OneExpert Fiber

ONX-700

User Guide

Notice

Every effort was made to ensure that the information in this manual was accurate at the time of printing. However, information is subject to change without notice, and VIAVI reserves the right to provide an addendum to this manual with information not available at the time that this manual was created.

Copyright/Trademarks

Copyright release

Terms and conditions

Specifications, terms, and conditions are subject to change without notice. The provision of hardware, services, and/or software are subject to VIAVI standard terms and conditions, available at **www.viavisolutions.com/en/terms-and-conditions**.

Open Source Disclaimer - IMPORTANT READ CAREFULLY

The OneExpert includes third party software licensed under the terms of separate open source software licenses. By using this software you agree to comply with the terms and conditions of the applicable open source software licenses. Software originated by VIAVI is not subject to third party licenses. Terms of the VIAVI Software License different from applicable third party licenses are offered by VIAVI alone.

Federal Communications Commission (FCC) Notice

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by VIAVI could void the user's authority to operate the equipment.

CAUTION:

- This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. The End user must follow the specific operating instructions for satisfying RF exposure compliance.
- This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Innovation, Science and Economic Development Canada (ISED)

This device complies with Innovation, Science and Economic Development Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

Device operation in the band 5150–5250 MHz is only for indoor use.

Dans la bande de fréquence 5150-5250 MHz, l'utilisation du produit doit être uniquement en intérieur.

EU WEEE and Battery Directives

This product, and the batteries used to power the product, should not be disposed of as unsorted municipal waste and should be collected separately and disposed of according to your national regulations.

VIAVI has established a take-back process in compliance with the EU Waste Electrical and Electronic Equipment (WEEE) Directive, 2012/19/EU, and the EU Battery Directive, 2006/66/EC.

Instructions for returning waste equipment and batteries to VIAVI can be found in the WEEE section of the VIAVI Standards and Policies web page.

If you have questions concerning disposal of your equipment or batteries, contact the VIAVI WEEE Program Management team at **WEEE.EMEA@ViaviSolutions.com**.

EU REACH

Article 33 of EU REACH regulation (EC) No 1907/2006 requires article suppliers to provide information if a listed Substance of Very High Concern (SVHC) is present in an article above a certain threshold.

For information on the presence of REACH SVHCs in VIAVI products, see the **Hazardous Substance Control** section of the VIAVI Standards and Policies web page.

EU CE Marking Directives (LV, EMC, RoHS, RE)

This product conforms with all applicable CE marking directives. For details, please see the EU Declaration of Conformity documentation included in the shipping package and available on StrataSync.

China RoHS

China RoHS documentation is included in the shipping package and available on StrataSync.

California Proposition 65

California Proposition 65, officially known as the Safe Drinking Water and Toxic Enforcement Act of 1986, was enacted in November 1986 with the aim of protecting individuals in the state of California and the state's drinking water and environment from excessive exposure to chemicals known to the state to cause cancer, birth defects or other reproductive harm.

For the VIAVI position statement on the use of Proposition 65 chemicals in VIAVI products, see the **Hazardous Substance Control** section of the VIAVI Standards and Policies web page.

Compliance with 2014/53/EU Radio Equipment Directive (RED)

In accordance with Article 10.8(a) and 10.8(b) of the RED, the OneExpert DSP instruments for sale in the EU operates in the 5-205 MHz frequency range at a maximum RF transmit power of +15dBm.

Please contact us for more information:

VIAVI Solutions

1445 South Spectrum Boulevard, Suite 102

Chandler, AZ 85286

United States

Compliance with 2014/53/EU Radio Equipment Directive (RED) (continued)

Frequency range (MHz)	Max. Transmit Power (dBm/mW)
2400-2483.5.	802.11b: 18 dBm@11 Mbps 802.11g: 16 dBm@54 Mbps 802.11gn (HT20): 14 dBm@MCS7 802.11gn (HT40): 13.5 dBm@MCS7 802.11ax (HE40): 11.5 dBm@MCS11 802.11be (EHT40): 11 dBm@MCS13 BT: (Class I Device) BR :10 ≤ Output Power ≤ 16 dBm EDR :7 ≤ Output Power ≤ 13 dBm BLE 1M/2M : 2 ≤ Output Power ≤8 dBm
5150-5350; 5470-5850; 5850-5925	802.11a: 15 dBm@54 Mbps 802.11an (HT20): 14 dBm@MCS7 802.11an (HT40): 13.5 dBm@MCS7 802.11ac (VHT40):12.5 dBm@MCS9 802.11ac (VHT80):12 dBm@MCS9 802.11ax (HE20): 12 dBm@MCS11 802.11ax (HE40): 11.5 dBm@MCS11 802.11ax (HE80): 11.5 dBm@MCS11 802.11ax (HE160): 11.5 dBm@MCS11 802.11be (EHT20): 11 dBm@MCS13 802.11be (EHT40): 11 dBm@MCS13 802.11be (EHT80): 11 dBm@MCS13 802.11be (EHT160): 11 dBm@MCS13
5925-7.125	802.11ax (HE20):11 dBm@MCS11 802.11ax (HE40): 10.5 dBm@MCS11 802.11ax (HE80): 10.5 dBm@MCS11 802.11ax (HE160): 10.5 dBm@MCS11 802.11be (EHT20): 10 dBm@MCS13 802.11be (EHT40): 10 dBm@MCS13 802.11be (EHT80): 10 dBm@MCS13 802.11be (EHT160): 10 dBm@MCS13 802.11be (EHT320): 9 dBm@MCS13

Precautions

WARNING:

The maximum "RF" input voltage to the meter is 125 Volts (AC or DC). A larger voltage will damage the meter.

WARNING:

Pursuant to FCC 15.21 of the FCC rules, changes not expressly approved by VIAVI might cause harmful interference and void the FCC authorization to operate this product.

CAUTION:

Do not use the instrument in any manner not recommended by the manufacturer.

CAUTION:

A strong electromagnetic field may affect the measurement accuracy of the meter.

Precautions (continued)

CAUTION:

Use only the battery charger supplied with the meter. Use of any other charger may damage the battery.

NOTE:

All spent batteries should be disposed of according to local laws and guidelines.

Contents

About this Guide

Thank you for purchasing the ONX-700. This guide provides setup and operating instructions to get you up and running as soon as possible.

Purpose and scope

The purpose of this guide is to help you successfully use the product features and capabilities. Additionally, this guide provides a complete description of the VIAVI warranty, services, and repair information.

Assumptions

This guide is intended for novice, intermediate, and experienced users who want to use the product effectively and efficiently. We are assuming that you have basic computer and mouse/track ball experience and are familiar with basic telecommunication concepts and terminology.

Technical assistance

If you require technical assistance, call 1-844-GO-VIAVI / 1.844.468.4284.

Outside US: +1-855-275-5378

Email: **CATVsupport@viavisolutions.com**

For the latest TAC information, visit

https://support.viavisolutions.com

https://www.viavisolutions.com/en/services-and-support/support/technical-assistance

Safety and compliance information

Safety information is contained in a separate guide and is provided in printed format with the product.

For information about CE compliance, see the Declaration of Conformity. A copy of the declaration is included in the shipping package.

Conventions

This guide uses typographical and symbols conventions as described in the following tables.

Typographical conventions

Description	Example
User interface actions	On the Status bar, click **Start**.
Buttons or switches that you press on a unit	Press the **ON** switch.
Code and output messages	All results okay
Text you must type exactly as shown	Type: ***a:\set.exe*** in the dialog box
Variables	Type the new ***hostname***.
Book references	Refer to ***Newton's Telecom Dictionary***
A vertical bar | means "or": only one option can appear in a single command.	platform [a|b|e]
Square brackets [ ] indicate an optional argument.	login [platform name]
Slanted brackets < > group required arguments.	<password>

Keyboard and menu conventions

Description	Example
A plus sign + indicates simultaneous keystrokes.	Press **Ctrl+s**
A comma indicates consecutive key strokes.	Press **Alt+f,s**
A slanted bracket indicates choosing a submenu from menu.	On the menu bar, click **Start > Program Files**.

Symbol conventions

This symbol indicates a note that includes important supplemental information or tips related to the main text.

This symbol represents a general hazard. It may be associated with either a DANGER, WARNING, CAUTION, or ALERT message. See the *"Safety definitions" on page 18* for more information.

This symbol represents an alert. It indicates that there is an action that must be performed in order to protect equipment and data or to avoid software damage and service interruption.

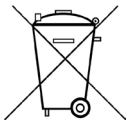
This symbol represents hazardous voltages. It may be associated with either a DANGER, WARNING, CAUTION, or ALERT message. See the *"Safety definitions" on page 18* for more information.

This symbol represents a risk of explosion. It may be associated with either a DANGER, WARNING, CAUTION or ALERT message. See the *"Safety definitions" on page 18* for more information.

This symbol represents a risk of a hot surface. It may be associated with either a DANGER, WARNING, CAUTION, or ALERT message. See the *"Safety definitions" on page 18* for more information.

Symbol conventions (continued)

This symbol represents a risk associated with fiber optic lasers. It may be associated with either a DANGER, WARNING, CAUTION or ALERT message. See the ***Safety Definitions*** below for more information.



This symbol, located on the equipment, battery, or the packaging indicates that the equipment or battery must not be disposed of in a land-fill site or as municipal waste, and should be disposed of according to your national regulations.

Safety definitions

Term	Description
DANGER	Indicates a potentially hazardous situation that, if not avoided, will result in death or serious injury. It may be associated with either a general hazard, high voltage, or other symbol.
WARNING	Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury. It may be associated with either a general hazard, high voltage, or other symbol.
CAUTION	Indicates a potentially hazardous situation that, if not avoided, could result in minor or moderate injury and/or damage to equipment. It may be associated with either a general hazard, high voltage, or risk of explosion symbol. When applied to software actions, indicates a situation that, if not avoided, could result in loss of data or a disruption of software operation.
ALERT	Indicates that there is an action that must be performed in order to protect equipment and data or to avoid software damage and service interruption.

What ships with the ONX-700

When you unpack the OneExpert, the following items are included as standard.

You can also find the Quick Start Guide at ***www.viavisolutions.com.***

- ONX-700 unit
- Battery (installed in the unit)
- AC power adapter & battery charger
- Fitted carrying case/glove
- Safety information sheet

Preparation for use

This section explains how to start using the ONX. When you unpack your instrument, do the following:

- Inspect the unit for damage. If the instrument is damaged, put it back in the box and contact VIAVI customer service (see ***"Technical assistance" on page 15***).
- If undamaged, save the box and packing materials in case you need to ship the instrument in the future.
- Remove the protective film from the LCD. This film is in place to protect the LCD during shipment. Use the tab in the lower right corner to easily remove the film.

Before using the instrument for the first time, do the following:

- Turn the ONX on (use the green button on the front of the instrument), and then verify it is operating properly by navigating through a few menus.
- If the **Power** indicator is red, charge the battery.

Available models

The ONX-700 is available in Base, Plus, and Pro models. See the datasheet for details and available replacement parts and accessories.

NOTE:

For additional information about OneExpert options and services, contact your local VIAVI representative or visit www.viavisolutions.com.

NOTE:

This hand-held instrument is not intended to be body worn, or operated while held against the body.

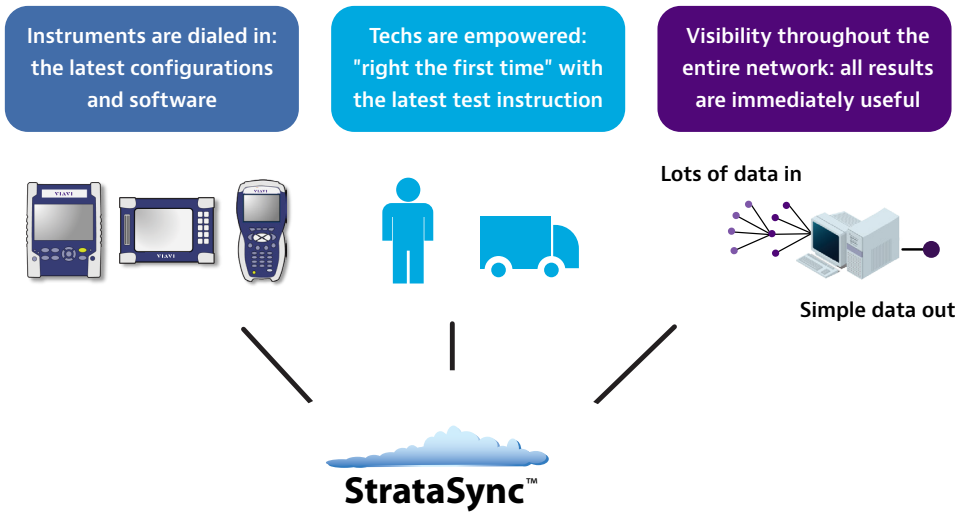
About the StrataSync System

StrataSync is a hosted, cloud-based software application that provides asset, configuration, workflow, and test data management for a wide range of VIAVI Solutions instruments.

