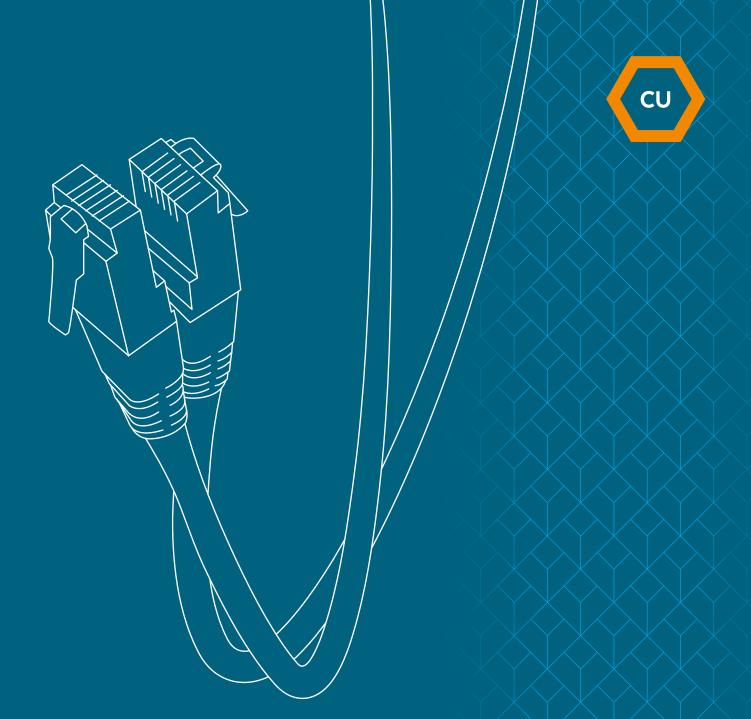


#### CONTENT

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**FIBER** 

QUALIFIER	NetXpert XG	35
CERTIFIER	WireXpert Series WireXpert 500 Fiber-only WireXpert 500-PLUS WireXpert 4500 FiberXpert OTDR 5000	38 39 40 41 43
ADAPTER/ ACCESSORIES	MPO/MTP® Adapter EF Multimode Adapter Singlemode Adapter FiberXpert Launch Cord Fiber Microscope Visual Fault Locator	46 47 48 49 50 51
ETHERNET	CableMaster 800/850 NetXpert XG LanExpert 80	53 55 57
الم WIFI	WiFi Overview	59
CLOUD	eXport Cloud Enterprise	61
SERVICE	Xpert Careplan 3 Years Warranty	64 68



## COPPER CABLE TESTER

#### TESTER

Testers for network,

telephone, and coax

					\$7/FX		
CableMaster	200	500	550	600	650	800	850
Article Number	226504	226512	226580	226515	226516	226520	226521
Application	CU	CU	CU	CU	CU		
Cable Test							
Wiremap (i.e. shorts, opens, reversals, miswires, split pairs)	Ø	Ø	Ø	Ø	0	0	Ø
Voltage Warning	<b>I</b>	<b></b>	<b></b>	<b></b>	<ul> <li>Image: Contract of the second s</li></ul>	<b></b>	<b>O</b>
Tone Generator	Ø	<b>O</b>	0	<b></b>	<b>Ø</b>	0	0
Remote ID (detection of identifiers)	<b>v</b>	Ø	Ø	Ø	<b>Ø</b>	0	Ø
Length Measurement Capacitive/TDR		<ul> <li>/ -</li> </ul>	<b>v</b> / -	-/ 🕗	- / 🕑	-/ 🕗	- / 🗸
PoE Load Test				<b></b>	<b></b>	0	0
Saving Results/PC Reporting Software				<b></b>	<ul> <li>Image: A start of the start of</li></ul>	<ul> <li>Image: A start of the start of</li></ul>	Ø
Network Test							
Hub Flash		0	0	<b>O</b>	<b>I</b>	0	Ø
Ethernet and Bandwidth Detection				<b></b>	<b></b>	<b>v</b>	Ø
Link/Ping Test						0	Ø
Discovery (LLDP, CDP, NDP)						<b>v</b>	Ø
VLAN Detection						0	Ø
IPv6 Support						0	Ø
Connectors							
RJ45/RJ11-12/Coax (type F)	⊘/-/-	⊘/⊘/⊘	⊘/⊙/⊙	⊘/-/⊘	⊘/-/⊘	⊘/-/⊘	⊘/-/
USB port				<b></b>	<b></b>	<b>I</b>	Ø
Accessories							
Cable Detection and Port Mapping (CP15)	0	0	0	0		0	<b>Ø</b>
Remote ID Set RJ45	1-5	0	1-5	0	0	0	0
Remote ID Set Coax		0	1-5	0	1-20	0	1-20
Alligator Clip		0	<b>v</b>	0	<b>Ø</b>	0	Ø
Wiremap remote units (RJ45 and RJ11-12)		0	0	1	8	1	8
RJ45 patch cord			2	2	9	2	9
Micro USB cable				<b>•</b>	<b>O</b>	0	0
Carrying bag			<b>O</b>	<b>O</b>		<b>O</b>	

-

### CableMaster 200

#### **Compact cabling tester**

The CableMaster 200 is a low-cost and compact wiremap tester for Ethernet cables. The device tests twisted pair cables on wiring faults such as interruptions, short circuits, crossed cores and split pairs.

With integrated remote unit and built-in tone generator.

#### **FEATURES**

- > Support of 5 remote identifiers
- Display of cable faults according to TIA 568 specifications
- Removable remote unit enables testing long cable distances
- > Testing of cables up to 304m / 998ft
- > Tone generator can be used for cable tracking with atone probe (optional accessories) turn
- > Clear LCD display with all test information, including PASS/FAIL display
- > Very easy operation
- > Compact size

#### **Article Number**

#### CableMaster 200

226504

Scope of delivery: 1 CableMaster 200, 1 Mapper-ID set of remotes (5 RJ45-Remotes) Optional accessories: Cable Tracker Tone Probe, e.g. CP15 (Article number 226007)

CableMaster

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#### TESTER

## CableMaster 500/550

#### Affordable Cable Tester and Fault Locator

The CableMaster is the all-in-one tool for localizing cable faults in data cables, telephone cables and coax cables.

The length measurement function allows easy measurement of a cable run or distance to fault. A built-in tone generator is useful for tracing faults and finding the termination ends of installed cable of all types. Using the attached remote and wiremapper sets, one user can identify up to 20 remote and wiremapper sets.

Director accession of the	
CableMaster CM500	1
Copen Mis-wire Short Rev Split	1
X-Over ID	1
12345678	1.
pt/ UTP STP Itm 1234pr Voltage! 0 49	1-
Carlos Provinces	E.
MODE	
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0/1)	1
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#### **FEATURES**

- > Tests voice (6 wire), data (8 wire) and video (coax)
- Tests and indicates pins with shorts, opens, reversals, miswires and split pairs
- Displays 'Pass' icon for correctly wired 6-pin telephone plus 'Rev' for reversed-pinned
- > Measures length or distance to fault (open short)
- > Easy to read, extra large 7-segments LCD screen with large icons
- Tone generator with selectable tone cadence and selectable pins carrying tone. Traces multiple cables runs with four usable tones to quickly distinguish between respective outlets

- Applications: 🕶
- > RJ master remote stores in bottom of case
- > Maps 20 locations at one time
- > Low power consumption for long battery life
- > Auto power-off

<b>Article Number</b>	CableMaster 500
226512	Scope of delivery: 1 CableMaster 500 Optional accessories: Tone Probe, e.g. CP15 (Article number 226007)
<b>Article Number</b>	CableMaster 550
226580	<b>Scope of delivery</b> : 1 CableMaster 500, 1 Cable Probe CP15 (Article number 226007), 1 cable assembly RJ45 to alligator clips, 1 RK305 (RJ45 and F-adaptor) (1-5), 2 RJ45 cables, 1 9V battery, 1 soft pouch

## CableMaster 600/650

#### Professional Cable Tester for Data, Voice, and Video

The CableMaster 600 is a cable tester for network, telephone, and coax cabling, equipped with an RJ45 jack for network cables and an F-type connector for coax cables. The CableMaster 600 verifies the wire map, determines the cable length and distance to fault. The results can be saved and documented using the PC reporting software. The CableMaster 600 offers many functions for troubleshooting such as cable tracing, link detection up to 1Gbit/s, PoE/PoE+ tests, and port/outlet identification with Remote ID's. CableMaster 600 is perfectly suited for professional installers and network operators who are challenged with testing both network RJ45 and coax cabling, verifying the correct wiring, determining cable lengths and documenting all this in test reports.



- > Tests network and coaxial cables (RJ45 jack and F-type connector)
- > Displays wire map in graphical format for rapid troubleshooting
- > Determines cable length and distance to a cable fault performing a full TDR measurement
- > High resolution, backlit color display for excellent readability in any environment

Applications: 🙄

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- Generation of test reports and documentation with PC reporting software
- > Extensive test and fault finding capabilities such as: cable tracing/port identification using a tone probe, PoE/PoE+ detection and load testing, link detection up to 1Gbit/s, outlet/port identification with Remote ID's

The CableMaster 600 features an integrated tone generator to send a modulated audible signal into the cable. The tone can be detected by an optional tone probe used for cable tracing (unscreened cables) and outlet/port identification. Cable Remote ID's enable the user to identify which outlet is connected to the appropriate port in a patch panel.

#### CABLING TESTS

The CableMaster 600 features extensive test capabilities for RJ45 network, telephone and coaxial cable testing. Consisting of a main unit and a network/telephone test and ID Remote. The CableMaster 600 is the ideal tool to test RJ45 cabling displaying the results in a wire map format. It verifies continuity, tests for shorts, opens, reversals, miswires, and split pairs. The cable length and the distance to the open/short will be determined using the integrated TDR (Time Domain Reflectometer).

#### TESTER

## CableMaster 600/650

#### NETWORK TESTING

The CableMaster 600 enables a rapid identification of network ports/outlets while displaying the link capability and the current link status. In addition, PoE (Power over Ethernet) and PoE+ presence is detected and displayed and can be tested with a load test compliant with IEEE 802.3 af/at.

#### SAVE AND REPORT

Cable test results can be saved in the main unit and exported to the PC reporting software via the included USB cable.

<b>Article Number</b>	CableMaster 600
226515	Scope of delivery: 1 CableMaster 600, 1 Remote Unit, 2 RJ45 cables, 6 AA batteries, 1 micro USB cable, 1 pouch Optional accessories: Tone Probe, e.g. CP15 (Article number 226007)
<b>Article Number</b>	CableMaster 650
226516	<b>Scope of delivery</b> : 1 CableMaster 600, 1 Cable Probe CP15 (Article number 226007), 8 network/telephone test and ID Remotes, 1 cable assembly RJ45 to alligator clips, 20 coax identifier Remote (1-20), 9 RJ45 cables, 6 AA batteries, 1 micro USB cable, 1 pouch

## CableMaster 800/850

#### **Cable Tester and Network Diagnostic Tool**

CableMaster 800 is a professional cable tester equipped with an RJ45 jack for network cables and an F-type connector for coaxial cables. The CableMaster 800 verifies the wire map, determines the cable length, and distance to fault. The results can be saved and documented using the PC reporting software. In addition, the CableMaster 800 offers many network diagnostics features for troubleshooting such as cable tracing, link detection up to 1Gbit/s, ping, network discovery, PoE/PoE+ tests, and much more. The CableMaster 800 is perfectly suited for professional installers and network operators who are challenged with testing and troubleshooting both network (RJ45) and coaxial cabling in active networks.

#### **FEATURES**

- > Tests network and coaxial cables (RJ45 jack and F-type connector)
- > Displays wire map in graphical format for rapid troubleshooting
- > Determines cable length and distance to the cable fault performing a full TDR measurement
- > Cable/port identification using the cable/port Remote ID's
- > PoE/PoE+ detection and load test
- > Link test up to 1Gbit/s to identify link capability and current link status

- > Pinging of individual or lists of IPv4 and IPv6
- devices
- > CDP/LLDP/NDP and VLAN discovery
- > High resolution, backlit color display for excellent readability in any environment
- with PC reporting software

CABLE TESTING

CableMaster 800 features extensive test capabilities for RJ45 network, telephone and coaxial cabling. Consisting of a main unit and a test/ID Remote, the CableMaster 800 is the perfect tool to test RJ45 cabling displaying the results in a wire map format on a full-color graphical display. It verifies continuity, tests for shorts, opens, reversals, miswires, and split pairs. The cable length and the distance to the open/short will be determined using the integrated TDR (Time Domain Reflectometer).

