WX Series (WX4500)
Notices

No part of this manual may be reproduced in any form or by any means (including electronic storage and retrieval or translation into a foreign language) without prior agreement and written consent from Softing as governed by international copyright Laws.

Warranty

The material contained in this document is provided “as is,” and is subject to being changed, without notice, in future editions. Further, to the maximum extent permitted by applicable law, disclaims all warranties, either express or implied, with regard to this manual and any information contained herein, including but not limited to the implied warranties of merchantability and fitness for a particular purpose. Softing shall not be liable for errors or for incidental or consequential damages in connection with the furnishing, use, or performance of this document or of any information contained herein. Should Softing and the user have a separate written agreement with warranty terms covering the material in this document that conflict with these Terms, the warranty terms in the separate agreement shall control.

CAUTION

A CAUTION notice denotes a hazard.

It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in damage to the product or loss of important data. Do not proceed beyond a CAUTION notice until the indicated conditions are fully understood and met.

WARNING

Operating procedure, practice, if not correctly performed or adhered to, could result in personal injury or death. Do not proceed beyond a WARNING notice until the indicated conditions are fully understood and met.

General Safety Information

WARNING

Do not use the device if it is damaged. Before you use the device, inspect the casing. Look for cracks or missing plastic. Do not operate the device around explosive gas, vapor, or dust.

Always use the device with the cables provided.

Observe all markings on the device before establishing any connection.

Turn off the device and application system power before connecting to the I/O terminals.

When servicing the device, use only the specified replacement parts.

Do not operate the device with the cover removed or loosened.

Use only the power adapter provided by the manufacturer to avoid any unexpected hazards.
If the device is used in a manner not specified by the manufacturer, the device protection may be impaired.

Always use dry cloth to clean the device. Do not use ethyl alcohol or any other volatile liquid to clean the device.

Do not permit any blockage of the ventilation holes of the device.

**Environmental Conditions**

This instrument is designed for indoor use and in an area with low condensation. The table below shows the general environmental requirements for this instrument.

<table>
<thead>
<tr>
<th>Environmental conditions</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Temperature</td>
<td>0 °C to 40 °C</td>
</tr>
<tr>
<td>Operating humidity</td>
<td>20% to 85% RH non-condensing</td>
</tr>
<tr>
<td>Relative humidity</td>
<td>10% to 80%</td>
</tr>
</tbody>
</table>
EU Declaration of Conformity

We, Psiber Data Pte. Ltd.
3 Science Park Drive
#03-09, The Franklin
Singapore Science Park 1
Singapore
118223

declare under our sole responsibility that the products

Model / Description
WX4500-FA / WireXpert cable certifier 2500 MHz
WX500-CU / WireXpert cable certifier 500 MHz
WX_AD_VCL/MM1/MM2 / Multi mode fibre adapter
WX_AD_EF/MM1/MM2 / Multi mode fibre adapter (encircled flux compliant)
WX_AD_SM1/MM2 / Single mode fibre adapter
WX_AD_MM_MPO KIT/ SOURCE/PWRMETER / Multi mode MPO adapters

comply with the requirements of the following directives:

EMC directive 2004/108/EC (valid until April 19, 2016)
EMC directive 2014/30/EU (valid from April 20, 2016)

RoHS directive 2011/65/EU

Low Voltage Directive 2006/95/EC (valid until April 19, 2016)
Low Voltage Directive 2014/35/EU (valid from April 20, 2016)

Applied harmonised standards:

EN 55024 (2003-10): Information technology equipment – Immunity characteristics – Limits and methods of measurement


[Signature]
Simon Harrison
General Manager

[Date]
15/3/16

Template version 2.0

Document No: 3000-0004
## Contents

**Chapter 1: Getting Started** ........................................................................................................ 7

Unpacking the kit (WX_AD_MM_MPO_KIT) ............................................................................. 7

**Chapter 2: Configuring WireXpert** ..................................................................................... 8

WireXpert User Interface ........................................................................................................... 8

* TOUCH SCREEN LAYOUT .................................................................................................. 8

* THE ONE TOUCH ACCESS BUTTONS ........................................................................... 9

**Chapter 3: Setting Reference** .......................................................................................... 14

**Chapter 4: Configuring an Autotest** ................................................................................. 15

Testing Guide for 12-core MPO Testing. ............................................................................. 16

**Chapter 5: Performing an Autotest** .................................................................................. 17

Managing test result(s) ............................................................................................................ 18

Exporting test results into eXport PC Software ....................................................................... 20

**Technical Support** ........................................................................................................... 21
Chapter 1: Getting Started

Unpacking the kit (WX_AD_MM_MPO_KIT)

<table>
<thead>
<tr>
<th>Power Meter (Local) Adapter (WX_AD_MM_MPO_PWRMETER)</th>
<th>Type A Tail Cords (WX_AC_MM_MPO_TESTCORD)</th>
<th>MPO Cleaning Kit (WX_AC_MPO_CLEANING_KIT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light Source (Remote) Adapter (WX_AD_MM_MPO_SOURCE)</td>
<td>Type A Reference Cord (WX_AC_MM_MPO_REFCORD_A)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Type B Reference Cord (WX_AC_MM_MPO_REFCORD_B)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mating Couplers</td>
<td></td>
</tr>
</tbody>
</table>
Chapter 2: Configuring WireXpert

WireXpert User Interface

Touch Screen Layout
The Graphical User Interface (GUI) in version 7.0’s firmware has been updated with a more responsive system and quick-access menus.