StrataSync manages inventory, test results, and performance data anywhere with browser-based ease and improves technician and instrument efficiency.

StrataSync features

- **Updates and Options** – Field personnel operate at maximum capability and efficiency by knowing immediately when firmware upgrades and instrument options are available. They receive proactive, application-aware notifications, and distribution is managed for specific groups or individuals.
- **Asset and Configuration Management** – Enterprise-wide standardized templates to ensure instruments are aligned to a specific configuration. StrataSync lets users monitor and update asset data, modules, configurations, test plans and scripts, templates, and groups, ensuring technicians consistently have the right instrument configurations when performing tests—increasing first-time success rates and reducing repeat rates.
- **Test Data Management** – A common test data repository makes baselining performance practical, and enables the analysis of network trends for proactive maintenance, improved reliability, and customer satisfaction. StrataSync performs file storage, printing, and exporting, and provides clear dashboards and basic reports.
- **Workflow** – Automatically track whether assigned jobs are being completed and their pass/fail status. Results can be viewed per technician, per region, per subcontractor, or however you like.



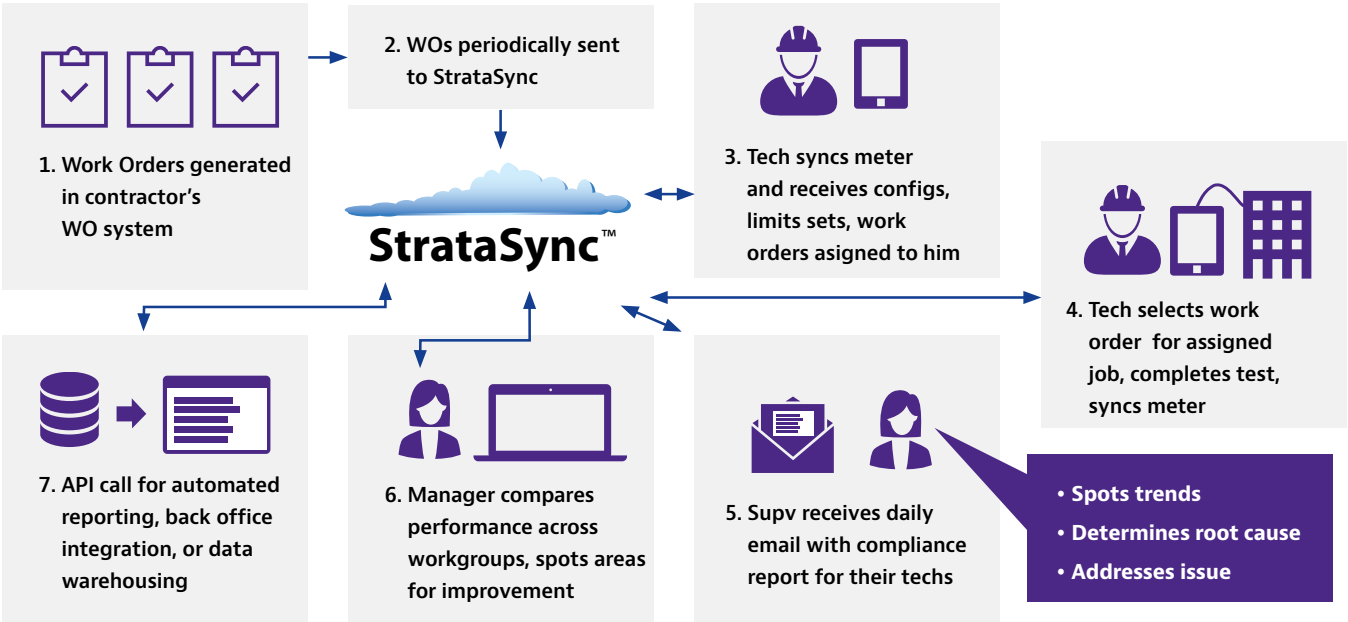
Asset management

StrataSync asset management provides a single, intuitive way to monitor and upgrade assets in the field and office. An administrator can quickly identify out-of-date and under-utilized test sets and target updates and the reallocation of assets. With StrataSync, registration identifies which test units are assigned to each technician. StrataSync tracks each test-set sync with the server, making utilization and test practices visible. Post-analysis of compliance and technician activity provides near real-time coaching opportunities.

Upgrades can be applied automatically during the normal work order process, as technicians use their test sets in the field. This dramatically reduces the amount of time spent in the work center determining the fit-for-purpose status of the test set, identifying upgrade requirements, and then manually upgrading the test set.

Test data management

StrataSync collects and stores test data in a central location, enabling viewing and sharing of test data results. Often, data is not centrally collected and its long-term value is underrated. The causes of repeat truck rolls are obscure, and data from previous tests is not available or is not analyzed. With StrataSync, critical plant-performance information is stored in a secure location, enabling proactive problem-area identification. Test data is also accessible via an API to simplify automated retrieval.

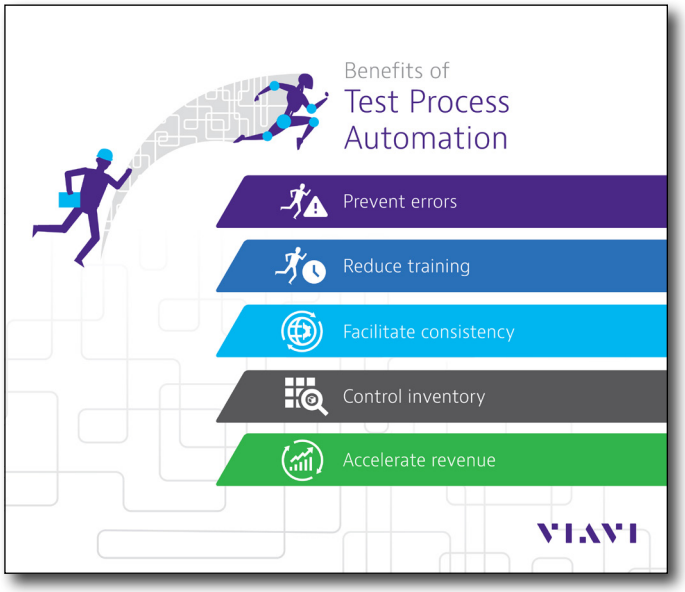


About Test Process Automation (TPA)

Test Process Automation (TPA) is a cloud-based workflow solution for teams that build, test, and deploy network services.

Powered by StrataSync, TPA connects teams and their test instruments together to ensure alignment, efficiency, and accuracy at every stage of a job.

TPA leverages an ecosystem consisting of 3 parts (StrataSync, VIAVI Mobile Tech, & VIAVI test instruments), each designed to equip team members with the information and resources they need to complete jobs with real-time visibility from start to finish.



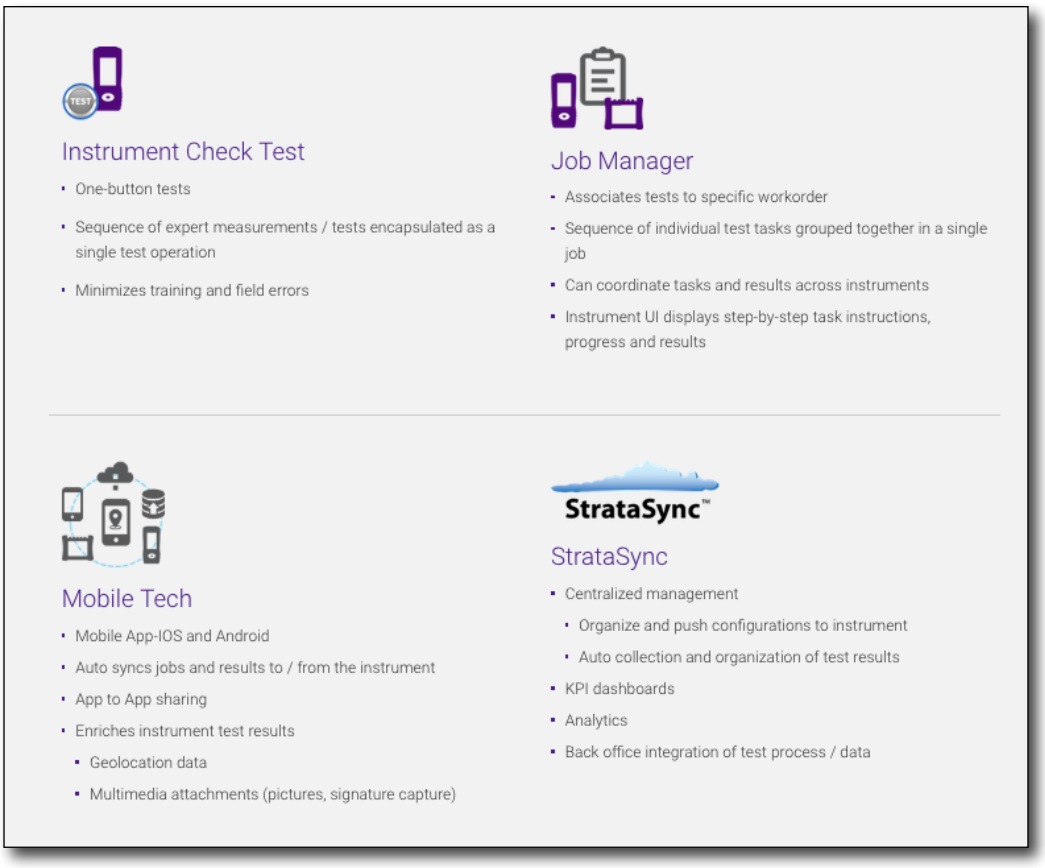
Features

- Ensure consistent and efficient operational workflows
- Automate flow of information throughout your testing ecosystem
- Design & assign jobs directly to field technicians
- Use throughout life cycle: Construction > Service Activation > Maintenance > Upgrade
- Delivering quality results every time
- Common data model, creating common rules for how things are done.
- Speed revenue cycles with real-time results and automatic report generation
- Efficiently manage inventory and software versions
- Reduce administrative work
- Save money by reducing operational costs
- Automated recording
- Streamline test results collection to a centralized test data repository

TPA is a licensed feature. Contact ***TAC@viavisolutions.com.***

For complete details on TPA, see the ***Cloud Services User Guide.***

- **Simplify the field-testing experience for fiber technicians**
  - Reduce manual test processes and data entry - minimizing human error and increasing the scale of network deployment
  - Same user experience across multiple devices.
  - Reduce training needs with guided test processes with the availability of remote expert help
  - Provide objective evidence of proper job completion with a closed-loop test process
  - Collect and present information to allow customers to analyze the job, team, process, project, network, etc.
  - Speed acceptance and get paid faster
- **Reduce administrative work**
  - Save money by reducing operational costs
  - Automated recording
  - Streamline test results collection to a centralized test data repository



About the VIAVI Mobile Tech app

Several VIAVI instruments are designed to be paired with a mobile device or tablet (such as an iPhone, iPad, or similar Android device), and leverage the user interface of those devices along with the **VIAVI Mobile Tech App** to provide a smooth user experience.

Mobile Tech

You can view test results, set up the instrument, sync files, update the meter, and configure test parameters from the app.

To get started, download the VIAVI Mobile Tech app from your App Store.