The CableMaster 800 professional cable tester is highly versatile - whether during installation, to verify which outlet is connected to the appropriate port in the patch panel, after installation, for quality testing and documentation of the cabling, or for in-service troubleshooting of the network. The test results are displayed on the full-color graphic screen in a clear and easy to understand way. Test results can be saved in the device

and be exported to a PC for evaluation or documentation with the free PC reporting software.

addresses as well as any URL on internet

- > Network Discovery creates lists of broadcasted

- > Generation of test reports and documentation







#### TESTER

## CableMaster 800/850

The CableMaster 800 features an integrated tone generator to send a modulated audible signal into the cable, which is detected by an optional tone probe used for cable tracing (unscreened unlabeled cables) and outlet/port identification. Numbered cable ID Remotes allow the user to easily identify which outlet is connected to the appropriate patch panel port.

#### NETWORK TESTING

CableMaster 800 enables rapid identification of network ports/outlets while displaying link capability and current link status. With the added network discovery features, any broadcasted devices in the network can be discovered and displayed and saved as a list. Pinging individual or lists of IPv4 and IPv6 addresses as well as a URL will detect their availability.

#### SAVE AND REPORT

Cable test results can be saved in the main unit and be exported to the PC reporting software via the USB cable included to create professional test reports.

Article Number	CableMaster 800
226520	<b>Scope of delivery</b> : 1 CableMaster 800 basic unit, 1 Remote unit, 2 RJ45 cable, 6 AA batteries, 1 micro USB cable, 1 pouch <b>Optional accessories</b> : Tone Probe, e.g. CP15 (Article number 226007)
Article Number	CableMaster 850
226521	<b>Scope of delivery</b> : 1 CableMaster 800 basic unit, 1 Cable Probe CP15 (Article number 226007), 8 network/telephone test and ID Remotes, 1 RJ45 cable/alligator clip, 20 coax identifier Remotes (1-20), 9 RJ45 cables, 6 AA batteries, 1 micro USB cable, 1 pouch



## **COPPER CABLE** QUALIFIER



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#### QUALIFIER

## 

#### The new generation of "Ethernet Speed Certification"

New standards defining data rates up to 10Gbit/s are big challenge for latest generation qualifiers. Particularly cabling for wireless access points has to support ever increasing data rates. In order to verify if the cabling installed is able to support the increased data rates, operators need to perform adequate testing before commissioning the network, to avoid any unpleasant surprises.

NetXpert XG enables you to meet the new challenges now!



#### **FEATURES**

- Tests data cabling for IEEE 802.3 compliance at data rates of up to 10Gbit/s (BERT) by determining signal-to-noise ratio (SNR) and performing Bit Error Rate Test (BERT)
- > Measures delay skew
- Combined length measurement performing TDR and capacitance measurements for highly accurate test results and easier troubleshooting even of shorts
- Full-color wire map shows opens, shorts, miswires, and split pairs in a clear and easy to understand way
- > Saves test results and generates standards-based measurement reports providing "Pass/Fail"
- > Supports IPv4 and IPv6



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Net pert

- > Discover your network and see the connected network devices
- Identifies defective PoE switches with a PoE load test
- > DHCP test
- > Ping lists can be defined and saved for later use
- > LLDP/CDP detection and analysis
- > Identifies VLANs present in your network
- Data transfer from the tester to the PC using USB stick

#### TEST FOR HIGHEST NETWORK SPEEDS WITH YOUR QUALIFIER

The new NetXpert XG verifies, if cabling channels support maximum transmission rates of up to 10Gbit/s, irrespective of cable categories, patch panels, or outlets installed. NetXpert XG provides a precise statement by automatically performing three individual tests which are combined into an overall test result.

By performing a sequence of various tests the NetXpert XG verifies error-free data transmission up to 10Gbit/s. Determination of Signal-to-noise ratio (SNR) followed by a Bit Error Rate Test (BERT) and delay skew test qualify Gigabit transmission. Delay skew indicates the signal time delay between the wire pairs used. Excessive delay can result in a serious degradation of transmission performance, making it impossible for the receiver to interpret the data stream correctly. Delay skew, just as the signal-to-noise ratio, are considered to be crucial parameters for a reliable data transmission.

#### TROUBLESHOOTING OF ACTIVE PoE / PoE+/++ NETWORKS

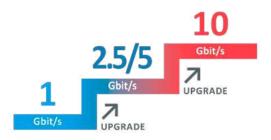
For active PoE network troubleshooting, NetXpert XG additionally offers a comprehensive tool set. This includes load tests for voltage drop to verify stability of PoE supplies, identification of the devices connected to the network, and detection of availability of priority devices.

NetXpert XG offers sufficient internal storage even for large projects and, if required, generates complete standards-based test reports containing all the necessary information.

Extensive accessories turn NetXpert XG into the ultimate multitool – from locating individual cables with the built-in tone generator or the Remote Identifiers, to generating test documentation and in-service troubleshooting of PoE networks.

#### INCLUDING PORTS FOR FIBER OPTIC MEASUREMENTS

The NetXpert offers full flexibility regardless of whether you are measuring fiber or copper cabling. Using its available SFP/SFP+ ports, various active fiber tests such as protocol detection (CDP/LLDP), network ping test and network discovery can be performed. In the area of passive tests, a throughput test of fiber optic cabling will also be possible.



#### WELL-EQUIPPED FOR THE CHALLENGES OF THE FUTURE

NetXpert XG ensures a future-proof start into the new era of high-speed qualification. The NetXpert series offers simple firmware upgrades, and a license system allows for later upgrades to add new features.

There are 3 options (NetXpert 1G, NetXpert 2.5/5G and NetXpert XG). The purchase of an upgrade license always extends the functionality of the device one step upwards.

All wear parts (e.g. RJ45 jack) can easily and conveniently be replaced.

Article Number	NetXpert XG
	<b>Scope of delivery</b> : 1 NetXpert XG Main Unit, 1 Active Remote, 2 power supplies, 2 test cables, 1 hard case, 1 Micro USB adapter
226552	NetXpert XG - 10G
226553	NetXpert XG - 2.5/5G
226554	NetXpert XG - 1G
226555	One step upgrade license



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# CERTIFIER

## The Wire pert Series

### **WireXpert Series**

From now on, you have the choice between three WireXpert 500 variants to find the version that fits best to your field of work: Softing IT Networks offers a Cat  $6A/Class E_A$  copper certification tester, a fiber-only certification tester, or a combined Cat  $6A/Class E_A$  copper and fiber certification tester. All models can be upgraded, eliminating the need to buy a new certification tester when your requirements change. The WireXpert 4500 premium model supports certifications up to 2,500MHz based on the latest Cat 8 standard and Class I & II standards.



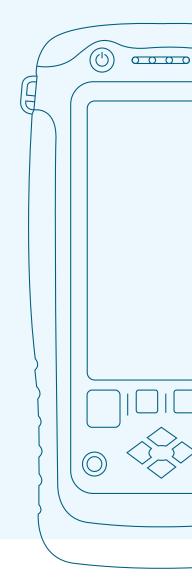
certifies copper cabling up to 500MHz compliant with the relevant Class  $D/E/E_A$ , Cat 5e/6/6A standards. In addition to twisted-pair cabling, industrial Ethernet RJ45 and M12 D-coded as well as X-coded cabling systems, coaxial cabling and patch cords can be measured. The certifier exceeds Level IIIe accuracy requirements defined by ISO and TIA and displays the test results within seconds due to extremely short measuring times with the integrated autotest feature. Also available as a fiber version.



is the technologically advanced combination model for copper testing up to 500MHz according to the standards' Class D/E/E<sub>A</sub>, Cat 5e/6/6A requirements and for fiber-optic multimode and singlemode testing (850/1300nm and 1310/1550nm). WireXpert 4500 and WireXpert 500-PLUS are the only certification testers that support the test requirements of data centers, of building cabling and industrial Ethernet. The WireXpert 500-PLUS is compatible with all adapters and can be upgraded to 2,500MHz in support of Cat 8, Class I & II measurements.



enables certification of highest performance cabling systems in enterprise networks and data centers. An extremely fast measurement technology and an intuitive device operation ensure highly accurate and fast certification measurements. WireXpert 4500 was the first cable certifier of its class that is able and ready today to perform certification testing in compliance with new cabling standards such as ANSI/TIA Cat 8 and ISO/IEC Class I & II.



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#### CERTIFIER



#### Affordable Certifier for Copper LAN Cabling Certification

It is increasingly common today for electrical contractors to get projects for installing network cabling systems. WireXpert 500 allows technicians to easily certify copper cabling systems from Cat 5e to Cat 6A (Class D to Class  $E_A$ ) and produce professional test reports for their customer.



#### **FEATURES**

- > Advanced cable certification up to 500MHz
- > Certifying according to standards Class D/E/E<sub>A</sub> & Cat 5e/6/6A
- > Extremely short autotest time for Cat 6A and Class E<sub>A</sub>
- Meets ANSI/TIA and ISO/IEC Level IIIe accuracy requirements
- Certification testing of patch cords via dedicated adapters
- Industrial Ethernet testing via purpose-built M12 adapters
- > Advanced reporting and documentation
- Cost-effective cabling certifier for structured building cabling and industrial Ethernet

Applications: (Upgrade available)

#### > Industrial Ethernet Cabling Measurement The WireXpert 500 measuring solution for the industrial Ethernet cabling includes various cable kits and is suitable for measurements in the channel and permanent link configuration as well as for E2E-Links (please order E2E-Adapter separately). With Industrial Ethernet connection technology. Measuring cable kits are available e.g. with M12 D-coded interface. Also available measuring cable kits with M12 X-coded interface and with RJ45interface, which make it possible to test 10-Gigabit capable Industrial Ethernet cabling efficiently

> Coaxial cable measurement With the optional coax measuring adapters the WireXpert 500 is also capable to measure length, resistance, transit time and return loss of coaxial cables

#### **Article Number**

#### WireXpert 500

228071

Scope of delivery: 2 identical measurement units (Local and Remote) with Dual Control System – DCS™, 2 Li-Ion batteries, 2 power supplies, 1 calibration certificate, 1 eXport software, 2 CAT 6A channel adapters, 2 CAT 6A Permanent Link adapters, 2 talksets, 1 USB-Stick, 1 Quick start guide, 1 soft carrying case

## Wire X pert

#### LAN Copper and Fiber Cable Certifier

The WireXpert 500-PLUS is conceived for copper and fiber certification and sets new standards for user friendliness. Both Local and Remote unit are equipped with a touch sensitive graphical user interface. The innovative design combines superior measurement accuracy and ease of use with low costs of ownership. The devices of the WireXpert 500 series support certification measurements up to a frequency of 500MHz and can be upgraded to the widest frequency range of up to 2,500MHz.