WireXpert boots up to the SETUP screen. It is categorized into 5 groups:

1. Status bar
2. Channel Selector
3. Test Settings group
4. Project Settings group
5. System Settings group

1. The Status bar displays the current date, talkset and battery level.
2. The Channel Selector provides selection on which channel loss limit will be applied on a 12 core MPO cable during an AUTOTEST.
3. The Test Settings group provides results oriented configurations necessary to perform an AUTOTEST.
4. The Project Settings group provides non-results oriented configurations before performing an AUTOTEST.
5. The System Settings group settings provides device, time, localization and device related configurations. The Information group at the top provides hardware information such as the device Information (Local/Remote), name, battery level, etc.
The One Touch Access Buttons

The fundamental philosophy behind the WireXpert User Interface is simplicity in its ease of use. The main functions of the One-Touch access buttons as follows:

AUTOTEST

The “AUTOTEST” button will perform an immediate certification test on the last configured settings. If no settings were configured, default settings will be used.

Test results will be generated automatically after the test is completed.

You will receive any of the following 2 results after the “AUTOTEST”:

- Green “PASS” – Good test result in accordance to pre-defined settings.
- Red “FAIL” – Unacceptable results with severe disturbance on one or more test parameters.

You will be given the following option after performing an AUTOTEST:

- “Save” test results to device

An “AUTOTEST” will fail in the event of missing connection between the Local and Remote units, wrong settings configured, “dirty” end connectors or broken cables.
**MPO AUTOTEST results**

**Detailed loss results**

**Detailed polarity results**

*Note: Results are for illustration purposes only and do not represent suggested test values.*

**SETUP**

The “SETUP” button provides setting options necessary to conduct an AUTOTEST and configure the device.

These options include –

**Channel Selector**

Channel Selector provides selection on which channel(s) loss limit will be applied on during an AUTOTEST. Passed and failed result(s) will be indicated in green and red respectively. Deselected channels will be indicated in yellow.
**Test Settings**

Test Settings provides results oriented configurations necessary to perform an AUTOTEST.

**Network Limits**

Choose from 40GBASE-SR4 and 100GBASE-SR10 limit to perform MPO test. SR4 uses a single MPO ribbon with four strands to transmit and four strands to receive. SR10 uses a 24 strand MPO cable with ten strands to transmit and 10 strands to receive.

Custom Limit: Enter Loss Limit to perform custom limit test. Uncheck “Enable Polarity Check” to bypass polarity check for customized cable.

Channel Selector: Loss limit will be applied to selected channels during an AUTOTEST.
Cable
Select “Generic MMF” cable.

Connector
Select “Generic” connector.

Label Source
Refer to User Manual – WireXpert Copper Certification for more information.

List Based Testing
List based testing allows creation of label list in the eXport software on PC and then bring the list to WireXpert. It further allows easy selection of labels from the list to help technician select the cables to be tested quickly. This testing method is carefully optimized for typical test work-flow, and it significantly improves productivity.


Project Settings
Project Settings provides non-results oriented configurations before performing an AUTOTEST.

Refer to User Manual – WireXpert Copper Certification for more information on Project Settings.

System Settings
Refer to User Manual – WireXpert Copper Certification for more information.
DATA

The “DATA” button provides archive and data management ability to saved sites and test results. Saved test results can be renamed or deleted in this option.

Test results for MPO can be found in the “Others” tab.

Note: Deleting a site will also delete its containing test results.

TOOLS

The “TOOLS” button provides advanced options for in-depth troubleshooting and expert WireXpert users. These options include-

Set Reference – Establish test conditions between reference cords and cord to be tested to ensure low insertion loss using Power Meter and Light Source.

Power Meter – Measures the power loss from an 850nm wavelength light source.

Fiber Map – Performs test to verify mapping and absolute power of each channel.

Inspect Fiber – Performs visual verification of fiber’s quality using an external scope probe.

About – Displays worldwide contact information.
Chapter 3: Setting Reference

It is necessary perform a set reference measurement when reference cords or adapters are removed and re-attached. If there is a mismatch in firmware versions, WireXpert will deny Autotest. Please also check that calibration is not expired before testing.

1. Connect the unpinned end of the tail cords to the Local and Remote units.
2. Connect each pinned end of the tail cord to a connector.
3. Connect a Type A or Type B reference cord to the other end of the connectors.
4. Press the TOOLS button > Set Reference to begin set reference.