For complete details, see the *Cloud Services User Guide.*

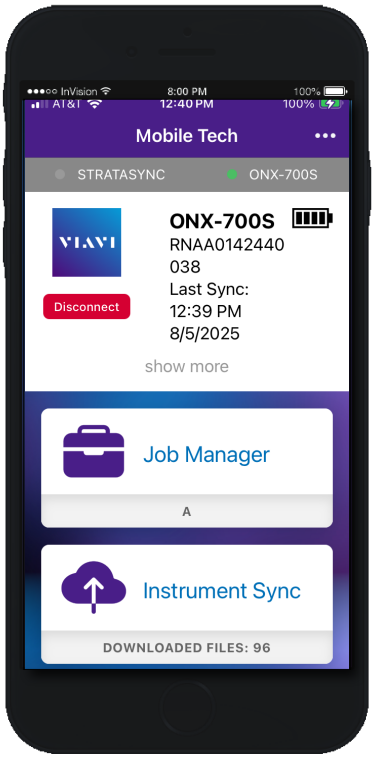
Connecting to StrataSync

You can connect to StrataSync using your smart phone or tablet anytime, anywhere using the VIAVI Mobile Tech app, the 10G Ethernet port, WiFi, or management port.

Once your instrument is connected to the Mobile Tech app via Bluetooth or WiFi, geo location information can be added to reports and files when syncing to StrataSync. If configuration files or work orders are set to be deployed from StrataSync to your meter, you can check those here, as well as browsing files from the unit itself.

Download on the App Store

GET IT ON Google Play



1

Quick Tour

This chapter provides an overview of the unit, status indicators, connectors, and user interface, including the following:

About the ONX-700

The VIAVI ONX-700™ is an installation/service meter that empowers techs with the simplest, most comprehensive, and fastest service activation test and troubleshooting solution, simplifying 10 G service deployments over PON like never before.

Comprehensive Tools Increase Productivity

We built expertise into OneExpert Fiber so technicians at any skill level can quickly verify and optimize performance. With a modular platform that adapts easily to rapidly changing technologies, OneExpert Fiber is:

- Simple — One button OneCheck tests for PON, Ethernet, and WiFi integrate with VIAVI TPA to make any technician an Expert
- Fast — Integrated service testing up to 10Gbps over Ethernet, Fiber, and WiFi 7 validates all of the latest 10G services in less than a minute
- Fiber — Integrated Optical Power Meters, VFL and Fiber Inspection scope support, lets technicians confidently install and troubleshoot PON services

Benefits

- **Rapid Multi-Gig Service Validation** – Confirms Ethernet, PON, and WiFi 7 performance up to 10 Gbps in under a minute
- **Streamlined Technician Workflows** – VIAVI TPA guides users through standardized procedures, ensuring consistent results and reducing training overhead
- **Reduced Repeat Visits** – Comprehensive testing at the point of install minimizes callbacks and accelerates last-mile service delivery
- **Modular Upgrade Path** – Supports future technologies like 25G/50G PON, making it a scalable investment for evolving network demands

Features

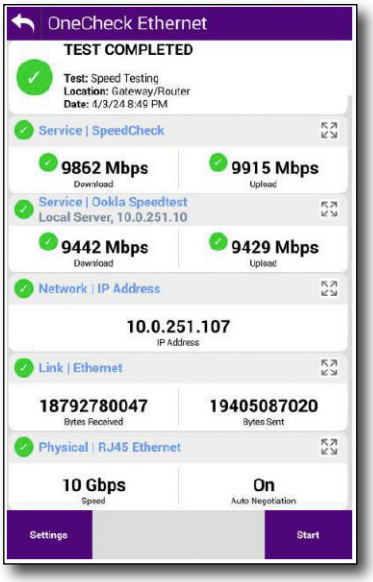
- **Unified OneCheck Workflow** – Automates pass/fail testing for Ethernet, WiFi, and PON with Geo Tagged saved results and minimal training
- **TruePON + PON Emulation** – Verifies PON-ID, loss, ODN Class and power levels; emulates ONT for throughput on GPON/XGS-PON using VIAVI SFPs
- **Precision Optical Power** – Measures coexistent wavelengths and broadband power. Support for GPON/XGSPON/25GPON/50GPON
- **Built-In Fiber Tools** – VFL and fiber scope support with Auto Analysis and defect detection for fast troubleshooting
- **Smart Access Anywhere** – Provides remote coaching and training on any network via PC or mobile
- **Rugged, Modular, Connected** – IP54-rated, upgradeable for 25G/50G PON, with GPS, StrataSync, and mobile app support. High-capacity battery for multi-day use

Connected

- Complete connectivity with the VIAVI MobileTech app via the technician's mobile device
- Real-time data connection updates supervisors and back office systems
- Provides complete information tracking that couples work orders to jobs and enables geotagging for validation of customer visits

Flexible and affordable

- Minimize expense by matching test capabilities to current needs, then changing as needed as part of software/service/support plans
- Expand meter functionality as the technician advances, adding new capabilities as needed
- Built-in support for fiber optic inspection and power measurements, along with home network integrity testing



OneCheck Ethernet dashboard

Efficient

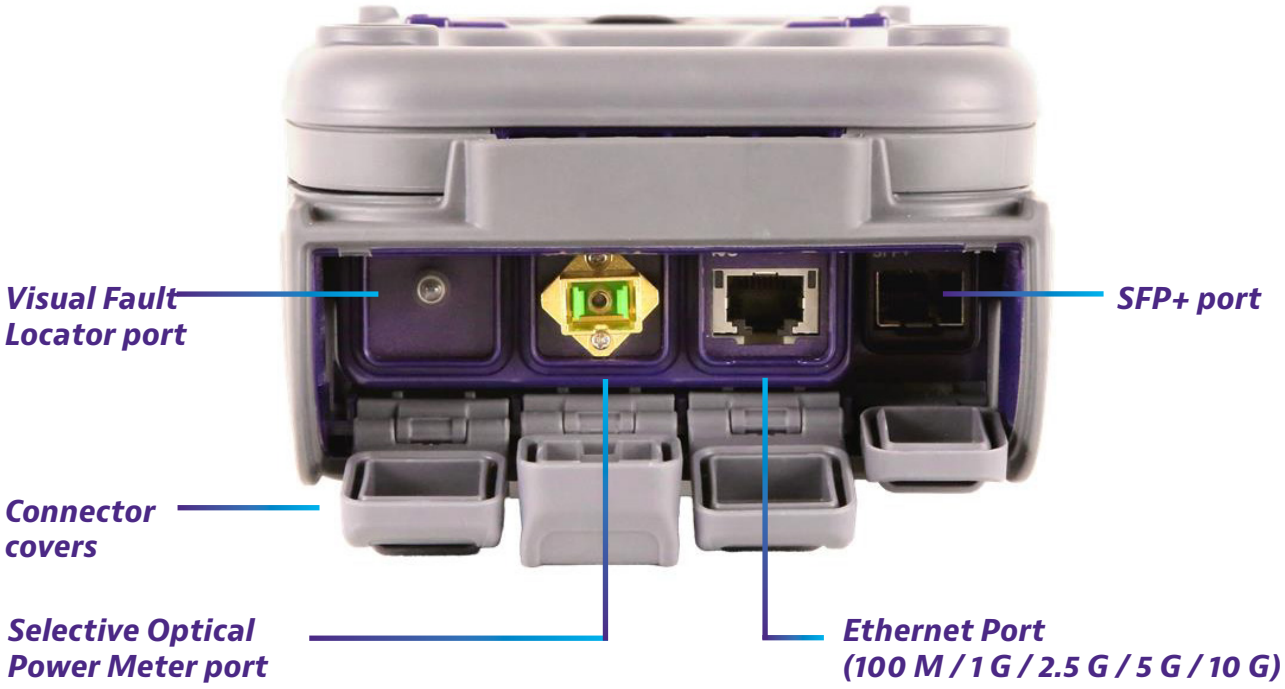
- Simple icon-based UI with capacitive touch screen control is easy for new technicians to learn
- Powerful measurement dashboards with simple Pass/Fail results for novice technicians while advanced techs can drill down for more detailed measurement results
- Technicians can quickly identify and resolve issues without needing years of field experience
- Powerful processing for faster measurements and complete autotest results in less than two minutes
- Works right out-of-the-box with each unit being factory synced to the customer's StrataSync account, so any configurations and limits are automatically configured upon arrival

A guided tour of the ONX-700

Front view

Top view

ONX-700 PON (with Selective Optical Power Meter port)

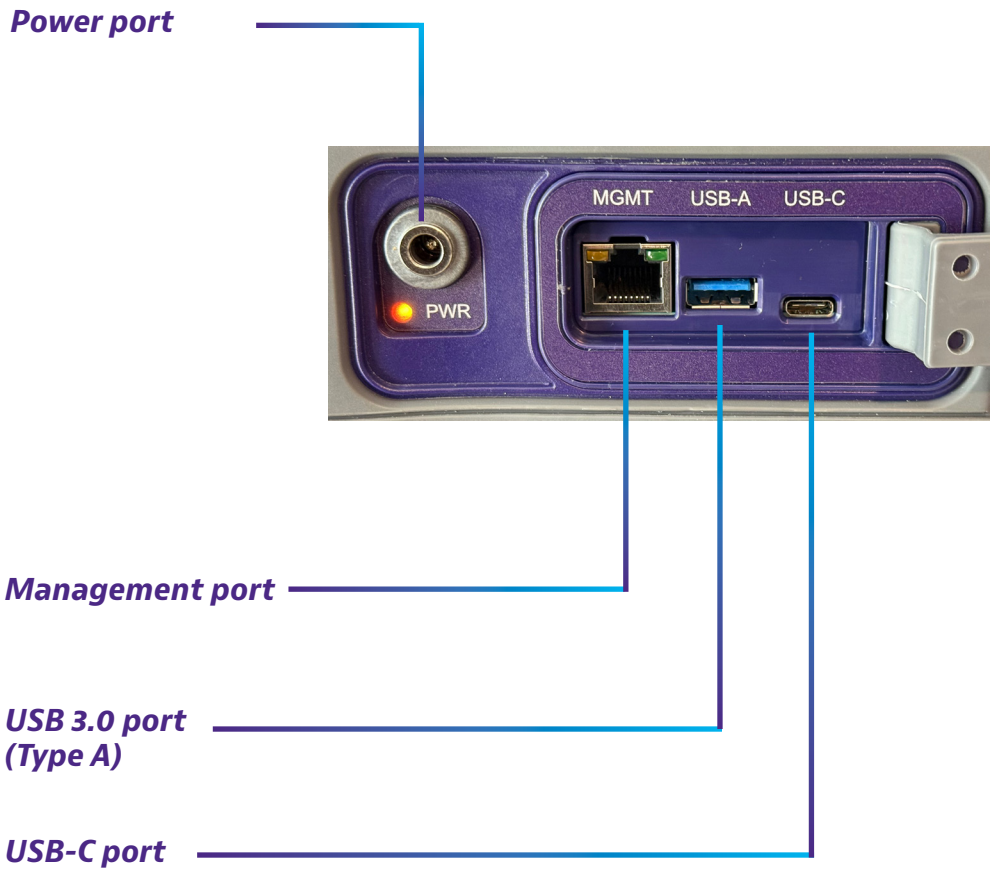


Important: The selective power meter connection should be cleaned and inspected as well as the optical jumper prior to connecting.

ONX-700-BB (with Broadband Power Meter port)

ONX-700 (without optics)

Side view


Power port
MGMT
USB-A
USB-C
PWR
Management port
USB 3.0 port
(Type A)
USB-C port

Power indicator

The indicator on the side of the meter shows the battery status, as follows:

- **Solid orange** – Charging
- **Solid green** – Charge complete
- **Flashing red** – Error in charging or powering the unit. In this case, the meter will need to be serviced by a Certified Repair Center. Before sending in the unit for repair, contact VIAVI for an RMA.

Touchscreen display

The touchscreen display operates similar to a smart phone or tablet, where you swipe to go to the next page or zoom in/out by pinching or opening your fingers. Touch the screen to select options or navigate menus.

Buttons

The buttons are found under the touchscreen.

Navigation arrows and OK button – Navigate and select menu items.

Home – Return to the main menu.

Power – Press and hold the **Power** button to turn the ONX on or off.

Back/Cancel – Exit a menu or go back to the previous menu.