#### **FEATURES**

- Combined 500MHz copper cable and MM + SM fiber optic certifier
- Most advanced certification measurements compliant with all standards: Class D/E/E<sub>A</sub>, Category 5e/6/6A
- Measurement accuracy independently verified by ETL
- Exceeds ISO and TIA Level IIIe accuracy requirements
- > Endorsed by companies worldwide
- Many test adapters available, e.g. patch cord testing, industrial Ethernet, RJ45, MMC PRO
- Fiber certifications for MM fiber at 850 and 1300nm and SM fiber at 1310 and 1550nm
- > MPO multimode
- > Advanced reporting and documentation

> The only certifier supporting all data center, premise cabling and industrial Ethernet measurement requirements

- > Easy to Use and Ruggedized Design WireXpert comes with high resolution color LCD touch screens and an intuitive touch sensitive user interface, designed for industrial, heavy duty usage. The Dual Control System (DCS™) – featuring identical devices for Local and Remote 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 a Cat 6A/Class E<sub>A</sub> and fiber certification test in a few seconds. It offers intuitive navigation through the device with screen menus and generates professional reports through the included eXport PC reporting software

#### **Article Number**

#### WireXpert 500-PLUS

228144

**Scope of delivery**: 2 identical devices (Local and Remote) with Dual Control System – DCS<sup>TM</sup>, 2 Li-lon batteries, 2 power supplies, 1 calibration certificate, 1 eXport reporting software, 2 Cat 6A/Class  $E_A$  Channel adapters, 2 Cat 6A/Class  $E_A$  Permanent Link adapters, 2 talksets, 1 USB-Stick, 1 quick start guide, 1 soft carrying case

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Applications:

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#### CERTIFIER



### WireXpert 4500 ist worldwide the most flexible cabling certifier up to category 8

Most advanced cable certification compliant with all standards: Class D/E/E<sub>A</sub>/F/F<sub>A</sub>, Category 5e/6/6A, and the new ANSI/TIA Cat 8 standard as well as ISO/IEC Class I & II standards.

The WireXpert is the first cable certifier with the capability to certify the highest performance cabling systems in enterprise networks and data centers. Network installers make significant gain in productivity with the WireXpert's industry leading test speed and intuitive operation enabling them quickly to perform accurate certification tests.

#### **FEATURES**

- Cable certification up to 2,500MHz in support of the new ANSI/TIA Cat 8 standard and ISO/IEC Class I & II standards
- > Most advanced cable certification for all standards: Class D/E/E<sub>A</sub>/F/F<sub>A</sub>, Category 5e/6/6A, and the new ANSI/TIA Cat 8 standard as well as ISO/IEC Class I & II standards
- > Fastest autotest in less than 9 seconds
- Measurement accuracy independently verified by ETL
- Meets and exceeds ISO/IEC level VI, V, IV, and IIIe and TIA level 2G and IIIe accuracy requirements

> Endorsed by more than 20 cable manufacturers worldwide

- Field upgradable with many options, e.g. patch cord testing, industrial Ethernet, Class F<sub>A</sub>, coax, fiber, MPO
- Supports extended fiber certification for 850/1300nm (multimode) and 1310/1550nm (singlemode)
- > First to support MPO fiber testing for data centers
- > Advanced reporting and documentation of cabling
- > The only certifier supporting all data center, premise cabling, and industrial Ethernet requirements

With certification testing of copper cabling up to Class  $F_A$  and Cat 8, as well as MPO, SM, and MM fiber optic cabling, the WireXpert is the only cabling certifier of its class that is ready for 40G and beyond.

#### EASY TO USE AND RUGGEDIZED DESIGN

The WireXpert comes with an intuitive touch sensitive user interface and a high-resolution color LCD screen designed for industrial, heavy duty usage. The Dual Control System (DCS<sup>™</sup>) – featuring identical devices for the Local and Remote unit – makes it really easy to operate the test cycles. Whether coordinated by two technicians or only one, walking time between outlets is minimized.

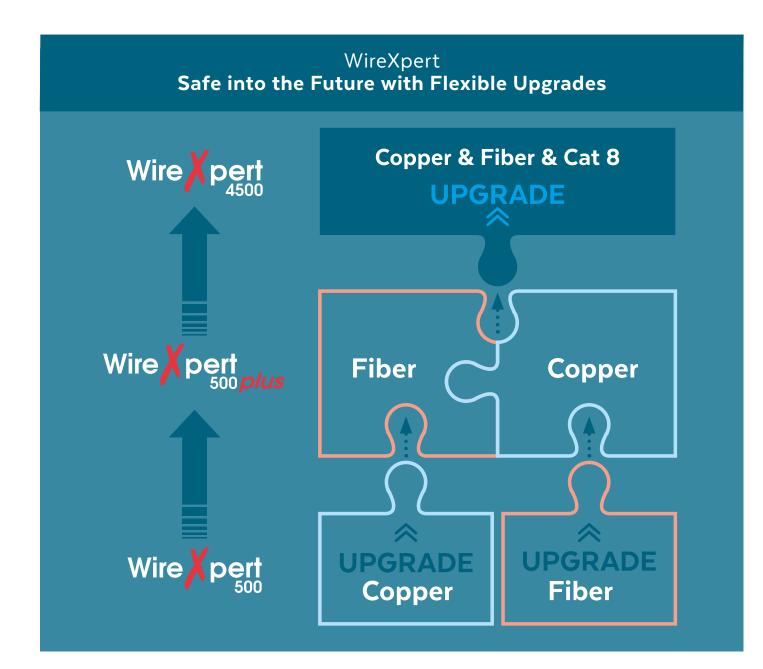


Applications:

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#### FAST AND EASY FOR MAXIMUM EFFICIENCY

High productivity through fast autotests and short post-processing times. Among the advantages of the WireXpert are its intuitive screen navigation through the individual menus and the evaluation software eXport for professional reporting on the PC.



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#### CERTIFIER

### WireXpert 4500

#### PROTECTS YOUR INVESTMENT: BEYOND 10G

If you are testing 10Gbit/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 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 VI requirements throughout the measurement frequency range.



WireXpert, with its industry leading measurement performance,

provides adapters for testing cabling systems with higher performance than Cat 6A (500MHz). For Class FA cabling, testing is performed over 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 is supported. Adapters are also available for testing Cat 7A patch cords. With measurement bandwidth exceeding 2,000MHz, WireXpert is capable of testing Class I, II and CAT8 cabling.



#### PROVEN ACCURACY AND VENDOR APPROVALS

WireXpert meets and exceeds all accuracy requirements for cable certification. WireXpert has been independently verified by highly respected test laboratories such as ETL.

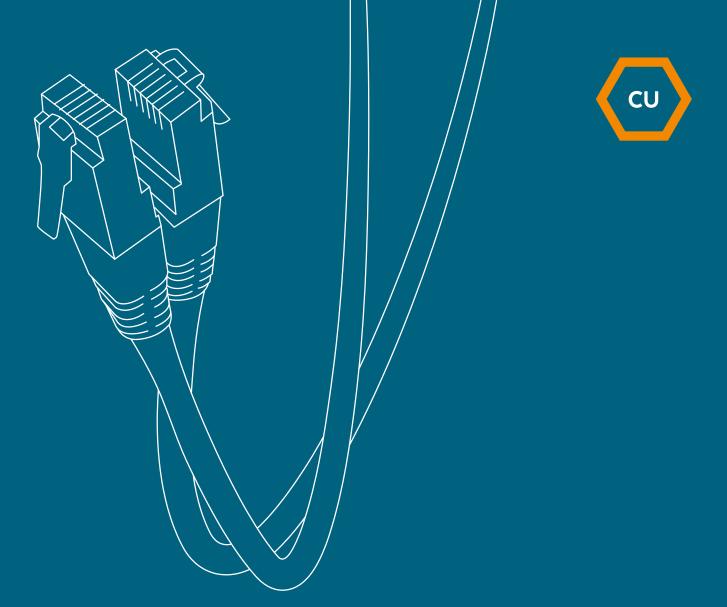
Most leading cable manufacturers have extensively tested WireXpert and have approved the instrument for field certification and associated warranties of their structured cabling solutions. Laboratory testing and comparisons against vector analyzers have proven that WireXpert has excellent accuracy and measurements correlate with laboratory equipment. In fact, major cable vendors are using WireXpert in their labs for qualifying Cat 8 cabling systems under development.

**Article Number** 

#### WireXpert 4500

228070

Scope of delivery: 2 identical devices (Local and Remote) with Dual Control System - DCS<sup>™</sup>, 2 Li-Ion batteries, 2 power supplies, 1 calibration certificate, 1 eXport reporting software, 2 Cat 6A/Class E<sub>A</sub> Channel adapters, 2 Cat 6A/Class E<sub>A</sub> Permanent Link adapters, 2 talksets, 1 USB-Stick, 1 quick start guide, 1 soft carrying case



### COPPER CABLE ADAPTER

#### ADAPTER

### Patch Cord Test Adapter

#### Fast and reliable performance verification of patch cables

Insufficient quality of patch cords is often the cause for a bad performance of the cable and influences the performance of a good cabling structure. To make sure that the performance of the used patch cable is OK, you should test it first. With its fast and precise dual-ended test, the WireXpert patch cable test kit can be used as well for the inspection before use of the patch cables by the user as well as for testing cables by manufacturers during production.

WireXpert patch cable test kits are available for testing CAT 5e, CAT 6, CAT 6A, CAT 7 and CAT 7A patch cables.

#### **FEATURES**

- > Extremely fast autotest with "dual-end" patch cordscertification
- > Intuitive selection of test configurations and thresholds
- > Test kits suitable for all ISO and TIA patch cables standards
- > Enables input of user-defined test values
- > Transfer of test results into the eXport software
- > Easy replacement of worn measuring sockets

- > WireXpert carries out standard-compliant patch cable tests for all common standards. You can use patch cables of categories 5e, 6, 6A, 7 and 7A with the patch cable test adapters in the required performance class
- > The graphical menu of WireXpert makes it easy to select TIA or ISO limit values for patch cords with a specified length. WireXpert tests all parameters of a patch cable at both ends in a single extremely fast autotest

#### Article Number CU Patchkabel-Test-Adapter für WireXpert

228098	<b>CAT 7A patchcable test adaptors</b> (1 pair) With GG45 interface for testing of shielded CAT 7A patchcables
228027	Patch cord adapters (1 pair) with CAT 6A test jacks mounted for testing shielded and unshielded CAT 6A patch cords
228028	Patch cord adapters (1 pair) with CAT 6 test jacks mounted for testing shielded and unshielded CAT 6 patch cords
228029	Patch cord adapters (1 pair) with CAT 5e test jacks mounted for testing shielded and unshielded CAT 5e patch cords
228037	1 pre-tested reference CAT 6A patch-cord for use in verification of CAT 6A patch-cord adapter performance
228038	1 pre-tested reference CAT 6 patch-cord for use in verification of CAT 6 patch-cord adapter performance
228039	1 pre-tested reference CAT 5e patch-cord for use in verification of CAT 5e patch-cord adapter performance

### High Performance Adapter

#### **Testing High Performance Twisted Pair Cabling**

The WireXpert Class  $F_{\rm A}$  adapter meets the proposed level V accuracy specifications required for certifying Class  $F_{\rm A}$  cabling. WireXpert 4500 provides accurate measurements over a wide bandwidth from 1MHz to 2.5GHz, making it the tester of choice for certifying high performance cabling systems like Class  $F_{\rm A}$  and Cat 8/Class I & II.

#### **FEATURES**

#### > Class F<sub>A</sub>

WireXpert 4500 is the first cable tester to meet the Level V accuracy specifications (ISO/IEC 61935-1 Ed.4) required for certifying Class  $F_A$  cabling. In fact, a majority of Class  $F_A$  cables installed world-wide are certified using WireXpert. Class  $F_A$  certification testing is performed over full standards defined frequency range from 1MHz through 1,000MHz. Both TERA and GG45/ARJ45 interfaces are available through WireXpert test adapters. Adapters are also available for testing Cat 7A patch cords

- > Category 8/Proposed Class I & II
- WireXpert 4500 is the first cable certifier to offer test limits for Cat 8/Class I & II cabling. It performs testing to 2.5GHz and shows plots for comparing measurement parameters against the proposed limits. This is very helpful in determining if a given cabling channel is likely to meet Cat 8/Class I & II requirements

#### Article Number

#### **TERA** measurement method for WireXpert

228004	<b>Class F<sub>A</sub> Channel adapter</b> (1 pair), with TERA interface for Class $F/F_A$ channel testing
228051	<b>Class F<sub>A</sub> Channel adapter</b> (1 pair), with TERA interface for Class $F/F_A$ channel testing; included is 1 2m TERA patch cord for "Set Reference"
	Permanent Link Adapter
228052	Kit for Class $F/F_A$ TERA Permanent Link testing Comprising of: 2 Class $F_A$ TERA Permanent Link interface adapters and 2 Class $F_A$ Permanent Link test cords
228005	Class F <sub>A</sub> Permanent Link adapters (1 pair) with TERA interface for Class F/F <sub>A</sub> Permanent Link testing Clable not included – please order separately!
	GG45/ARJ45 Channel Link Adapter
228054	Class $F_A$ Channel adapter (1 pair) with GG45/ARJ45 interface, suitable for Class F/F <sub>A</sub> channel testing included is 1 2m GG45/ARJ45 patch cord for "Set Reference"
228006	Class $F_A$ Channel adapter (1 pair) with GG45/ARJ45 interface, for Class F/F <sub>A</sub> channel testing
228127	ARJ45 CAT8.2 Channel Mess-Adapter CAT 8.2 Channel Adapters c/w ARJ45 jacks (1 pair) for measurements up to 2000MHz with ARJ45 jacks without patch cord for "Set Reference"
228129	1 CAT8.2 S/FTP Patch cord, 2m, ARJ45
228123	MMCpro CAT8.2 Channel adapter (1 pair) for measurements up to 2000MHz with BKS MMCpro connector without patch cord for "set reference"
228124	1 patch cord for "set reference" for MMCpro CAT 8 adapters
228180	CAT8.2 Channel Adapters c/w TERA jacks (1 pair) for measurements up to 2000MHz with TERA jacks without patch cord for "Set Reference"
228106	CAT8.2 S/FTP Patch cord, 2m, TERA

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#### ADAPTER

### Coax **Adapter**

### WireXpert's Unique Test Solution for Coax Cable

The coax cabling solution has a wide RF measurements frequency range of 1-2,500MHz. The autotest takes about 15 seconds and both dual-ended and single-ended testing can be performed. There are customizable test limits for insertion loss and return loss.