Reference cord type should be the same as the MPO cable to be tested.

Note: Results are for illustration purposes only and do not represent suggested test values.
Chapter 4: Configuring an Autotest

After configuring the system settings, follow these steps to set up an autotest.

1. Press the SETUP button > Project Settings
   a. **Site** – Create or select a Site
   b. **Operator** – Create or select an Operator
   c. **Label Source** – Select cable labelling scheme. Load labels from USB flash drive if using List Based Testing (LBT).
   d. **AutoSave** – Enable option for WireXpert to auto save every PASS result.

2. Press the SETUP button > Test Settings
   a. **Test Limit** – Select a test limit

   ![40Gbase-SR4](image1.png)
   ![100Gbase-SR10](image2.png)

   b. **Channel Selector** – Select Channel(s) of cable where loss limit will be applied
   c. **Cable** – Select “Generic”
   d. **Connector** – Select “Generic”

Please ensure you have the following components before conducting the test;

- WireXpert, Local & Remote units (WX4500)
- MPO Testing Kit (WX_AD_MM_MPO_KIT)
Testing Guide for 12-core MPO Testing

1. Replace the reference cord with the trunk cable of the same type to be tested. Please ensure the fiber cables are cleaned using the cleaning kit provided in the kit.

2. Toggle the light transmission on the Remote unit.

3. Press the AUTOTEST button on the Local unit to begin test.

CAUTION

Exercise caution when coupling MPO connectors. Always use a coupler when mating a pinned and unpinned connector. Mating two pinned connectors with a coupler will damage the pins.
Chapter 5: Performing an Autotest

Press the AUTOTEST button once settings and limits have been selected. WireXpert will use the last configuration or factory settings to perform the AUTOTEST if new settings are not configured.

WireXpert will display summarized result with PASS or FAIL once autotest is completed. Press the “Loss” or “Polarity” button to view the detailed result or the “Save” button to save the results.

Depending on the type of MPO cable is under test, Type A, B and C will return different results. By pressing the buttons in the lower right corner, test results displayed will toggle between absolute power, loss, polarity and fiber map of the MPO cable.

Type A MPO cable

Type B MPO cable
Type C MPO cable

**NOTE**

If 40GBase-SR4 or 100GBase-SR10 limits are selected, channels 5, 6, 7, 8 and 1, 12 will be deselected automatically.

Click on the parameter to display a more comprehensive individual result.

In detailed view, the absolute power and loss values can be displayed in grid or chart format and polarity can be displayed in simplified text or map format.

**Managing test result(s)**

Test results can be manually saved by pressing the “Save” button after an autotest is completed. When prompted, enter label name and click “OK” to save.
To view saved results,

1. Press the “DATA” button.
2. Select “Others” press the “View” button.
3. Select the test results click “View” button to view results.
4. Select the next page if for more results.

To delete a saved result,

1. Press the “DATA” button.
2. Select “Others” and press the “View” button.
3. Press the “Manage” button.
4. Select result(s) and press the “Delete” button to delete result(s).

To rename a saved result,

1. Press the “DATA” button.
2. Select “Others” and press the “View” button.
3. Press the “Manage” button.
4. Select result and press the “Rename” button to rename result.
Exporting test results into eXport PC Software

eXport is a data management software designed to work seamlessly with WireXpert.

Refer to User Manual – WireXpert Copper Certification for more information on exporting test results into eXport PC Software.

Refer User Manual – eXport for more information on how to use the software.
Technical Support

Worldwide Offices

Softing’s global presence ensures our customers receives sales and technical support anywhere around the world. For more information: http://itnetworks.softing.com

North America
Softing Inc.
7209 Chapman Highway
Knoxville, TN 37920
Phone: +1 865 251 5250
E-mail: info@softing.us

Asia / Pacific
Softing Singapore Pte. Ltd.
3 Science Park Drive
#03-09, The Franklin
Singapore Science Park 1
Singapore 118223
Phone: +65-6569-6019 ext. 105
E-mail: asia-sales.itnetwork@softing.com

Softing Shanghai
Room 208, Building 1, No 388, Tianlin Road
Xuhui District, 200233
Shanghai, China
Phone: +86-21-54133123
E-mail: china-sales.itnetwork@softing.com

Europe/Middle East/Africa
Softing IT Networks GmbH
Richard-Reitzner-Alle 6
D-85540 Haar, Munich
Phone: +49 89 45 656 660
E-mail: info.itnetworks@softing.com

Softing SRL
87 Rue du Général Leclerc
Creteil, Île-de-France
94000 (Paris)
Phone: +33 1451 72805
E-mail: info.france@softing.com

Softing Italia Srl.
Via M. Kolbe, 6
20090 Cesano Boscone (MI)
Phone: +39 02 4505171
E-mail: info@softingitalia.it