Tray – Brings up the Tray menu for common functions. See "*Using the tray menu on page 37.*

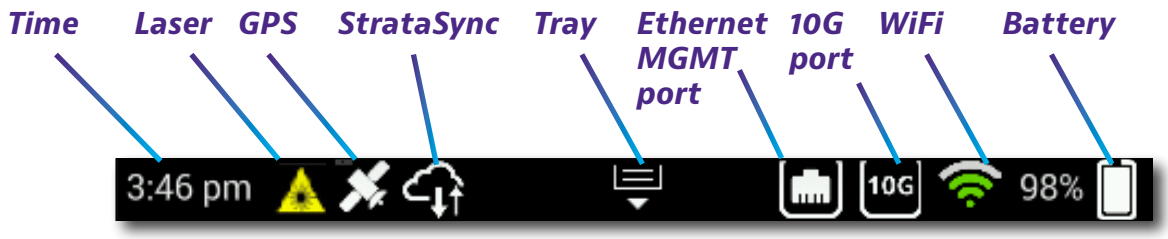
Navigating the user interface

The user interface of the ONX is designed to be intuitive and easy to use. The LCD is a touchscreen that operates similar to a mobile device (such as an iPad or similar Android device), where you swipe to go to the next page or zoom in/out by pinching or opening your fingers. Using the interface, you can view test results, set up the ONX, and configure test parameters.

When you power up the ONX, the **Home** screen appears. The Home screen indicates the options enabled on your instrument.

Top indicators

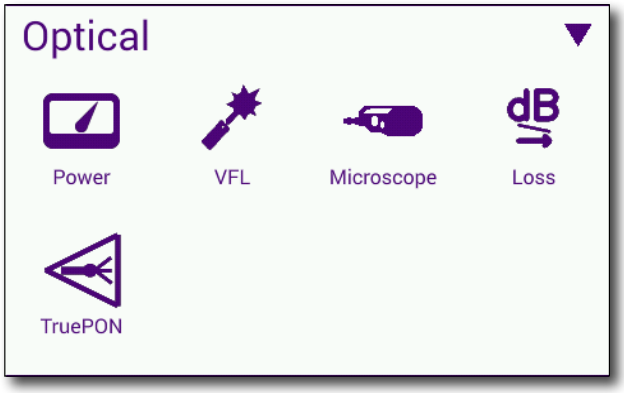
The area at the top of the screen provides the time, laser status, GPS icon, StrataSync status, Tray icon, Ethernet management port, 10G port, WiFi, and battery status (using a graphic of the battery charge remaining).



Expanding a menu

Each item on the main menu is a collapsible menu. You can expand each of the collapsible menu items by pressing the triangle on the right.

The triangle points down to show the menu is expanded.

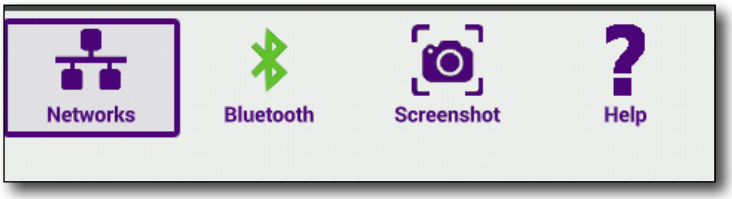


Selecting a menu option

After you expand a collapsible menu, you can select a specific option by pressing the menu option.

Using the tray menu

The Tray menu allows access to commonly used functions. Bring it up by swiping downward from the top of the screen.



Network – Brings up the Network connection menu (Ethernet and WiFi)

Bluetooth – Enables or disables Bluetooth

Screenshot – Takes a screenshot of the screen you were viewing when you launched the tray menu

Help – Provides TAC support contact info

Entering data

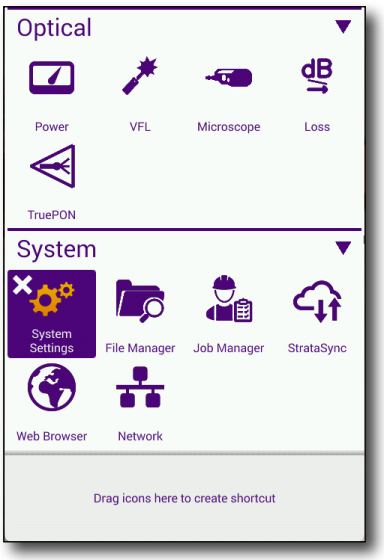
Some menu options may require you to enter text or numbers (for example, test settings or user information). The process is similar to data entry on a mobile device.

1. Press the desired item. A data entry box appears.
2. Tap in the box. A keypad appears on the screen.
3. Use the keypad to enter the data.
   - To switch from letters to numbers, use the **123 or ABC** button.
   - On the alpha keypad, the up arrow is the shift button.
   - On the numeric keypad, the second button (1/2) allows you to move among multiple numeric screens.
   - The left pointing arrow with the X in it is the backspace button.
4. Press the enter/return button on the onscreen keypad. The data is entered and stored.

Creating or removing a shortcut

If you have a test or function that you use frequently, you can make it a shortcut. You can create up to four shortcuts.

- To create a shortcut, press and hold the icon for the function and then drag it to the bottom of the screen to the shortcut bar.
- To remove a shortcut, press and hold the icon and then drag it off the shortcut bar.



Main menu, with no shortcuts

Main menu, with shortcuts

2

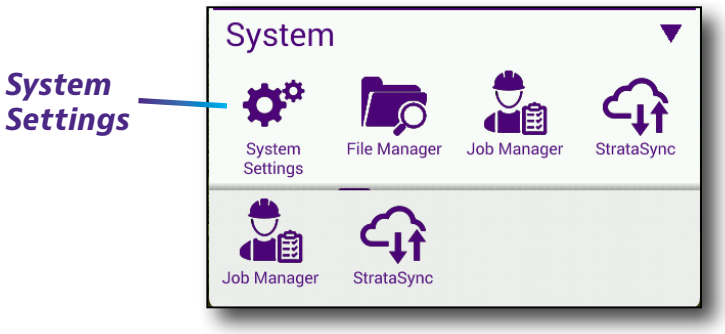
Meter Setup

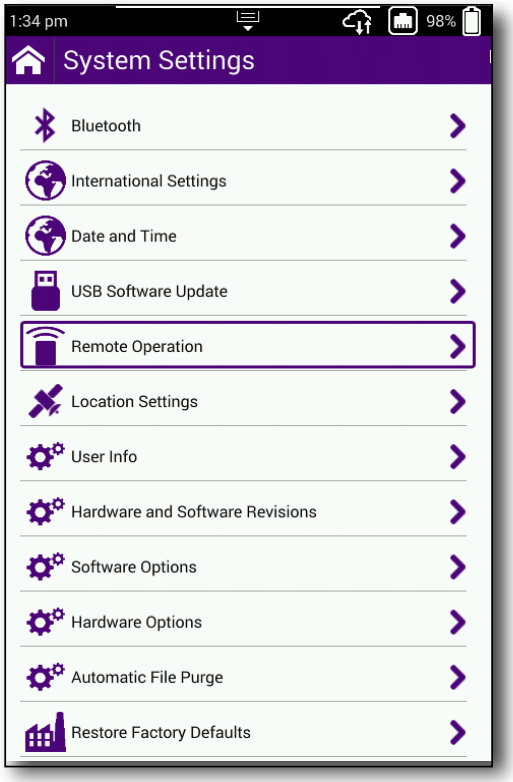
This chapter describes steps to set up your meter, including the following:

System Settings

Using the **System Settings** menu, you can change screen and power settings, control the volume, view hardware and software versions, view options purchased, complete USB software updates, etc.

From the Main menu, under the System menu, press **System Settings**. The System Settings menu appears.





Setting up your instrument

As mentioned in the previous sections, you can set up your instrument in the System Settings and Tray menus.

Configuring international settings

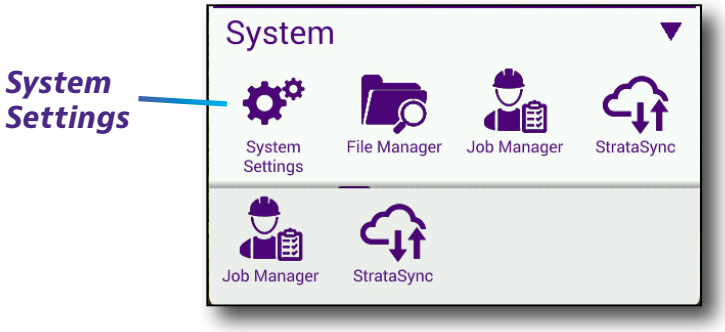
The **International Settings** menu is used to select the language, local units of measurement, and other international settings. There are two ways to select international settings:

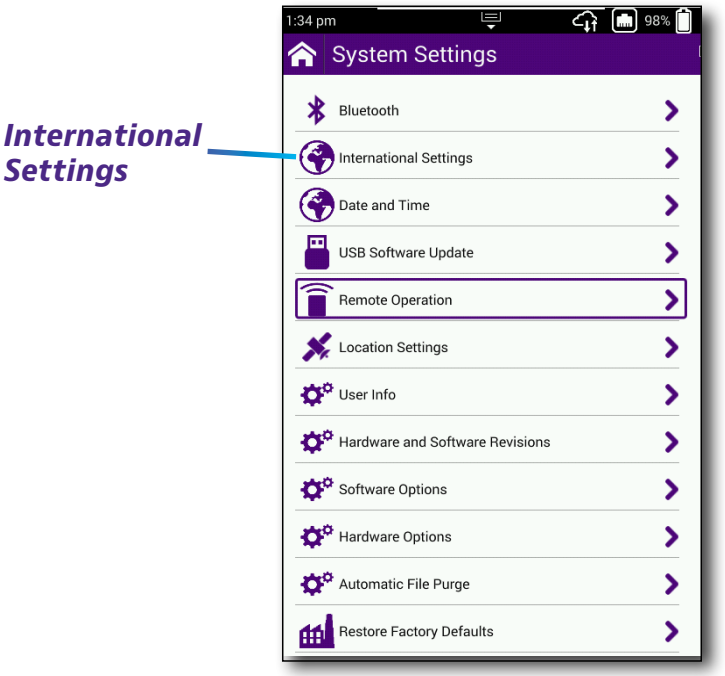
- Select a preset country. This automatically configures the international settings as appropriate for the selected country.
- Configure each setting individually. If you are not in one of the preset countries, or if the settings aren't appropriate for your situation, you can configure each setting individually.

After selecting a country or configuring each individual setting, you must reboot the instrument for the international settings to take effect. The settings will be retained when you turn your instrument off.

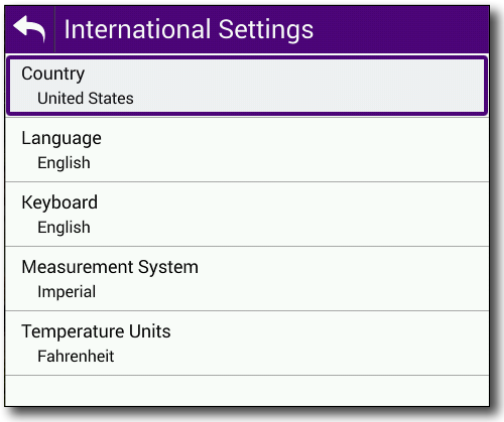
1. Go to the **System Settings** menu, then select **International Settings**. The International Settings menu appears.
2. Optional. Select **Country** to select a preset country.

   Selecting a specific country will automatically change the settings as appropriate for that country. For example, selecting France will automatically set the language to Francais, the measurement system to metric (e.g. the unit of distance will be expressed in meters and the cable size will be expressed in millimeters), and the unit of temperature to Celsius.





3. If necessary, change the settings for **Language**, **Keyboard**, **Measurement System**, and **Temperature Units**:
    - Press the menu item that corresponds to the setting.
    - Select the value for the setting from the list.
4. Press **Back/Cancel** to exit the menu.
5. Turn off the power, then turn back on to reboot the instrument.



The international settings are configured and the user interface is localized.