#### **FEATURES**

- > RF measurements frequency range: 1-2,500MHz
- > Autotest time: 15 seconds
- > Customizable test limits for insertion loss and return loss
- > Both dual-ended and single-ended tests
- With Coax test adapters, WireXpert supports testing of coaxial cables for attenuation and return loss over a wide frequency band
- > Test Parameters include:
  - Insertion Loss v/s frequency
  - Return Loss v/s frequency
  - Measured from both ends in dual-ended mode
  - For single-ended mode, a remote termination is required
  - DC resistance
  - ~ Length
- Simple one-time reference process for the Local and Remote units to pair with each other. The eXport software provides full graphical reports including all measurement plots

#### **Article Number**

#### Koax-Messadapter (1 pair)

228017

Scope of delivery: 2 Coax adapters with 75 Ohms F-type interface for testing frequency range of 1-2,500MHz in accordance with TIA570B, 568C.4

### Wire Xpert in the Industry

#### Industrial Ethernet Cabling Test with WireXpert

The WireXpert test solution for industrial Ethernet cabling consists of various adapter kits. Different kits are available for testing of cabling with two-pair (D-coded) and four-pair (X-coded) M12 as well as RJ45 and other plug-in faces. The different cables and adapter kits are described on the following pages.



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#### **FEATURES**

- > Testing of M12 channels, permanent links, end-to-end-links or hybrid links (M12-RJ45)
- > Easy selection of test limits including PROFINET limits
- > Support for user-defined customized test limits
- > Selection of 2-pair or 4-pair configurations
- > Seamless reporting of test results in eXport software
- > Cost effective replacement of worn out test cords
- > WireXpert is the first cable certification tester with full support for X-coded industrial Ethernet cabling. These kits feature adapters with high performance TERA interface and test cords terminated in M12 test connectors. This approach provides flexibility particularly in space constrained industrial outlets as test instruments do not need to directly attach to links/ channels under testing. Second, this approach improves the longevity of the adapter because extensive use only wears out the test cords, not the adapter
- > WireXpert provides built-in limit for PROFINET. Alternatively, a standard limit can be selected (e.g. Cat 5e/Class D for two pairs). A user can also create custom test limits for specific applications. Industrial Ethernet cabling links use M12 connector due its rugged structure. WireXpert provides options to test various configurations of industrial Ethernet cabling

#### ADAPTER

### PreLink<sup>®</sup> System for M12 and RJ45 End-to-End Cabling Links

The Harting preLink® system allows for a quick and easy adaptation of various connector systems for industrial Ethernet applications such as Profinet to the WireXpert family. Only a single measurement adapter is required for the WireXpert family. All connector systems supported by Harting preLink® can be connected to the WireXpert using this measurement adapter with the appropriate test cord and preLink® interface.

Article Number	Product Description
228179	End-to-End (E2E) adapter with TERA interface for testing industrial Ethernet cabling such as Profinet (1 pc)
228153	E2E test cord TERA to Harting preLink® system (1 pc)
228080	Cat 7A/Class $F_A$ reference cord (2m) with TERA interface for reference setting (1 pc)
228154	Interchangeable RJ45 plug for Harting preLink $^{\odot}$ Cat 6A/Class E <sub>A</sub> system, IP20 (1 pc)
228155	M12 D-coded plug for Harting preLink® Cat 5e/Class D system (1 pc)
228156	M12 X-coded plug for Harting preLink® Cat 6A/Class E <sub>A</sub> system (1 pc)
228157	M12 D-coded jack for Harting preLink® Cat 5e/Class D system (1 pc)
228158	M12 X-coded jack for Harting preLink $^{\odot}$ Cat 6A/Class E <sub>A</sub> system (1 pc)
228159	Interchangeable V14 push-pull RJ45 plug for Harting preLink® system (1 pc)
228160	Interchangeable Han® 3 A RJ45 plug for Harting preLink® system (1 pc)
228161	Release tool for Harting preLink® systems (5 pcs)
228162	preLink® RJ45 jack with Cat 6, HIFF-format for Harting preLink® system, without cable termination block (1 pc)
228171	Pouch for WireXpert accessories. Compartments for 2 WireXpert adapters, small parts and test cords
228172	1 test cord (2m) with TERA and RJ45 jack for measurements on E2E and Profinet links with RJ45 plugs, consisting of 1 <228153>, 1 <228162>
228173	1 test cord (2m) with TERA and M12 D-coded jack for measurements on E2E and Profinet links with M12 D-coded connectors
228174	1 test cord (2m) with TERA and M12 D-coded connectors for measurements on E2E and Profinet links with M12 D-coded jacks
228175	1 test cord (2m) with TERA and M12 X-coded jack for measurements on E2E and Profinet links with M12 X-coded connectors
228176	1 test cord (2m) with TERA and M12 X-coded connector for measurements on E2E and Profinet links with M12 X-coded jacks
228163	M12 D-coded test cord kit, contains 1 <228080> reference cord, 2 <228153> test cords TERA to Harting preLink®, 2 <228155> M12 D-coded connectors, 2 <228157> M12 D-coded jacks*
228164	M12 X-coded test cord kit, contains 1 <228080> reference cord, 2 <228153> test cords TERA to Harting preLink®, 2 <228156> M12 X-coded connectors, 2 M12 <228158> X-coded jacks*
228165	Harting RJ45 HAN® 3 A test cord kit, contains 1 <228080> reference cord, 2 <228153> test cords TERA to Harting pre- Link®, 2 HAN® 3 A connector*
228166	Harting RJ45 V14 test cord kit, contains 1 <228080> reference cord, 2 <228153> test cords TERA to Harting preLink®, 2 <228159> RJ45 V14 push-pull connector*
	* Please note: Set does not contain WireXpert E2E adapters



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#### ADAPTER

### Test Cord **Kits**

The test cord kits always contain a reference cord and two TERA to preLink® test cords (2m) and the respective measurement heads.

#### ARTICLE NO. 228163 M12 D-CODED

The M12 D-coded test cord kit contains all test cords required to measure M12 D-coded systems with connectors or jacks.



#### ARTICLE NO. 228164 M12 X-CODED

The M12 X-coded test cord kit contains all test cords required to measure M12 X-coded systems with connectors or jacks.



#### ARTICLE NO. 228165 RJ45 V14

The RJ45 V14 test cord kit contains all test cords required to measure RJ45 cabling systems with jacks.



#### ARTICLE NO. 228166 RJ45 HIFF

The RJ45 HIFF test cord kit contains all test cords required to measure RJ45 HIFF systems with jacks.



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#### ADAPTER

## Additional **Test Cords**

The products described on the following pages consist of test cords with measurement heads that are not interchangeable.

Article Number	Product Description
228169	1 test cord (2m) with TERA and M8 jack for measurements on E2E links with M8 D-coded connectors
228170	1 test cord (2m) with TERA and IX jack for measurements on E2E links with IX connectors
228177	M8 test cord kit contains 1 <228080> reference cord, 2 <228169> test cords TERA to M8 D-coded jack <sup>*</sup>
228178	Harting IX test cord kit contains 1 <228080> reference cord, 2 <228170> test cords TERA to Harting IX jack.*

 $^{\ast}$  Please note: Set does not contain WireXpert E2E adapters



### Test Cord **Kits**



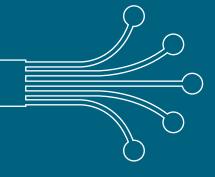


#### **ARTICLE NO. 228178**



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## **FIBER** QUALIFIER





#### The new generation of "Ethernet Speed Certification"

New standards defining data rates up to 10Gbit/s are big challenge for latest generation qualifiers. Particularly cabling for wireless access points has to support ever increasing data rates. In order to verify if the installed cabling is able to support the increased data rates, operators need to perform adequate testing before commissioning the network, to avoid any unpleasant surprises.

NetXpert XG enables you to meet the new challenges now!

#### FEATURES

- > Tests data cabling for IEEE 802.3 compliance at data rates of up to 10Gbit/s (BERT) by determining signal-to-noise ratio (SNR) and performing Bit Error Rate Test (BERT)
- > Measures delay skew
- Combined length measurement performing TDR and capacitance measurements for highly accurate test results and easier troubleshooting even of shorts
- Full-color wire map shows opens, shorts, miswires, and split pairs in a clear and easy to understand way
- > Saves test results and generates standards-based measurement reports providing "Pass/Fail"
- > Supports IPv4 and IPv6

#### Applications: 🕶 🕫 🖵 🔊

- Discover your network and see the connected network devices
- Identifies defective PoE switches with a PoE load test
- > DHCP test
- > Ping lists can be defined and saved for later use
- > LLDP/CDP detection and analysis
- > Identifies VLANs present in your network
- Data transfer from the tester to the PC using USB stick



#### TEST FOR HIGHEST NETWORK SPEEDS WITH YOUR QUALIFIER

The new NetXpert XG verifies, if cabling channels support maximum transmission rates of up to 10Gbit/s, irrespective of cable categories, patch panels, or outlets installed. NetXpert XG provides a precise statement by automatically performing three individual tests which are combined into an overall test result.

By performing a sequence of various tests the NetXpert XG verifies error-free data transmission up to 10Gbit/s. Determination of Signal-to-noise ratio (SNR) followed by a Bit Error Rate Test (BERT) and delay skew test qualify Gigabit transmission. Delay skew indicates the signal time delay between the wire pairs used. Excessive delay can result in a serious degradation of transmission performance, making it impossible for the receiver to interpret the data stream correctly. Delay skew, just as the signal-to-noise ratio, are considered to be crucial parameters for a reliable data transmission.

#### QUALIFIER

### NetXpert **XG**

#### TROUBLESHOOTING OF ACTIVE POE / POE+/++ NETWORKS

For active PoE network troubleshooting, NetXpert XG additionally offers a comprehensive tool set. This includes load tests for voltage drop to verify stability of PoE supplies, identification of the devices connected to the network, and detection of availability of priority devices.

NetXpert XG offers sufficient internal storage even for large projects and, if required, generates complete standards-based test reports containing all the necessary information.

Extensive accessories turn NetXpert XG into the ultimate multitool – from locating individual cables with the built-in tone generator or the Remote Identifiers, to generating test documentation and in-service troubleshooting of PoE networks.

#### INCLUDING PORTS FOR FIBER OPTIC MEASUREMENTS

The NetXpert offers full flexibility regardless of whether you are measuring fiber or copper cabling. Using its available SFP/SFP+ ports, various active fiber tests such as protocol detection (CDP/LLDP), network ping test and network discovery can be performed. In the area of passive tests, a throughput test of fiber optic cabling will also be possible. Qualifying the transmission rates of fiber cabling channels is possible by connecting the main units at both ends.



#### WELL-EQUIPPED FOR THE CHALLENGES OF THE FUTURE

NetXpert XG ensures a future-proof start into the new era of high-speed qualification. The NetXpert series offers simple firmware upgrades, and a license system allows for later upgrades to add new features.

There are 3 options (NetXpert 1G, NetXpert 2.5/5G and NetXpert XG). The purchase of an upgrade license always extends the functionality of the device one step upwards.

All wear parts (e.g. RJ45 jack) can easily and conveniently be replaced.

Article Number	NetXpert XG
	Scope of delivery: 1 NetXpert XG Main Unit, 1 Active Remote, 2 power supplies, 2 test cables, 1 hard case, 1 Micro USB adapter
226552	NetXpert XG - 10G
226553	NetXpert XG - 2.5/5G
226554	NetXpert XG - 1G
226555	One step upgrade license





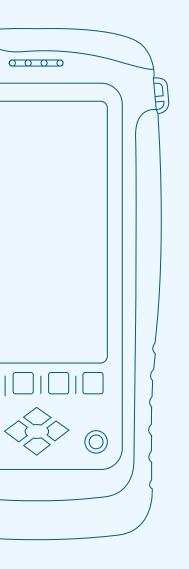
# **FIBER** CERTIFIER



### CERTIFIER

# The Wire pert Series

From now on, you have the choice between three WireXpert 500 variants to find the version that fits best to your field of work: Softing IT Networks offers a Cat  $6A/Class E_A$  copper certification tester, a fiber-only certification tester, or a combined Cat  $6A/Class E_A$  copper and fiber certification tester. All models can be upgraded, eliminating the need to buy a new certification tester when your requirements change. The WireXpert 4500 premium model supports certifications up to 2,500MHz based on the latest Cat 8 standard and Class I & II standards.





certifies copper cabling up to 500MHz compliant with the relevant Class  $D/E/E_A$ , Cat 5e/6/6A standards. In addition to twisted-pair cabling, industrial Ethernet RJ45 and M12 D-coded as well as X-coded cabling systems, coaxial cabling and patch cords can be measured. The certifier exceeds Level IIIe accuracy requirements defined by ISO and TIA and displays the test results within seconds due to extremely short measuring times with the integrated autotest feature. Also available as a fiber version.



is the technologically advanced combination model for copper testing up to 500MHz according to the standards' Class D/E/E<sub>A</sub>, Cat 5e/6/6A requirements and for fiber-optic multimode and singlemode testing (850/1300nm and 1310/1550nm). WireXpert 4500 and WireXpert 500-PLUS are the only certification testers that support the test requirements of data centers, of building cabling and industrial Ethernet. The WireXpert 500-PLUS is compatible with all adapters and can be upgraded to 2,500MHz in support of Cat 8, Class I & II measurements.



enables certification of highest performance cabling systems in enterprise networks and data centers. An extremely fast measurement technology and an intuitive device operation ensure highly accurate and fast certification measurements. WireXpert 4500 was the first cable certifier of its class that is able and ready today to perform certification testing in compliance with new cabling standards such as ANSI/TIA Cat 8 and ISO/IEC Class I & II.



### WireXpert 500 Fiber-Only: Fiber certifier

The WireXpert 500 fiber-only certifier with its innovative design is especially made for customers to certify fiber cabling in a much faster and easier way. Whenever necessary, the WireXpert 500 can be upgraded to the WireXpert 4500, making your investment cost efficient and future-proof. It is available as a Multimode EF version, a Quad version (MMEF + SM), and also as an MPO version.

### **FEATURES**

- Performs Tier 1 certification compliant with ISO/IEC and ANSI/TIA-568.3-D standards
- Options available to certify length and loss for singlemode at 1310/1550nm and multimode EF cabling at 850/1300nm

Applications: (Upgrade available)

- Seamlessly integrates copper and fiber reports into eXport software, enabling users to generate professional certification test reports
- > Double your productivity with the DCS<sup>™</sup> technology by using each unit as an independent optical certifier

### MULTIMODE AND SINGLEMODE TEST KITS

WireXpert optical loss kits are available for both multimode and singlemode fiber networks. The modular solution allows testing both types of networks with the same WireXpert unit using interchangeable modules. Each individual module allows for very accurate loss and length measurements at two wavelengths in line with the various standard requirements. Both test kits support certification of horizontal and backbone cabling.

### MPO TEST KITS

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

### QUAD KIT

The WireXpert 500 Fiber Certifier is also available in a QUAD configuration. In this configuration, the fiber certifier will be shipped with a kit of multimode MMEF modules as well as singlemode modules.

Article Number	WireXpert 500 Fiber-Only
	Scope of delivery: 2 identical measurement units (Local and Remote) with Dual Control System – DCS™, 2 Li-Ion batteries, 2 power supplies, 1 calibration certificate, 1 eXport software, 2 talksets, 1 USB–Stick, 1 quick start guide, 1 soft carrying case
228145	<b>for Multimode Cabling</b> incl. multimode EF kit (Article no.: 228079)
228146	<b>for Singlemode Cabling</b> incl. 1 singlemode kit (Article no.: 228003)
228147	<b>for Multimode and Singlemode Cabling</b> incl. 1 multimode and singlemode kit (Article no.: 228079 + 228003)
228148	<b>for Multimode MPO Cabling</b> incl. 1 MPO test kit (Article no.: 228072)

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### CERTIFIER

# Wire X pert 500 plus

### WireXpert 500-PLUS: LAN Copper and Fiber Cable Certifier

The WireXpert 500-PLUS is conceived for copper and fiber certification and sets new standards for user friendliness. Both Local and Remote unit are equipped with a touch sensitive graphical user interface. The innovative design combines superior measurement accuracy and ease of use with low costs of ownership. The devices of the WireXpert 500 series support certification measurements up to a frequency of 500MHz and can be upgraded to the widest frequency range of up to 2,500MHz.



### **FEATURES**

- Combined 500MHz copper cable and MM + SM fiber optic certifier
- Most advanced certification measurements compliant with all standards: Class D/E/E<sub>A</sub>, Category 5e/6/6A
- > Measurement accuracy independently verified by ETL
- > Exceeds ISO and TIA Level IIIe accuracy requirements
- > Endorsed by companies worldwide

Applications: 🗘 🌔

- Many test adapters available, e.g. patch cord testing, industrial Ethernet, RJ45, MMC PRO
- Fiber certifications for MM fiber at 850 and 1300nm and SM fiber at 1310 and 1550nm
- > MPO multimode
- > Advanced reporting and documentation
- > The only certifier supporting all data center, premise cabling and industrial Ethernet measurement requirements

### EASY TO USE AND RUGGEDIZED DESIGN

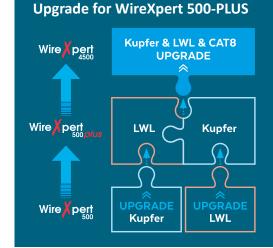
WireXpert comes with high resolution color LCD touch screens and an intuitive touch sensitive user interface, designed for industrial, heavy duty usage. The Dual Control System (DCS<sup>™</sup>) – featuring identical devices for Local and Remote units – makes it really easy to operate test cycles. Whether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

### FAST AND SIMPLE FOR HIGHEST PRODUCTIVITY

WireXpert completes a Cat  $6A/Class E_A$  and fiber certification test in a few seconds. It offers intuitive navigation through the device with screen menus and generates professional reports through the included eXport PC reporting software.

### WIREXPERT 4500 UPGRADE

You can upgrade your certifier up to 2,500MHz at any time, to perform measurements on twisted pair and coaxial cabling up to class D, E,  $E_A$ ,  $F_A$ , Class I, II and CAT 5e, 6, 6A, 7A and Category 8. The upgrade includes 1 year warranty, the software license for Category 8/Class I and II certification and a calibration certificate.



### Article Number

### WireXpert 500-PLUS

228144

Scope of delivery: 2 identical devices (Local and Remote) with Dual Control System - DCS<sup>™</sup>, 2 Li-Ion batteries, 2 power supplies, 1 calibration certificate, 1 eXport reporting software, 2 Cat 6A/Class E<sub>A</sub> Channel adapters, 2 Cat 6A/Class E<sub>A</sub> Permanent Link adapters, 2 talksets, 1 USB-Stick, 1 quick start guide, 1 soft carrying case Optional accessories: Digital Video Fiber Microscope (see page 50, Article Number 226539)

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### WireXpert 4500 is worldwide the most flexible cabling certifier up to category 8

Most advanced cable certification compliant with all standards: Class  $D/E/E_A/F/F_A$ , Category 5e/6/6A, and the new ANSI/TIA Cat 8 standard as well as ISO/IEC Class I & II standards.

The WireXpert is the first cable certifier with the capability to certify the highest performance cabling systems in enterprise networks and data centers. Network installers make significant gain in productivity with the WireXpert's industry leading test speed and intuitive operation enabling them quickly to perform accurate certification tests.

### **FEATURES**

- Cable certification up to 2,500MHz in support of the new ANSI/TIA Cat 8 standard and ISO/IEC Class I & II standards
- Most advanced cable certification for all standards: Class D/E/E<sub>A</sub>/F/F<sub>A</sub>, Category 5e/6/6A, and the new ANSI/TIA Cat 8 standard as well as ISO/IEC Class I & II standards
- > Fastest autotest in less than 9 seconds
- Measurement accuracy independently verified by ETL
- Meets and exceeds ISO/IEC level VI, V, IV, and Ille and TIA level 2G and Ille accuracy requirements

> Endorsed by more than 20 cable manufacturers worldwide

- Field upgradable with many options, e.g. patch cord testing, industrial Ethernet, Class F<sub>A</sub>, coax, fiber, MPO
- Supports extended fiber certification for 850/1300nm (multimode) and 1310/1550nm (singlemode)
- > First to support MPO fiber testing for data centers
- > Advanced reporting and documentation of cabling
- > The only certifier supporting all data center, premise cabling, and industrial Ethernet requirements

With certification testing of copper cabling up to Class  $F_A$  and Cat 8, as well as MPO, SM, and MM fiber optic cabling, the WireXpert is the only cabling certifier of its class that is ready for 40G and beyond.

### EASY TO USE AND RUGGEDIZED DESIGN

The WireXpert comes with an intuitive touch sensitive user interface and a high-resolution color LCD screen designed for industrial, heavy duty usage. The Dual Control System (DCS<sup>™</sup>) – featuring identical devices for the Local and Remote unit – makes it really easy to operate the test cycles. Whether coordinated by two technicians or only one, walking time between outlets is minimized.



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### CERTIFIER

## WireXpert 4500

### PROTECTS YOUR INVESTMENT: BEYOND 10G

If you are testing 10Gbit/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 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 VI requirements throughout the measurement frequency range.



WireXpert, with its industry leading measurement performance,

provides adapters for testing cabling systems with higher performance than Cat 6A (500MHz). For Class FA cabling, testing is performed over 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 is supported. Adapters are also available for testing Cat 7A patch cords. With measurement bandwidth exceeding 2,000MHz, WireXpert is capable of testing Class I, II and CAT8 cabling.



### PROVEN ACCURACY AND VENDOR APPROVALS

WireXpert meets and exceeds all accuracy requirements for cable certification. WireXpert has been independently verified by highly respected test laboratories such as ETL.

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 Cat 8 cabling systems under development.

Article Number

#### WireXpert 4500

228070

**Scope of delivery**: 2 identical devices (Local and Remote) with Dual Control System – DCS<sup>™</sup>, 2 Li-Ion batteries, 2 power supplies, 1 calibration certificate, 1 eXport reporting software, 2 Cat 6A/Class E<sub>A</sub> Channel adapters, 2 Cat 6A/Class E<sub>A</sub> Permanent Link adapters, 2 talksets, 1 USB-Stick, 1 quick start guide, 1 soft carrying case

Optional fiber adapters available

## FiberXpert **OTDR 5000**

### **Fiber Optic Cabling Certifier**

Designed with installers and operators of enterprise networks in mind, the FiberXpert OTDR 5000 measures, documents and troubleshoots fiber optic networks. The FiberXpert OTDR 5000 provides very high resolution with one of the shortest dead zones available for testing multimode and singlemode fibers, thus enabling measurement of very short fiber links. Automatic analysis simplifies the measurement tasks and lets you be the fiber expert.