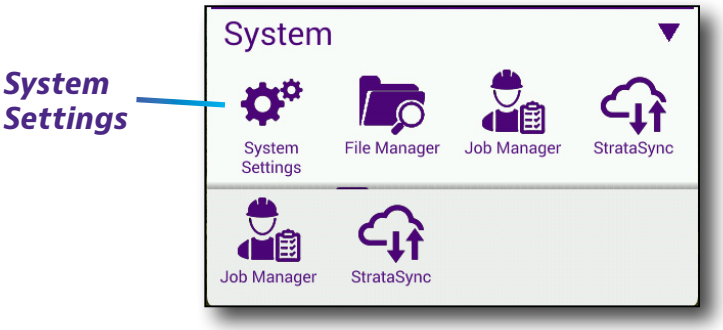
Setting the date and time

The OneExpert connects to StrataSync, the Mobile Tech app, or GPS to set the time, providing accurate time stamps for test results and reports.

See the *Cloud Services User Guide* for details on setup.

Go to the **System Settings** menu, then select **Date and Time**. The Date and Time Settings menu appears.

The date / time wil be grayed out, as they are set automatically.



Specify the date format

1. Press **Date Format**.
2. Select ***MM/DD/YYYY*** or ***DD/MM/YYYY***.

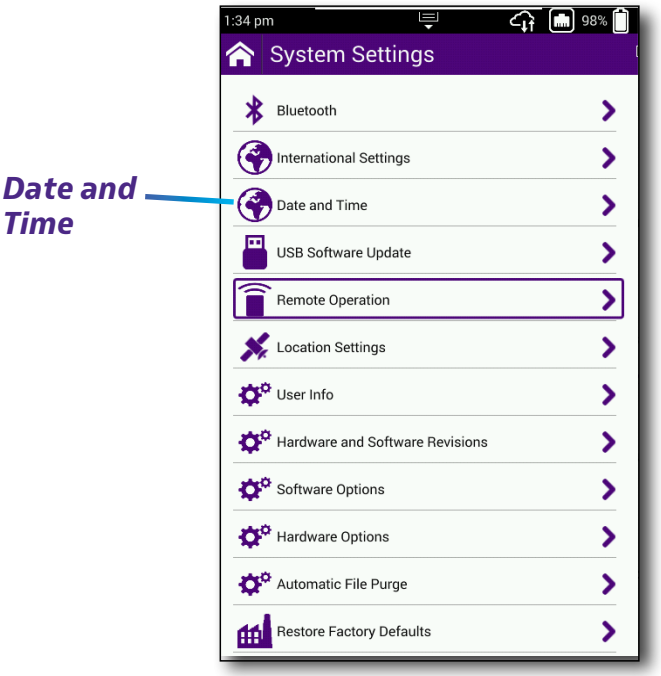
Specify the time format

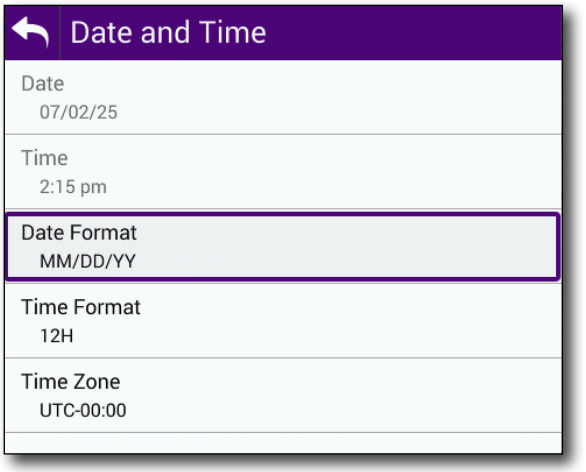
1. Press **Time Format**.
2. Select ***12*** or ***24*** Hour.

Change the time zone

1. Press **Time Zone**.
2. Select the time zone in UTC.

Press the **Back/Cancel** button to exit the menu.



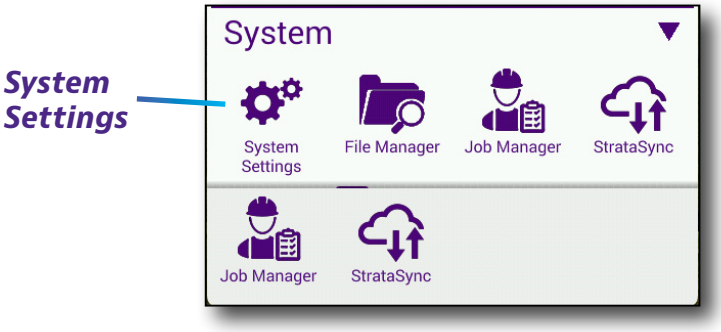


Changing screen and power settings

The **Screen and Power Management** menu allows you to adjust the brightness of the backlight, set the backlight timeout, and set the amount of idle time to wait before the instrument automatically powers itself off when operating on battery power.

Idle time refers to time during which no keys are pressed and no line activity takes place. So, if you set the **Power Off Delay** to 5 minutes and then begin a 15 minute test, the unit will not power down during the test because there is activity on the line (as a result of the test).

Go to the **System Settings** menu, then select **Screen & Power Management**.



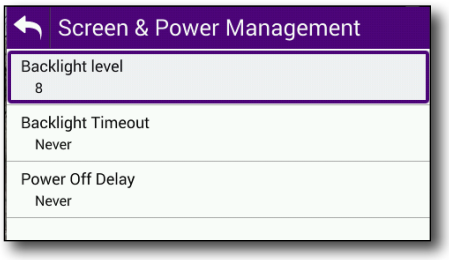
Set the backlight

1. Press **Backlight**.
2. Either press the + / – buttons on the screen or swipe your finger across the bar to move the line on the bar, adjusting the brightness of the backlight.

Important: To improve battery life, we recommend a backlight setting of 8 or less.

Set the backlight timeout

1. Press **Backlight Timeout**.
2. Select the amount of time to wait before the backlight dims.



Set the power off delay

1. Press **Power Off Delay**.
2. Select the amount of idle time to wait before the instrument automatically powers itself off.

Press the **Back/Cancel** button to save and exit.

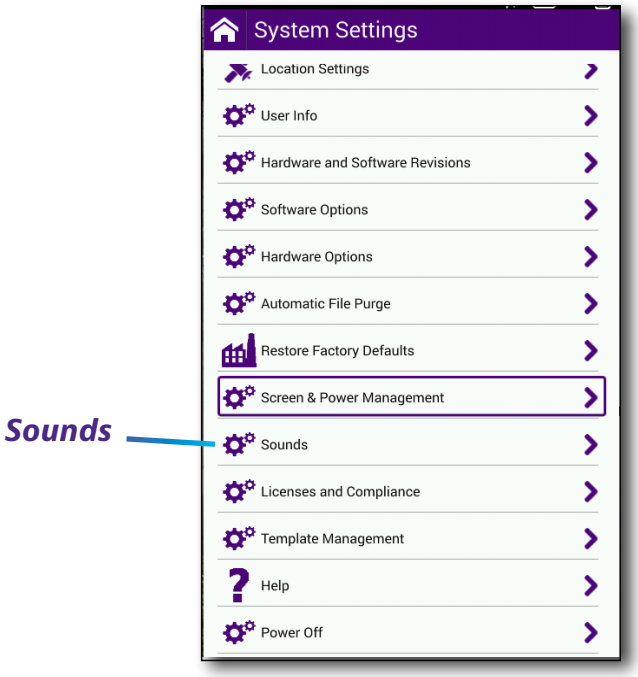
NOTE:

The OneExpert will not automatically power down when connected to the AC adapter.

Setting the sound

The **Sound Settings** menu allows you to set whether the unit plays a chime on power up/down and the overall volume.

Go to the **System Settings** menu, then select **Sounds**. The Sound Settings menu appears.



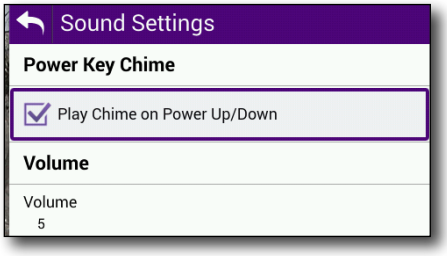
Set the power key chime

1. Press **Play Chime on Power Up / Down** to enable / disable.

Set the volume

1. Press **Volume**.
2. Swipe your finger across the bar to adjust the overall volume.
3. When done, select **OK**. The ONX will play a tone at the volume selected.

Press the **Back/Cancel** button to save and exit.

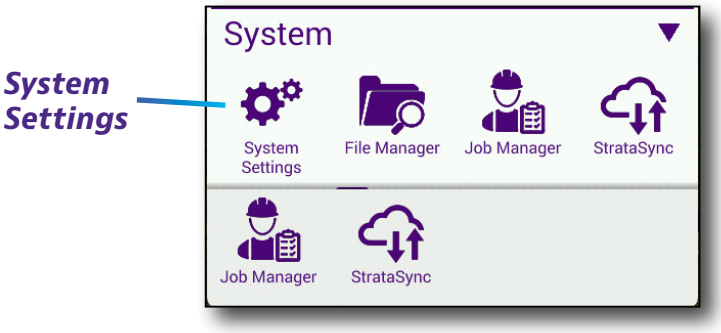


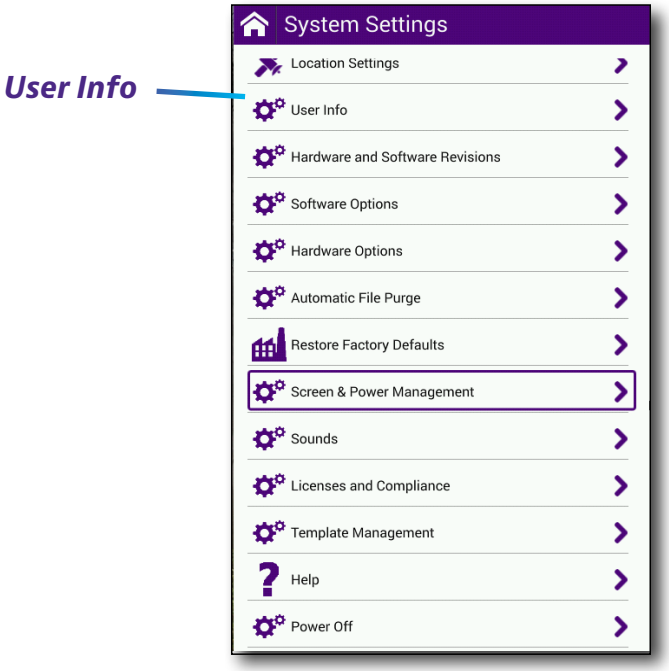
Specifying user information

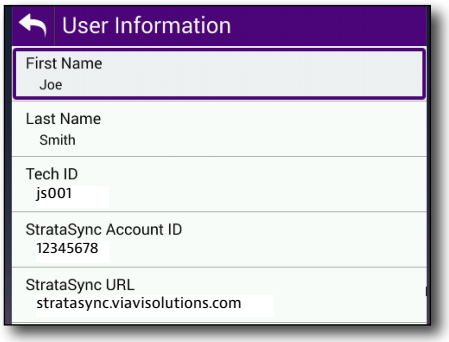
The **User Information** menu allows you to enter specific information related to the technician using the OneExpert.

This includes the technician name and ID, StrataSync account ID, and StrataSync URL and is used to sync with the StrataSync server.

1. Go to the **System Settings** menu, then select **User Info**. The User Information menu appears.
2. Enter all the user information.
3. Press the **Back/Cancel** button to save and exit the menu.







NOTE:

A valid StrataSync Tech ID/User ID and Account ID must be entered in order to sync your instrument to the StrataSync server.

Restoring factory defaults

The following procedure describes how to reset the OneExpert to factory default settings.

1. Go to the **System Settings** menu, then select **Restore Factory Settings**. A prompt appears indicating that all settings will be restored to factory defaults.
2. Select the items to be cleared (***System and Application Settings***, ***All Files Under FIle Browser***, or ***International Settings***).
3. Press **Restore** at the bottom to restore the factory default settings.

   Settings are restored to their factory default values. You must reboot your instrument for the factory defaults to take effect.