### **FEATURES**

- > Optical Time Domain Reflectometer (OTDR) for 850/1300nm multimode or combined for 850/1300nm multimode and 1310/1550nm singlemode
- > Standards compliant Tier 2 measurement of fiber optic cabling
- > Automatic "Pass/Fail" analysis of the test results according to the limits specified by ANSI/TIA/IEC/ISO
- > Display of the OTDR trace in a graphical format for a length-dependent analysis of all events for reflection and attenuation

- > All fiber link events and analysis listed in a table
- > Automatic macro-bend detection
- > Built-in optical loss test set
- > Optional fiber inspection probe
- > Large color LCD touch screen
- > Generation of professional reports with eXport reporting software

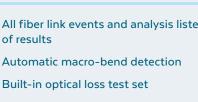
Featuring a high dynamic range and a small event dead zone, the FiberXpert OTDR 5000 is the tool for measuring short optical fiber links in company networks and data centers. With an event dead zone of less than 80cm, it is possible to detect connectors placed in close succession and measure them accurately. To reduce costs and resources, the FiberXpert measures with maximum resolution in the shortest possible time.

### EASY TO USE AND UNDERSTAND

The soft case and shoulder strap (included) leave your hands free to work. The measurement results are shown on the 5" touch screen and can be analyzed and saved easily on the device. The automatic "Pass/Fail" detection shows all detected events and indicates if the fiber can be used or needs to be reworked.

### 43

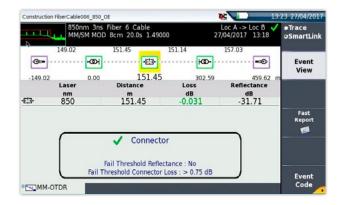
# Applications: 💬





### CERTIFIER

# FiberXpert OTDR 5000



### SMART LINK MAPPER

With the help of the symbol-based result display, a quick and easy assessment of the measured optical fibre is possible. The individual events on the route are marked with simple, logical symbols and can be selected individually to display detailed measured values for each event. You can choose at any time between Trace and SLM views. Both the SLM and the trace display are included with each device.

### ENHANCED MEASUREMENTS

In addition, the FiberXpert can measure the loss of the fiber, and with its built in power meter, it can show the output power of active components such as switches. An optional fiber microscope enables inspection of the quality of connector end faces, again performing an automatic "Pass/Fail" detection.

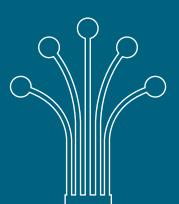
### ALL YOUR MEASUREMENT PROJECTS WITH ONE SOFTWARE PACKAGE

Ideally, both copper and fiber measurements should be documented in one software package. The eXport software supports both FiberXpert and WireXpert and all your measurement reports will be in the same format and in the same location.

Article Number	FiberXpert OTDR 5000	
	Scope of delivery: 1 main measurement unit, 1 Li-Polymer battery, 1 power supply, 1 soft case with shoulder strap, 1 hard carrying case, 1 calibration certificate, 1 eXport software	
226534	Quad Multimode/Singlemode incl. 1 SC compatible multimode module, 1 SC compatible singlemode module	
226535	Multimode inkl. 1 SC compatible multimode module	
226547	<b>Quad Pro Kit</b> 1 FiberXpert OTDR 5000 quad (226534), 1 Digital Video Fiber Microscope (see page 50, Article number 226539) and 1 Visual Fault Locator (see page 51, Article number 226546)	



# FIBER CABLE ADAPTER/ ACCESSORIES



### ADAPTER/ACCESSORIES

# MPO/MTP® Adapter

### Fast and accurate MPO/MTP® Cabling and Component Testing with the WireXpert Certifier

This MPO test solution enables data center IT managers, technicians and installers to get a quick and accurate assessment of the quality of MPO cabling. Additionally, it helps to perform incoming inspection of MPO components such as trunk cables, fan-out cables and cassettes. The key feature of this solution is a 5-second autotest that detects the fiber connection map and measures loss on each fiber.

### **FEATURES**

- > Tests MPO/MTP® using theWireXpert WX4500-F\_ cable certifier
- > MPO autotest in less than 5 seconds
- Reporting is integrated in eXport software together with standard single fiber and copper test results
- Tests MPO-to-SC/LC links for end-to-end loss measurement on individual fibers
- > Tests connectivity from MPO to individual fibers
- Allows configuring the number of active fibers in MPO, making it possible to test custom links, including 8-fiber links
- Automatically identifies connection type as type
   A, B, C or customized

- > Allows reference settings with any connection type
- > Displays absolute power level and loss on each fiber
- > The new MPO adapters for WireXpert enable testing of MPO/MTP® cabling. A typical test setup consists of the 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 links. This solution provides fast and accurate measurement of MPO link loss and testing against user configured limit

### Article Number

### MPO Multimode Test Kit for WireXpert

228072

Scope of delivery: 1 light source adapter (228093) & 1 power meter adapter (228094), 2 type A test cables "unpinned to pinned", length: 2m (228073), 2 Typ A adapter (228077), 1 type A reference cable "unpinned to unpinned", length: 0.5m (228074), 1 type B reference cable "unpinned to unpinned", length: 0.5m (228075), 1 MPO cleaning kit

# EF Multimode **Adapter**

### New Generation Multimode Fiber Adapters Add Full Standards - Compliant Fiber Certification

A light source and power meter are used to measure the power loss and length of optical cables at 850 and 1300nm. Certification of multimode fibers has often been a contentious issue due to the inherent uncertainties in the measurement process. ISO/IEC and ANSI/TIA have recently adopted an Encircled Flux (EF) standard that standardizes the launch condition for the light sources used in multimode test equipment. The WireXpert's new EF compliant adapters give you guaranteed compliance to the EF standard IEC 61280-4-1.

### **FEATURES**

- > Conform to the EF standard IEC-61280-4-1 and to IEC-14763-3
- > Rugged interchangeable SC, LC and ST adapters for the EF-kit
- > Improves reproducibility of measurements
- Reduces the variance in the measurement of the Insertion loss between laboratory and field instruments
- Troubleshooting with built-in Visual Fault Locator (VFL)
- > Validates fiber optics from various manufacturers

- > The "Encircled Flux" multimode adapters are used for the completely standard-compliant certification of Multimode cabling with OM1 to OM5 fibers used at 850 and 1300nm
- The TX side of the adapter is equipped with FC connectors and the RX side of the adapters is equipped with exchangeable connectors to connect SC and LC cabling to be able to test
- The standard kit is supplied with SC connectors. For measurement on LC cabling, LC cable and adapter kits are available

# Article NumberMultimode EF Adapter for WireXpert228079Encircled Flux Compliant Multimode Fiber Adapter Set for certification testing at 850nm and 1300nm<br/>wavelengths with dual wavelength source (850nm and 1300nm)<br/>Scope of delivery: 2 FC-SC modally transparent test cords, 2 SC-SC tail cords, SC), 1 cleaning kit228089LC Test Cord Kit for Encircled Flux Compliant Multimode Adapter<br/>Scope of delivery: 2 modally transparent FC-LC test cords, 2 LC-LC simplex tail cords,<br/>2 interchangeable LC adapters, 2 LC-LC duplex adapters228088Test Reference cord<br/>Scope of delivery: 2 modally transparent FC-SC test reference cords, 2 SC-SC tail cords

### ADAPTER/ACCESSORIES

# Singlemode **Adapter**

### WireXpert Optical Loss Test Kit -Fast and Intuitive Fiber Certification

WireXpert's singlemode fiber adapters offer unmatched performance in certification testing of fiber optic cabling. In addition to 6-second dual-ended, dual-wavelength certification testing, WireXpert provides intuitive graphical work-flow for bi-directional testing.

WireXpert makes the task of selection of set-reference method and test configuration straight-forward with the advantage of easy to follow graphical steps.

### **FEATURES**

- > Fast, 6-second autotest performs dual-wavelength certification testing
- > Intuitive selection of test configuration and reference setting
- > 1-, 2-, or 3- jumper referencing
- > Seamless reporting in eXport software together with copper test results
- > Automated standards based label creation
- > Light source and power meter functions converts WireXpert into two independent instruments
- > Certification single-fiber links in addition to duplex links
- > Loopback testing independently using WireXpert Local or Remote units, doubling the test capacity

### **Article Number**

#### Singlemode-Adapter for WireXpert

228003

Scope of delivery: 2 SM adapters with SC interfaces, 2 SC-SC duplex test cord, 1 SC-SC coupler, 1 cleaning kit

### FiberXpert Launch Cord

### Multimode and Singlemode launch cords neatly arranged and ready to use

FiberXpert launch cords ensure order in the measuring case. The launch cords are coiled gently and can be easily rolled up and stored. The fiber itself is protected and can be stored in the hard case of the FiberXpert OTDR 5000.

**FEATURES** 

- > Optimum protection for your launch cord
- > Multimode (150m) and singlemode launch cords (500m) available
- > Common connector combinations available (SC/SC, SC/LC, SC/ST)
- > Automatic roll-up in the PRO version

### **Article Number**

#### FiberXpert Launch Cord

400931/400935/400936 400933/400937/400938 400930/400939/400940 400932/400941/400942 Launch Fiber Pro multimode SC/LC/ST - 150m Launch Fiber Pro singlemode SC/LC/ST - 500m Launch Fiber Eco multimode SC/LC/ST - 150m Launch Fiber Eco singlemode SC/LC/ST - 300m

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### ADAPTER/ACCESSORIES

# Fiber Microscope

### **Digital Video Fiber Microscope for Connector Endface Inspection**

Before testing fiber-optic links and each time fiber optic connectors are mated, connector endfaces should be inspected and evaluated to avoid contamination that can cause degradation of network performance and destructive damage in the contact zone. The new fiber microscope provides for a quick and easy inspection of connector endfaces and an automated Pass/Fail analysis compliant with IEC 61300-3-35. The microscope is easily connected via USB with WireXpert or FiberXpert and the evaluation of connector endfaces can be added to the test reports.

### **FEATURES**

- > Inspection and evaluation of connector endface at the touch of a button
- > Automated analysis compliant with IEC 61300-3-35
- > Ease of use and quick analysis
- > Compatible with WireXpert and FiberXpert
- > Adapters for the most common fiber-optic connectors are included in the delivery

### Article Number

### **Digital Fiber Inspection Kit**

226539

Scope of delivery: I digital video fiber microscope, various tips suitable for all common connectors (SC-/FC-/LC-/U12M-/U25M), Adapter for the most common fiber optic connectors





### **Fiber Microscope**

# Visual Fault Locator

### VFL 5000: Fiber Optic Visual Fault Detector

The VFL 5000 is used for continuity testing and fault localization in optical fibers and components in singlemode and multimode applications. Depending on the application, a range of more than 5km can be achieved. A universal adapter allows connecting all common 2.5mm optical connector systems. An adapter for 1.25mm ferrules is also available. Battery life in flashing mode is approx. 40 hours.

### **FEATURES**

- > Detection of mechanical damage to the fiber
- > Fiber end detection
- > 1-, 2-, or 3- jumper referencing
- > Luminous range of 5km maximum (typical and under normal lighting conditions)
- > Generates visible laser light at a wavelength of approx. 635nm (red). With an output power of less than 1mW, the laser safety rating of the device is Class II (IEC 60825-1:2014)

Due to its compact and rugged design, the Visual Fault Locator is ideal for daily use in all fiber optic applications, e.g. in data centers, outdoors, in industrial environments, and in laboratories. The Visual Faul Locator from Softing IT Networks is designed with various practical features, such as its special, roll-resistant shape, its unlosable cap for dust and shock protection, and its extremely robust housing. The Visual Fault Locator provides easy one-handed use and is powered by AAA standard batteries. The practical belt loop allows for hanging the VFL 5000 at any time if required.

Article Number	Visual Fault Locator
226540	<b>VFL 5000 - Red Light Visual Fault Locator</b> <b>Scope of delivery</b> : 1 VFL 5000, highly ruggedized design, 1 dust cap, 1 battery pack (1 battery: VARTA Industrial Alkaline No. 4003; 1.5 V; AAA), 1 user guide
226542	Adapter Scope of delivery: 1 2.5mm to 1.25mm ferrule for VFL 5000
226546	VFL 5000 Set Scope of delivery: 1 VFL 5000, 1 adapter 2.5/1.25mm ferrule (includes 226540 + 226542), 1 dust cap, 1 battery pack (1 battery: VARTA Industrial Alkaline No. 4003; 1.5 V; AAA), 1 user guide

#### itnetworks.softing.com



# ETHERNET



# CableMaster 800/850

### **Cable Tester and Network Diagnostic Tool**

CableMaster 800 is a professional cable tester equipped with an RJ45 jack for network cables and an F-type connector for coaxial cables. The CableMaster 800 verifies the wire map, determines the cable length, and distance to fault. The results can be saved and documented using the PC reporting software. In addition, the CableMaster 800 offers many network diagnostics features for troubleshooting such as cable tracing, link detection up to 1Gbit/s, ping, network discovery, PoE/PoE+ tests, and much more. The CableMaster 800 is perfectly suited for professional installers and network operators who are challenged with testing and troubleshooting both network (RJ45) and coaxial cabling in active networks.

### **FEATURES**

- > Tests network and coaxial cables (RJ45 jack and F-type connector)
- > Displays wire map in graphical format for rapid troubleshooting
- > Determines cable length and distance to the cable fault performing a full TDR measurement
- > Cable/port identification using the cable/port Remote ID's
- > PoE/PoE+ detection and load test
- > Link test up to 1Gbit/s to identify link capability and current link status

documentation of the cabling, or for in-service troubleshooting of the network.

- > Pinging of individual or lists of IPv4 and IPv6 addresses as well as any URL on internet
- > Network Discovery creates lists of broadcasted devices
- > CDP/LLDP/NDP and VLAN discovery
- > High resolution, backlit color display for excellent readability in any environment
- with PC reporting software

software.

CABLE TESTING

### CableMaster 800 features extensive test capabilities for RJ45 network, telephone and coaxial cabling. Consisting of a main unit and a test/ID Remote, the CableMaster 800 is the perfect tool to test RJ45 cabling displaying the results in a wire map format on a full-color graphical display. It verifies continuity, tests for shorts, opens, reversals, miswires, and split pairs. Cable length and distance to the open/short will be determined using the integrated TDR (Time Domain Reflectometer).

The CableMaster 800 professional cable tester is highly versatile - whether during installation, to verify which outlet is connected to the appropriate port in the patch panel, after installation, for quality testing and

The test results are displayed on the full-color graphic screen in a clear and easy to understand way. Test results can be saved in the device and be exported to a PC for evaluation or documentation with the free PC reporting

Applications: 📿 🖵

> Generation of test reports and documentation



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### ETHERNET

# CableMaster 800/850

The CableMaster 800 features an integrated tone generator to send a modulated audible signal into the cable, which is detected by an optional tone probe used for cable tracing (unscreened unlabelled cables) and outlet/ port identification. Numbered cable ID Remotes allow the user to easily identify which outlet is connected to the appropriate patch panel port.

### NETWORK TESTING

CableMaster 800 enables rapid identification of network ports/outlets while displaying link capability and current link status. With added network discovery features, any broadcasted devices in the network can be discovered and displayed and saved as a list. Pinging individual or lists of IPv4 and IPv6 addresses as well as a URL will detect their availability.

### SAVE AND REPORT

Cable test results can be saved in the main unit and be exported to the PC reporting software via the USB cable included to create professional test reports.

Article Number	CableMaster 800
226520	<b>Scope of delivery</b> : 1 CableMaster 800 basic unit, 1 Remote unit, 2 RJ45 cable, 6 AA batteries, 1 micro USB cable, 1 pouch <b>Optional accessories</b> : Tone Probe, e.g. CP15 (Article Number 226007)
Article Number	CableMaster 850
226521	<b>Scope of delivery</b> : 1 CableMaster 800 basic unit, 1 Cable Probe CP15 (Article Number 226007), 8 network/telephone test and ID Remotes, 1 RJ45 cable/alligator clip, 20 coax identifier Remotes (1-20), 9 RJ45 cables, 6 AA batteries, 1 micro USB cable, 1 pouch





### The new generation of "Ethernet Speed Certification"

New standards defining data rates up to 10Gbit/s are big challenge for latest generation qualifiers. Particularly cabling for wireless access points has to support ever increasing data rates. In order to verify if the cabling installed is able to support the increased data rates, operators need to perform adequate testing before commissioning the network, to avoid any unpleasant surprises.

NetXpert XG enables you to meet the new challenges now!

### FEATURES

- > Tests data cabling for IEEE 802.3 compliance at data rates of up to 10Gbit/s (BERT) by determining signal-to-noise ratio (SNR) and performing Bit Error Rate Test (BERT)
- > Measures delay skew
- Combined length measurement performing TDR and capacitance measurements for highly accurate test results and easier troubleshooting even of shorts
- Full-color wire map shows opens, shorts, miswires, and split pairs in a clear and easy to understand way
- > Saves test results and generates standards-based measurement reports providing "Pass/Fail"
- > Supports IPv4 and IPv6

### Applications: CU FO D

- > Discover your network and see the connected network devices
- Identifies defective PoE switches with a PoE load test
- > DHCP test
- > Ping lists can be defined and saved for later use
- > LLDP/CDP detection and analysis
- > Identifies VLANs present in your network
- Data transfer from the tester to the PC using USB stick



### TEST FOR HIGHEST NETWORK SPEEDS WITH YOUR QUALIFIER

The new NetXpert XG verifies, if cabling channels support maximum transmission rates of up to 10Gbit/s, irrespective of cable categories, patch panels, or outlets installed. NetXpert XG provides a precise statement by automatically performing three individual tests which are combined into an overall test result.

By performing a sequence of various tests the NetXpert XG verifies error-free data transmission up to 10Gbit/s. Determination of Signal-to-noise ratio (SNR) followed by a Bit Error Rate Test (BERT) and delay skew test qualify Gigabit transmission. Delay skew indicates the signal time delay between the wire pairs used. Excessive delay can result in a serious degradation of transmission performance, making it impossible for the receiver to interpret the data stream correctly. Delay skew, just as the signal-to-noise ratio, are considered to be crucial parameters for a reliable data transmission.

### ETHERNET

### NetXpert **XG**

### TROUBLESHOOTING OF ACTIVE POE / POE+/++ NETWORKS

For active PoE network troubleshooting, NetXpert XG additionally offers a comprehensive tool set. This includes load tests for voltage drop to verify stability of PoE supplies, identification of the devices connected to the network, and detection of availability of priority devices.

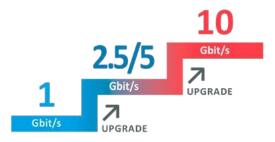
NetXpert XG offers sufficient internal storage even for large projects and, if required, generates complete standards-based test reports containing all the necessary information.

Extensive accessories turn NetXpert XG into the ultimate multitool – from locating individual cables with the built-in tone generator or the Remote Identifiers, to generating test documentation and in-service troubleshooting of PoE networks.

### INCLUDING PORTS FOR FIBER OPTIC MEASUREMENTS

The NetXpert offers full flexibility regardless of whether you are measuring fiber or copper cabling. Using its available SFP/SFP+ ports, various active fiber tests such as protocol detection (CDP/LLDP), network ping test and network discovery can be performed. In the area of passive tests, a throughput test of fiber optic cabling will also be possible.





### WELL-EQUIPPED FOR THE CHALLENGES OF THE FUTURE

NetXpert XG ensures a future-proof start into the new era of high-speed qualification. The NetXpert series offers simple firmware upgrades, and a license system allows for later upgrades to add new features.

There are 3 options (NetXpert 1G, NetXpert 2.5/5G and NetXpert XG). The purchase of an upgrade license always extends the functionality of the device one step upwards.

All wear parts (e.g. RJ45 jack) can easily and conveniently be replaced.

Article Number	NetXpert XG
	Scope of delivery: 1 NetXpert XG Main Unit, 1 Active Remote, 2 power supplies, 2 test cables, 1 hard case, 1 Micro USB adapter
226552	NetXpert XG - 10G
226553	NetXpert XG - 2.5/5G
226554	NetXpert XG - 1G
226555	One step upgrade license

### LanExpert **80**

### Handheld Gigabit Analyzer

The essential tool for LAN installers, technicians, and administrators.

The LanExpert 80 Network Analyzer is an essential tool for installing, monitoring, maintaining, upgrading or troubleshooting any network. The LanExpert 80 utilizes a color touch screen interface to access one of the most complete suites of test and analysis functions available in a portable test tool.

### **FEATURES**

- > Single port, dual port, and inline network analysis
- > Expert advice
- > Network connectivity tests
- > Packet capture and monitoring

 Cable tests - wire map, length and Power over Ethernet

LANEXPERT

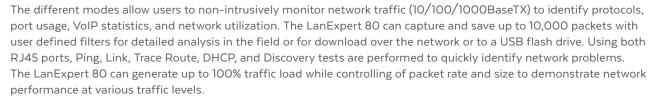
STRESS TEST

SETUP 1: Grand

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Applications: 모

- > Traffic generator
- > Stress test RFC 2544



Additionally, a stress test that generates traffic and measures performance metrics, in accordance with RFC 2544, is also provided. The stress test can be conducted using the two independent ports on a single unit or using a second unit located remotely on a network. PoE tests include voltage and inline current measurement to determine the actual power consumed by a powered device. The LanExpert also tests cables for shorts, opens, split pairs, reversed pairs, measures cable length and generates tones for cable tracing.

### Article Number

### LanExpert (LE80) - 2 x Fixed 10/100/1.000 BaseT Interface

226020

Scope of delivery: 1 handheld main unit with color touch screen, 1 pouch, 1 Remote terminator, 1 Memory Stick (contains manual and PC console software), 1 charger





# WIFI

# **WIFI**

### **PROFESSIONAL SOLUTIONS FOR WIFI NETWORKS**

**Basic structure** (signal strength, channel distribution)

Planning, surveying and design

**Documentation** 

Troubleshooting (troubleshooting disturbers and data analysis)

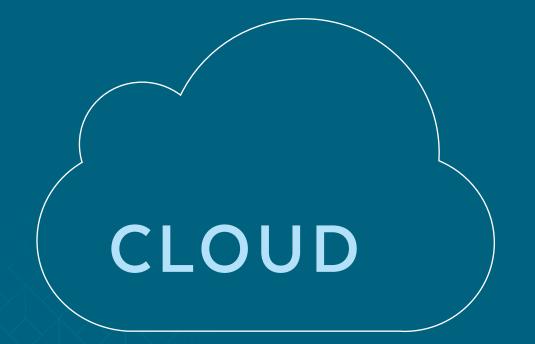
For more information about our WiFi product portfolio, please contact us at INFO.ITNETWORKS@SOFTING.COM







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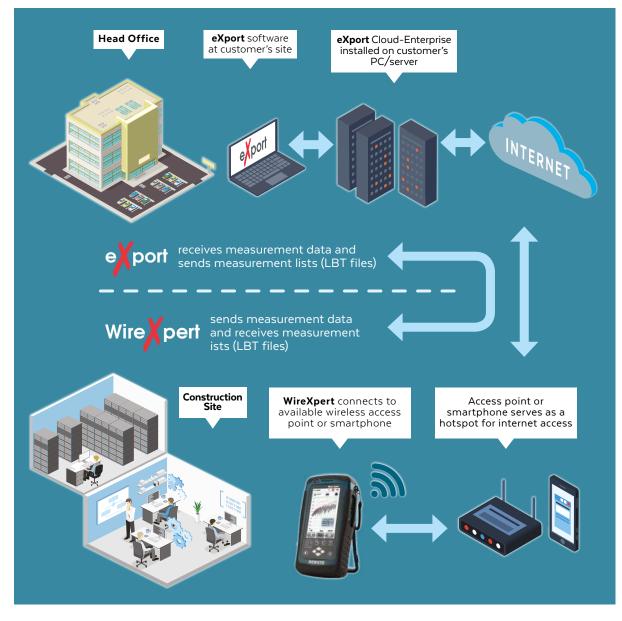


# e port Cloud Enterprise

### "CLOUD" CONNECTION FOR THE WIREXPERT SERIES TO ENTERPRISE NETWORKS

- > eXport Cloud Enterprise allows you to send back measurement data to your company via Wi-Fi and to download measurement lists for list based testing (LBT lists) from your company to the measurement devices. This enables project managers to control measurement tasks in a timely manner and get back the measurement results promptly.
- > Unique: eXport Cloud Enterprise is installed in your enterprise network and is therefore not dependent on a third party.
- > The customer owns the software, all measurement data are stored in your own network.