NOTE:

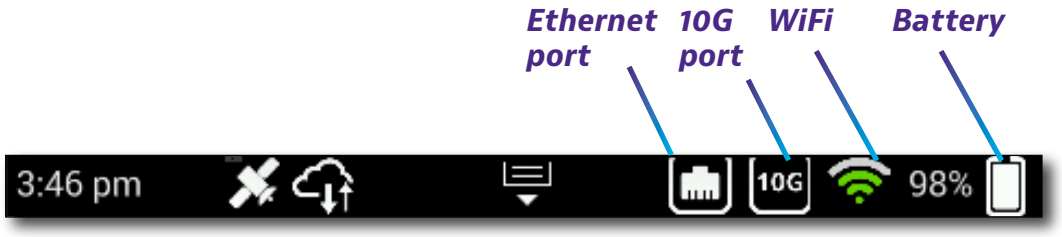
Restoring factory defaults resets test application settings and system settings (such as brightness, contrast, and volume), and powers down the unit.

Connecting to the network

You can you test from both a wired and wireless network, and from a wired connection, you can update the firmware, transfer files, or synchronize to the StrataSync server, or control the instrument's user interface remotely.

Ethernet connections

1. Using an Ethernet cable, connect the instrument to the LAN:
    - Connect one end of the Ethernet cable to the Ethernet connector located on the side of the unit, under the rubber door.
    - Connect the other end of the Ethernet cable to the LAN.
2. Verify that network connectivity is enabled on the top of the display.



WiFi connections

The WiFi option allows you to establish a WiFi connection to a wireless network to synchronize your instrument to the StrataSync server and export reports, screenshots, or job tickets (using FTP).

Adding a WiFi network profile

If an access point does not broadcast its Service Set Identifier (SSID), you can manually create a profile for a WiFi network. Your instrument will save the profile, then automatically authenticate and establish a connection to the network if 1) network connectivity is enabled, 2) the network's access point is in range, and 3) the network is determined to provide the best available access point (based on signal strength and/or encryption supported).

The instrument can save up to 32 WiFi network profiles.

NOTE:

Your instrument will automatically save a profile after successfully connecting to a new WiFi network.

1. Verify that network connectivity is enabled (see *"Connecting to the network" on page 48*).
2. Go to the **System** menu, then press **Network**. The System Network menu appears.
3. Select the **WiFi** button at the bottom of the menu. Your instrument immediately scans for WiFi networks and lists each network as an item.
4. Press **Add Network**. The Add WiFi Network menu appears.
5. Specify the following settings:

   SSID – The SSID (Service Set Identifier) of the WiFi network.

   Password – The password required to authenticate to the network. A password is not required if Key Management is set to None.

   Key Management – Open, WEP, or WPA/WPA2 Personal.

Network Mode – IPv4, IPv6, or IPv4/IPv6 Dual Stack. Depending on the Network Mode, you have one or more additional settings to specify. For details, see those areas earlier in this section.

6. Return to the **System Network** menu. The network that you created a profile for is listed on the menu.

Connecting to a WiFi network

You can manually connect to any compatible WiFi network that is within range of your instrument, and for which you have authorized access (and a password for authentication).

1. Verify that network connectivity is enabled (see *"Connecting to the network" on page 48*).
2. Go to **System**, then press **Network**. The System Network menu appears.
3. Select the **WiFi** button at the bottom of the menu. Your instrument immediately scans for WiFi networks, and lists each network as an item.
    - A lock indicates that authentication is required to connect to a network.
    - **Saved, In Range** – A profile for the network has been saved on your instrument, and a connection can be established to the instrument.
    - **Saved, Out of Range** – A profile for the network has been saved on your instrument, but the network is out of range (and therefore, a connection cannot be established).
    - **Incompatible** – A connection cannot be established to a network.
    - **Connected** – The instrument has already established a connection to the network.

    The instrument automatically connects to the network determined to provide the best available access point (based on signal strength and/or encryption supported).
4. If you want to connect to a different network, press the **SSID** of the WiFi network. A screen appears with items that allow you to specify advanced settings (profile settings), forget a saved network, or connect to the network.
5. Press **Connect**.
    - Messages appear briefly indicating the instrument is performing a four-way handshake, then authenticating to the network.
    - The status of the connection (Network Up), and details concerning the connection (IP address, netmask, gateway, and DNS server) appear at the top right of the menu.

The instrument is connected to the WiFi network.

GPON and XGSPON connections

1. Make sure all fiber cables and fiber ports are clean. Dirty fiber connections will result in erroneous measurements.
2. Using a fiber cable, connect the instrument to the GPON network:
    - Connect one end of the fiber cable to the ONX's SFP connector on the top of the unit using an SFP adapter, under the rubber door.
    - Connect the other end of the fiber cable to the GPON network.
3. Verify that network connectivity is enabled on the display.

CAUTION:

The GPON SFP interface on the ONX requires an SC/APC angled connection. Using a UPC connector will result in erroneous measurements and may cause damage.

CAUTION:

Before testing, ensure the GPON signal is not above -7dbM. Otherwise, the SFP could be damaged.

Bluetooth connections

The Bluetooth® option allows communication with a paired mobile device.

Enabling Bluetooth connectivity

Before you establish a connection to Bluetooth device, you must enable Bluetooth connectivity on your instrument.

1. Go to the **Tray** menu.
2. Press the **Bluetooth** icon. The icon will be green when connectivity is enabled.

Connecting to a Bluetooth device

You can establish a connection to any Bluetooth device that is within range of your instrument, and for which you have authorized access.

1. Go to the **System Settings** menu, then select **Bluetooth**. The Bluetooth Settings menu appears.
2. Press the box next to **Enabled**. A checkmark appears.
3. Press **Scan for devices**. The instrument scans for Bluetooth devices, then lists the devices on the menu.
4. Select the device to connect to.
    - If the instrument successfully authenticates to the device, a message appears indicating that pairing was successful.
    - If the instrument does not successfully authenticate to the device, a message appears indicating that pairing failed.

If pairing was successful, you can use the instrument with the paired device.

NOTE:

For more detail on using your meter with the VIAVI Mobile Tech app, see the Cloud Services User Guide.

Updating the instrument's firmware

All ONX units should be upgraded to the latest production software release—available through StrataSync (or your VIAVI representative). Software and firmware releases are the best way to ensure your ONX is functioning at its best.

The firmware can be updated in the field using a wired network or intranet connection, or a USB drive with a copy of the firmware.

Updating the firmware from StrataSync

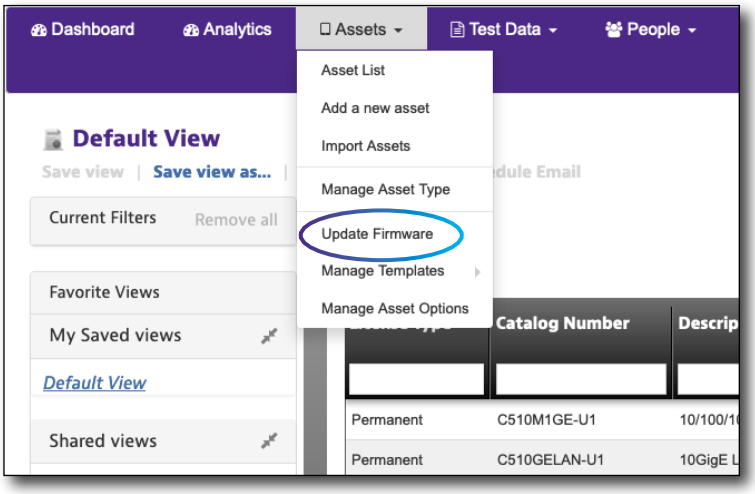
You can also connect to StrataSync via Ethernet to update the firmware of your unit.

See the *Cloud Services User Guide* for more details.

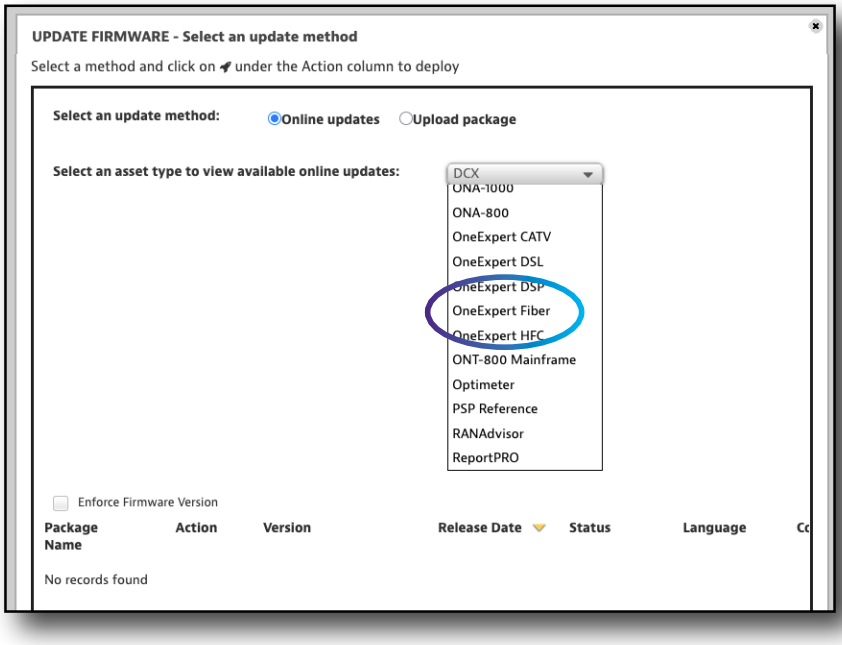
Deploying firmware

1. From a browser, log in to StrataSync.
2. Go to **Assets,** then select ***Update Firmware*.** You can also search for an asset using the filters, then right-click the asset and select ***Update Firmware*** *(*or choose it from the **Actions** dropdown*).* The Update Firmware screen appears.

> ***NOTE:***
>
> ***You need to have permissions to update units in order to deploy software from StrataSync.***

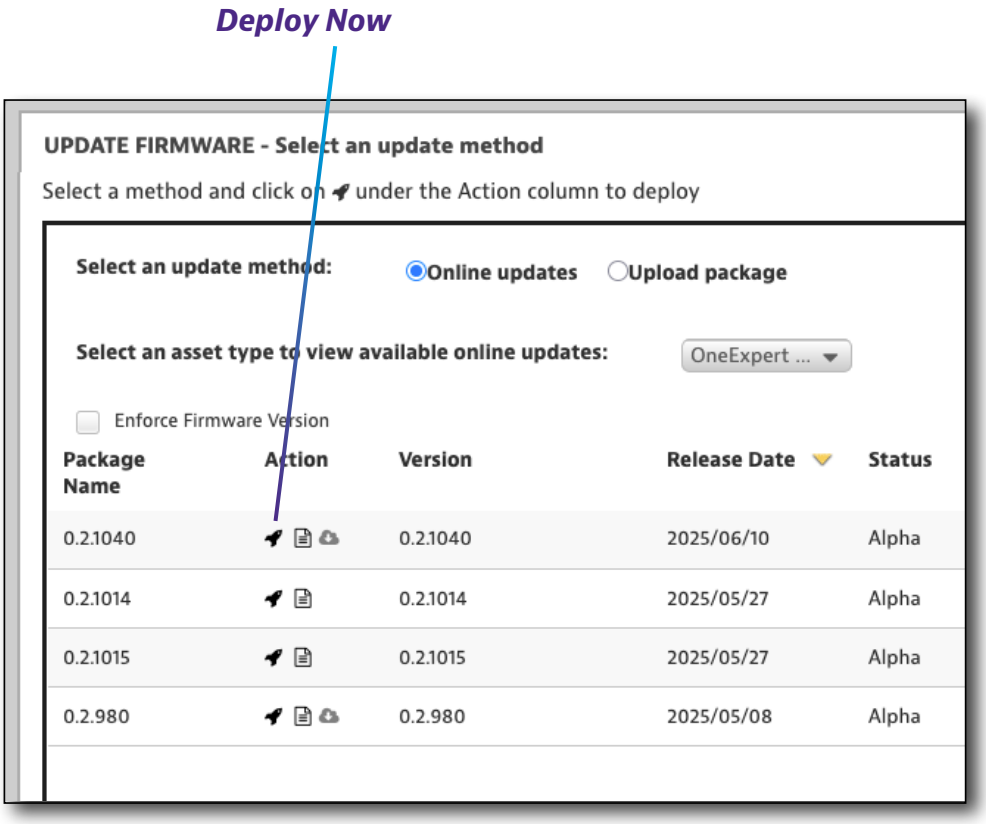


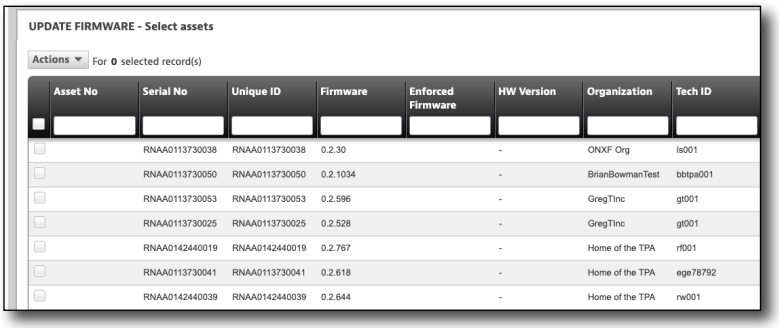
3. Select **Online Updates**.
4. Select **OneExpert Fiber**. The firmware for the asset is listed.
5. In the Update Firmware window, click **Deploy Now**. The select assets screen appears.