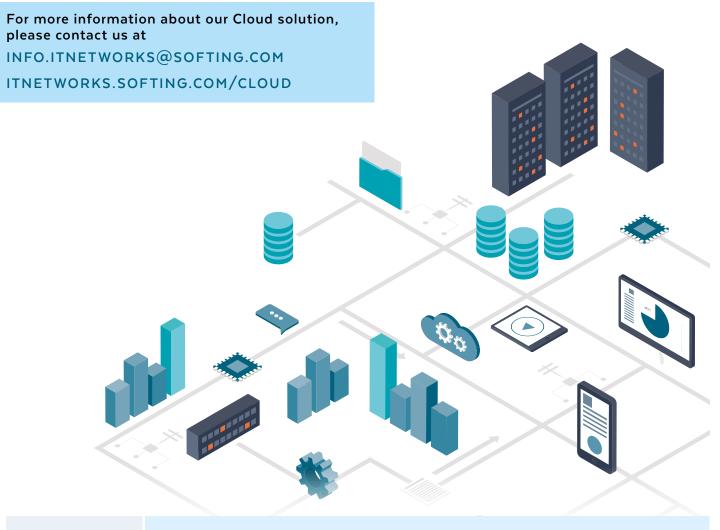
### FUNCTIONAL OVERVIEW



### CLOUD

# EXPORT CLOUD ENTERPRISE

- > There are no recurrent monthly costs, unlike with SaaS products (Software as a Service).
- > Only minimum hardware requirements on your enterprise network need to be fulfilled. The hardware required is a commercially available minicomputer or a laptop with Windows 10.
- > All WireXpert devices can be upgraded with this feature.
- > The WireXpert can use common access points or smartphones witha hot spot function to connect to the internet.
- > Any number of WireXpert devices or of users can be connected by an eXport Cloud Enterprise installation.



**Article Number** 

Single server license for eXport Cloud Enterprise

228233

Scope of delivery: Single server license for eXport Cloud Enterprise



# SERVICE

### SERVICE

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### Support Program for WireXpert

Considerable periods of downtime for a network cable certification device caused by unexpected defects can inconveniently delay project schedules and increase calculated maintenance costs. To keep these effects under control, Softing developed the XpertCare Support Program. It contains a complete package for annual calibration, maintenance (including a hire device in the event of an unexpected device failure) and replacement of wear parts for your WireXpert beyond the standard warranty.



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### THE XPERTCARE SUPPORT PROGRAM

To protect your investment, Softing IT Networks products in cable certifiers, require care and occasional maintenance. If you use your WireXpert constantly and are concerned about downtimes, Softing now offers you the XpertCare Support Program. Protect your investment beyond the standard warranty XpertCare.

### WHICH SERVICES ARE INCLUDED IN THE XPERTCARE SUPPORT PROGRAM?

### Annual calibration and inspection, including updating the device firmware

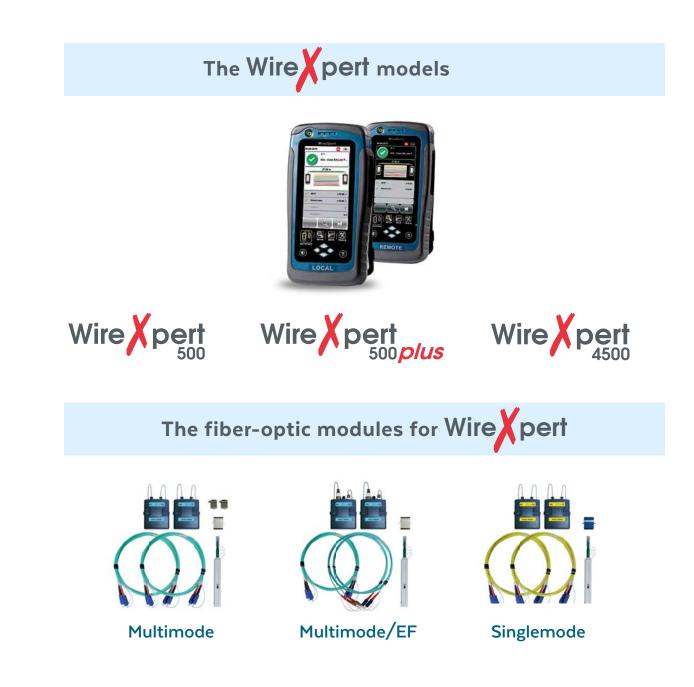
The XpertCare Support Program contains an annual recalibration of WireXpert devices (and fiber-optic modules where necessary) at the local Service Center, so that the required accuracy when measuring is always maintained. The calibration interval is dependent on the validity period of specifications and operational environment. The typical interval for LAN certification is one year. The last calibration date is stored in the device and can be printed on results report to guarantee to the customer at a glance that necessary accuracies are maintained. In addition, all accessories and functions of devices are checked in the Service Center and the device firmware is updated.

### Preferred handling in the case of repair, including loaner device during repair

If a user reports damage under the XpertCare Support Program, a loaner device is sent as quickly as possible, in order to minimize downtime at the jobsite. This is normally carried out within one working day. The loaner device arrives in a special transport case, which is then immediately used to return the defective device. The return documents are already enclosed with the consignment to ensure fast handling of the process.

### REPLACEMENT SERVICE FOR WEARING PARTS

Some accessories are subject to wear due to plugging in the connectors. These include the Channel Link adapters, Permanent Link adapters, and Permanent Link measurement cables. Batteries and headsets are also subject to wear. If these accessories are found to be defective or worn, a replacement will be provided. Up to 6 (six) individual parts can be exchanged per year under the XpertCare Support Program. Adapter and measuring cables are only available in pairs, which corresponds to two parts. In some cases, you may be asked to return the defective/worn accessory for inspection before the replacement is sent out.



### SERVICE

Extensive support program protects you from long downtime and unplanned repair costs

WireXpert				
1st year	2nd and 3rd year			
Repairs (covered under warranty)	Repairs			
Annual Inspection (checking and calibration)				
Wearing parts				
Loaner device				
WireXpert fiber-optic modules				
lst year	2nd and 3rd year			
Repairs (covered under warranty)	Repairs			
Annual Inspection				
Loaner d				

REMOTE

### HOW DO YOU ACCESS THE XPERTCARE SUPPORT PROGRAM SERVICES?

If your WireXpert requires unexpected repair service, please contact us in one of these ways:

- Please contact us by E-Mail: EMEA: support.itnetworks@softing.com, US: support@softing.us
- You contact us by telephone. Have your XpertCare number to hand for this. EMEA: +49 89 45 65 66 78, US: +1 865 251 52 44

### FOR WHICH DEVICES IS THE XPERTCARE SUPPORT PROGRAM AVAILABLE?

The XpertCare Support Program is available for all models in the WireXpert series and corresponding fiber-optic modules. The duration of the contract may be for a period of one, two or three years. Renewal within the period of validity is possible.

The best time to purchase a contract is when devices are newly ordered. Devices that have already been in the field for an extended period (> 90 days) must be inspected in the local Service Center before validation for the XpertCare Support Program and must have a valid calibration. The inspection is free of charge. Devices older than 5 years are not eligible for the XpertCare Support Program.

The XpertCare Support Program is not applicable in the case of intentional damage or misuse.

### WHAT DOES THE XPERTCARE CERTIFICATE CONTAIN?

The XpertCare certificate contains the agreement number, product details for the device, Softing's contact details and the period of validity. The document contains a removable, credit-card-sized contact card and enclosed device QR code sticker to enable Softing to be contacted quickly in the event of damage.

For more information about our XpertCare program please contact us by E-Mail: INFO.ITNETWORKS@SOFTING.COM

SERVICE



### Extend the warranty for your WireXpert

In the first year after the acquisition of a WireXpert/the appropriate modules, are covered by the Standard warranty, if defects should become apparent. Also save yourself in the subsequent years, with the unique "3-year warranty" extension program. Thus you receive the usual warranty services instead of 12 for 36 months.

This warranty extension is only valid at the moment of purchase and can be activated for a fee. The option is available for the WireXpert as well as for the WireXpert modules.

### WHAT SERVICES DOES THE 3-YEAR WARRANTY COVER?\*

When you purchase the warranty extension, you will receive a cheque booklet which will be the prove of the inspections which have been carried out.

You can buy an extension up to a maximum of 3 years. This extension can only be requested in the form of a warranty extension with the following conditions and scope:

- Purchasing the warranty extension
- Register your warranty extension with your data, the device data and the serial number by e-mail to info. itnetworks@softing.com and
- You send your device for an annual inspection (additional fees will be charged) to our Service Center

If a defect occurs in the three following years after the purchase of the WireXpert, you will be protected by your additional warranty.

### ANNUAL INSPECTION: CALIBRATION AND EQUIPMENT INSPECTION. INCLUDING FIRMWARE UPDATE

Condition for the warranty extension is the purchase of an annual inspection (additional fees will be charged) of the WireXpert-device (and the fiber optic modules, if applicable) in the local service center in order to always be able to comply with the references during measurement. The last calibration date is stored in the instrument and can be set to printed out in the results report, in order to ensure that the customer complies with the necessary accuracies. In addition, all accessories and functions of the units are checked in the service centre and updated with the latest firmware version.

<sup>\*</sup> Contrary to Clause 11.2 sentence 1 of the General Terms and Conditions of Softing IT Networks GmbH, the period within which you can assert your claims shall be one year, one year from delivery or acceptance and shall be extended thereafter by a further year to a maximum of 36 months from delivery or acceptance, with regard to the extended period of delivery or acceptance warranty period, provided that you (i) have not breached the subject matter of the contract or register with Softing IT Networks GmbH by e-mail and continue to do so at least until the expiration of the (ii) to keep the subject matter of the contract registered during the above warranty period in each year from delivery or acceptance, as the case may be, during the above warranty period in each year from the date of delivery or acceptance for this purpose, which must be paid for by Softing IT Networks GmbH, for an annual inspection (including inspection and calibration). In all other respects, the General Terms and Conditions of Softing IT Networks shall apply unchanged.

3-YEAR WARRANTY - OVERVIEW				
lst year	2nd and 3rd year			
Repairs (covered under warranty)	Repairs			
Inspection (additional fee required)				

### HOW DO I ACCESS THE FEATURES OF THE PROGRAM?

Should your WireXpert unexpectedly require repair service, please contact us by one of these means:

- Write us an e-mail at support.itnetworks@softing.com
- Contact us by phone and discuss the next steps: 089/45 646 660

### WHICH DEVICES ARE COVERED BY THE EXTENDED 3-YEAR WARRANTY?

The option of extending the warranty to 3 years is available for all models of the WireXpert series and the corresponding Fiber optic modules. The term of the contract can be concluded for a period of 2 years, building up to on the first year (standard warranty). The contract can only be concluded if the equipment is reordered. The warranty applies not in case of intentional damage or misuse.

### WHAT DOES THE 3-YEAR WARRANTY CERTIFICATE INCLUDE?

The 3-year warranty certificate contains the contract number, the product data of the devices, the contact data of the customer, the validity and contact details.

### WE ARE THERE FOR YOU!

Put your trust in the expert and reliable service of Softing IT Networks. We won't leave you alone: Our competent service team based in Haar near Munich is always there for you when you need technical support. We are known by our customers for this excellent service.

### For more information regarding our 3 years warranty extension please contact us: INFO.ITNETWORKS@SOFTING.COM



### EMEA

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