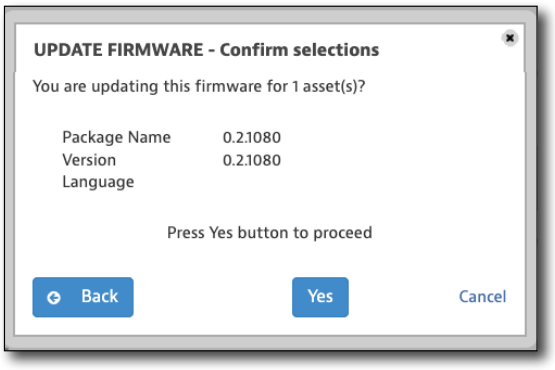


6. Use the filters and select the asset(s) you want to update by selecting the checkboxes next to each item, then select **Next**. A confirmation window appears.
7. Verify the package name and version, then select **Yes** to confirm.

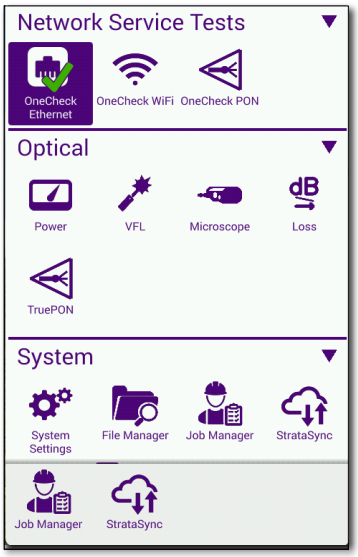
   On the next instrument sync, the firmware will be updated for the asset(s).







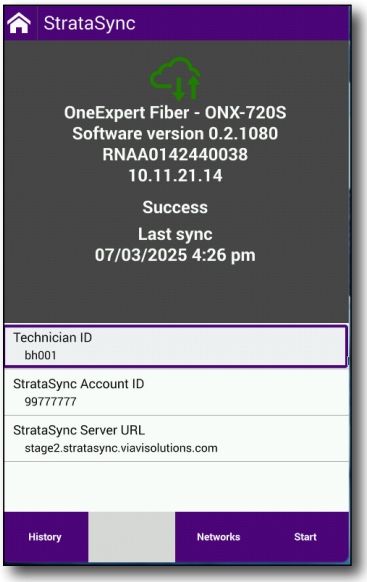
Syncing to StrataSync and updating



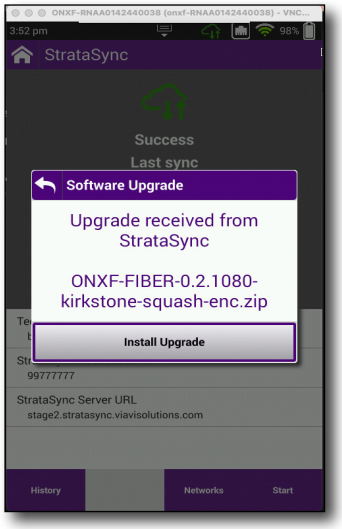
1. Connect the OneExpert to the AC charger adapter to ensure an uninterrupted supply of power during the update.
2. Using an ethernet cable, connect the instrument to the network.
3. Verify the ONX has a valid IP address (it should have been changed from the default address of 192.168.0.*)
4. Go back to the Home screen, scroll down to the bottom, and select **StrataSync**.
5. On the **StrataSync** screen, enter the following:
   - **Technician ID**
   - **StrataSync Account ID**
   - **StrataSync Server URL** – stratasync.viavisolutions.com (US) or eu.stratasync.viavisolutions.com (Europe)

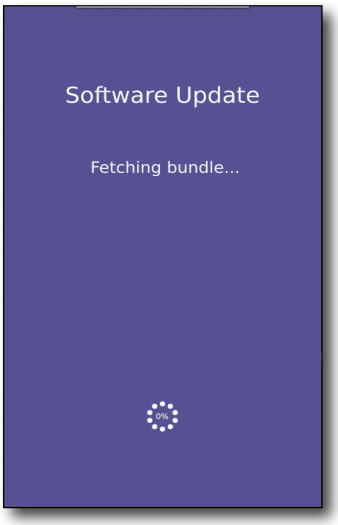
   This information can also be set in the **System Settings > User Info** settings.
6. When finished, select **Start**.

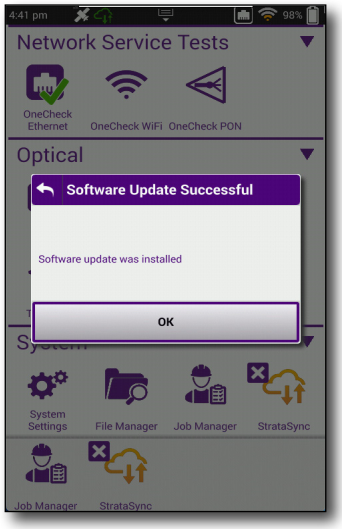
   The ONX will connect to StrataSync and determine if there is a software update available.
7. If an update is available, select **Install Upgrade**.



The update will begin and the meter will power off when finished. Please wait as this could take 10-15 minutes, based on the size of the update file and connection speed.







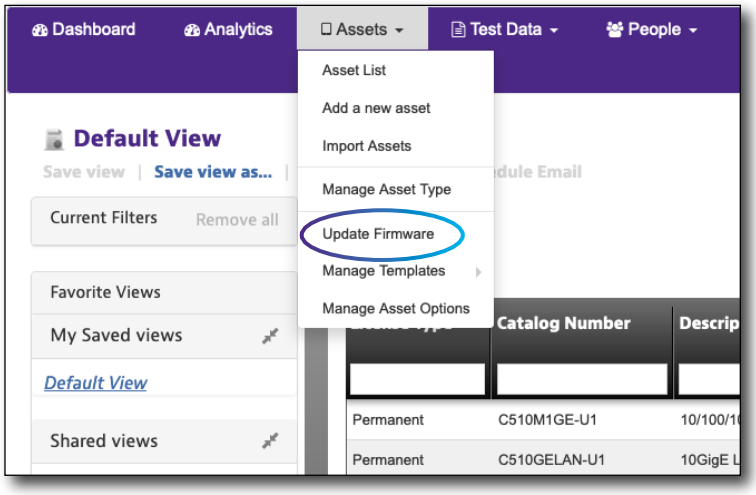
Download the firmware to a USB drive

If you are using a USB drive for updates, you can download the firmware from StrataSync.

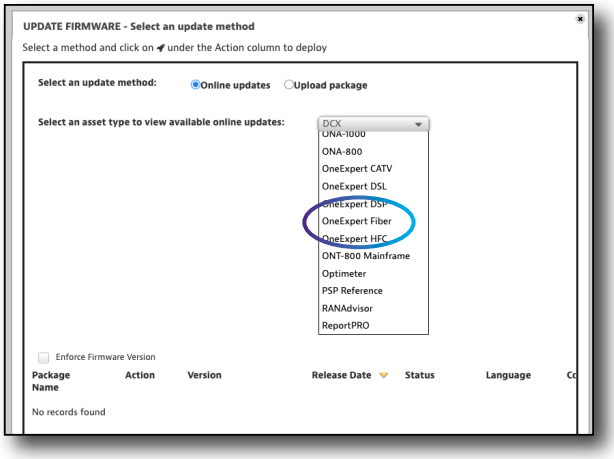
NOTE:

You need to have permissions to update units in order to download software from StrataSync.

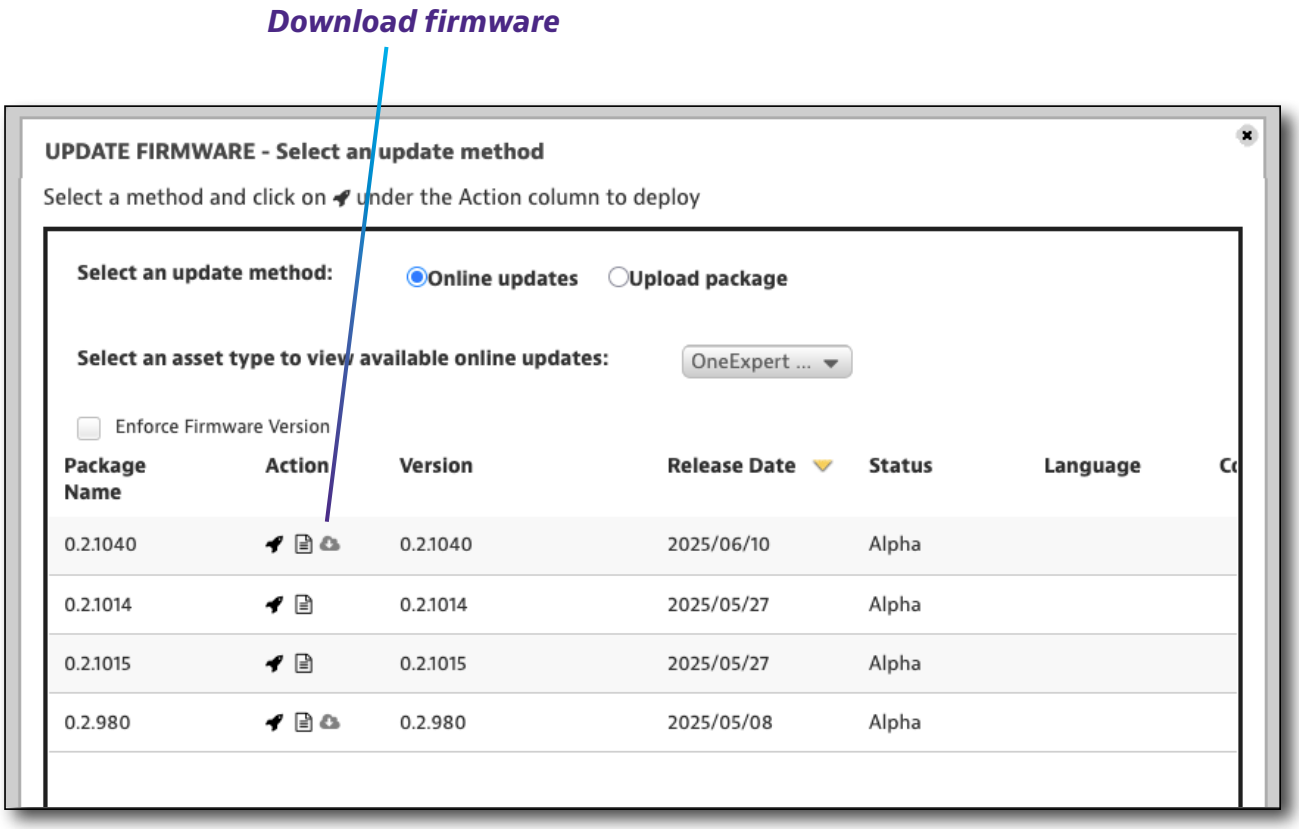
1. From a browser, log in to StrataSync.
2. Go to **Assets,** then select ***Update Firmware*.** The Update Firmware screen appears.



3. Select **Online Updates**.
4. Select **OneExpert Fiber**. The firmware for the asset is listed.



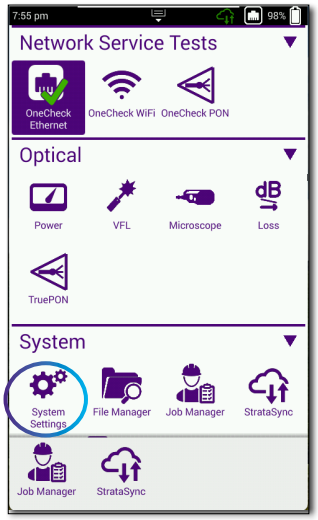
5. In the Update Firmware window, click the **Download Firmware** link. The file will begin to download.
6. Once file has been downloaded, plug in the USB drive and copy the firmware file to the root directory. The file name will be similar to “ONXCBL.xxx.xxx.xxx.oxu”.

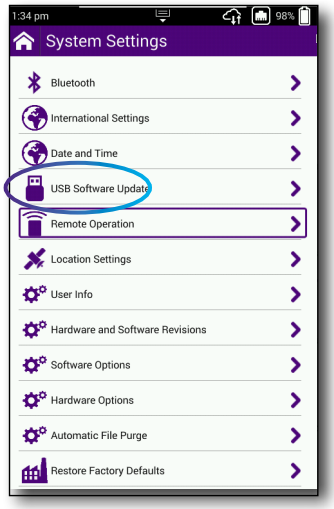


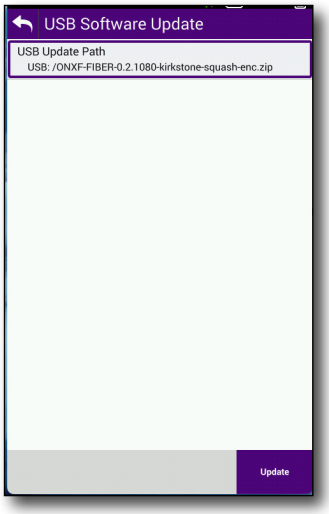
Updating the firmware from a USB drive

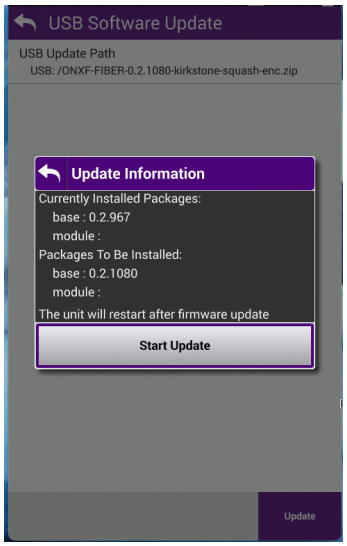
1. Connect the OneExpert to the AC charger adapter to ensure an uninterrupted power during the update.
2. Disconnect any Ethernet cables connected to the unit.
3. Plug the USB drive that you downloaded the firmware file to into a USB port on the OneExpert.
4. Go to the **System Settings** menu, then select **USB Software Update**. The USB Software Update screen appears.
5. Select the desired firmware file on the USB drive, and select **Update**. A confirmation screen appears.
6. Verify the package name and version, then select **Start Update** to confirm.

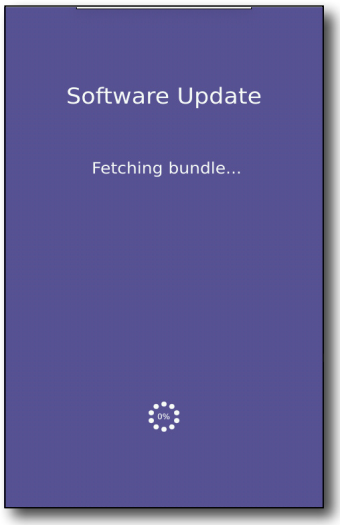
   The update will begin and the meter will power off when finished. Please wait as this could take 10-15 minutes, based on the size of the update file and connection speed.

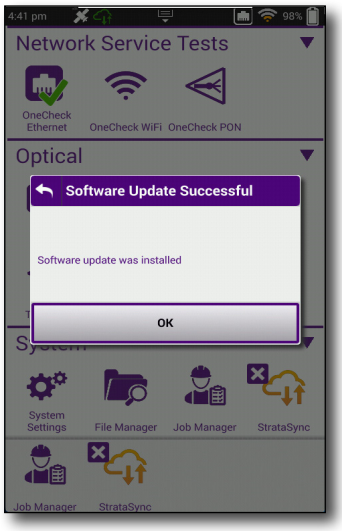






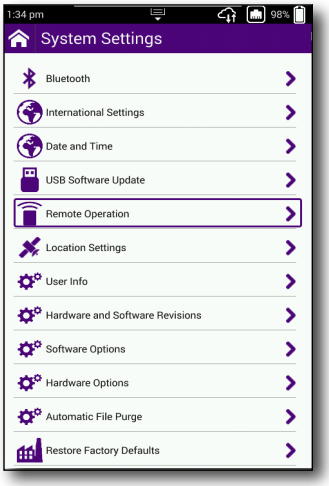






Viewing hardware/software versions and options

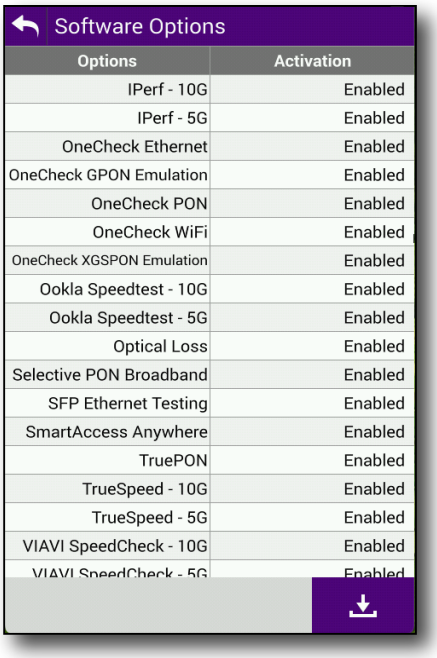
The following procedure describes how to view the status of available options and the hardware and software versions for your instrument.

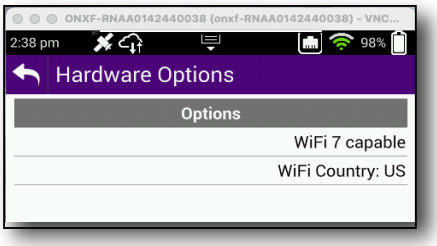


1. Go to the **System Settings** menu.
2. Do one of the following:
   - To review hardware and software versions, select **Hardware/ Software Revisions**.

     The revisions of the internal components and the software versions appear. The instrument's unique unit ID number also appears on this screen. You will need the unit ID if you are adding options.
   - To review the status of available options, select **Software** or **Hardware Options**.

     A list of available options appears with the status for each option (Enabled or Upgradeable).





Updating the instrument's software options

You can assign and deploy software options from StrataSync (preferred) or via USB drive.

The options can be updated in the field using a wired network or intranet connection, or a USB drive with a copy of the options.

Updating the options from StrataSync

You can connect to StrataSync via Ethernet to update the options of your unit.

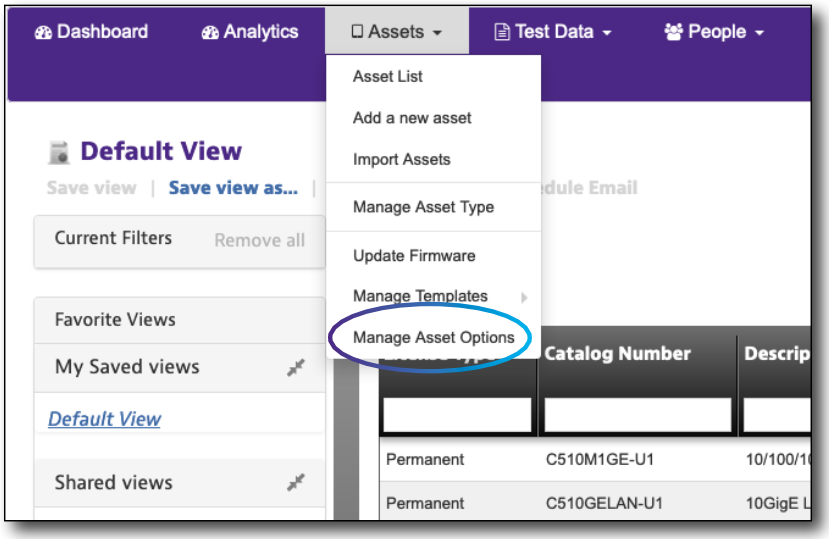
You can even deploy an option to multiple assets via the Manage Permanent Option Pool screen.

See the *Cloud Services User Guide* for more details.

Deploying options

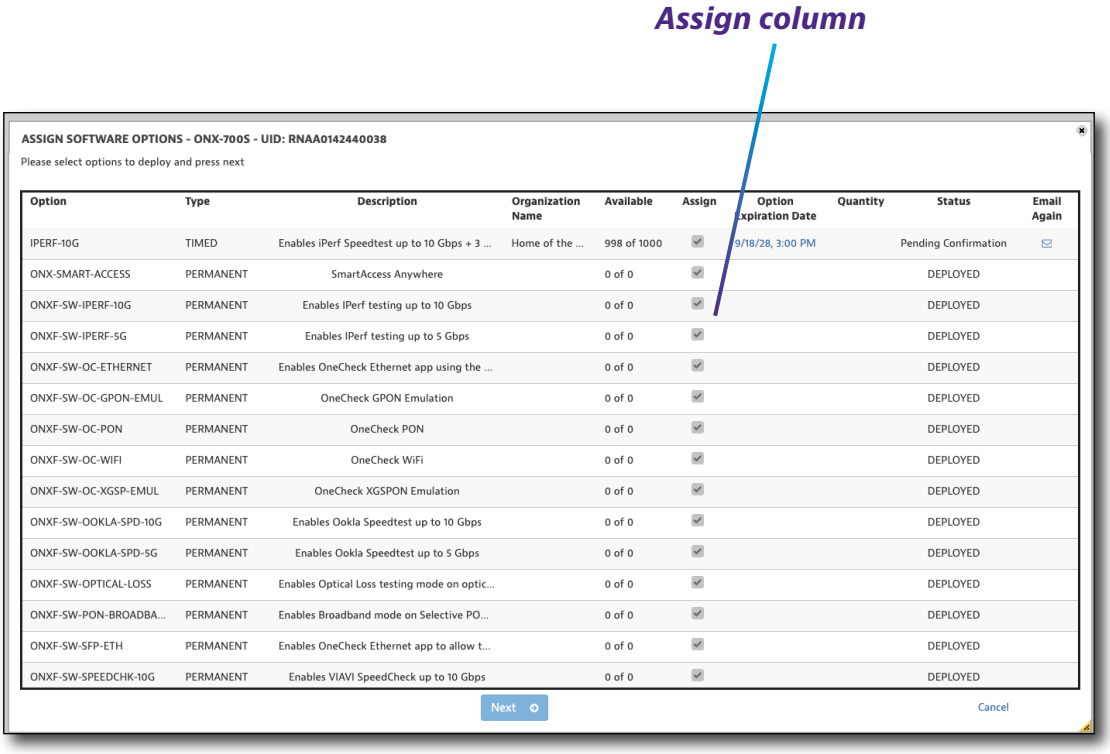
1. From a browser, log in to StrataSync.
2. From the **Assets** tab, select ***Manage Asset Options*****.** You can also search for an asset using the filters, then right-click the asset and select ***Options > Software Options*** *(*or choose it from the **Actions** dropdown*).* The Assign Software Options screen appears.

> ***NOTE:***
>
> ***You need to have permissions to update units in order to deploy software options from StrataSync.***



StrataSync, Assets tab

3. Select the option(s) you want to assign, and then select the checkbox for each option in the **Assign** column.
4. Select **Next**. The Confirm Software Options Deployment screen is displayed.



Assign Software Options screen

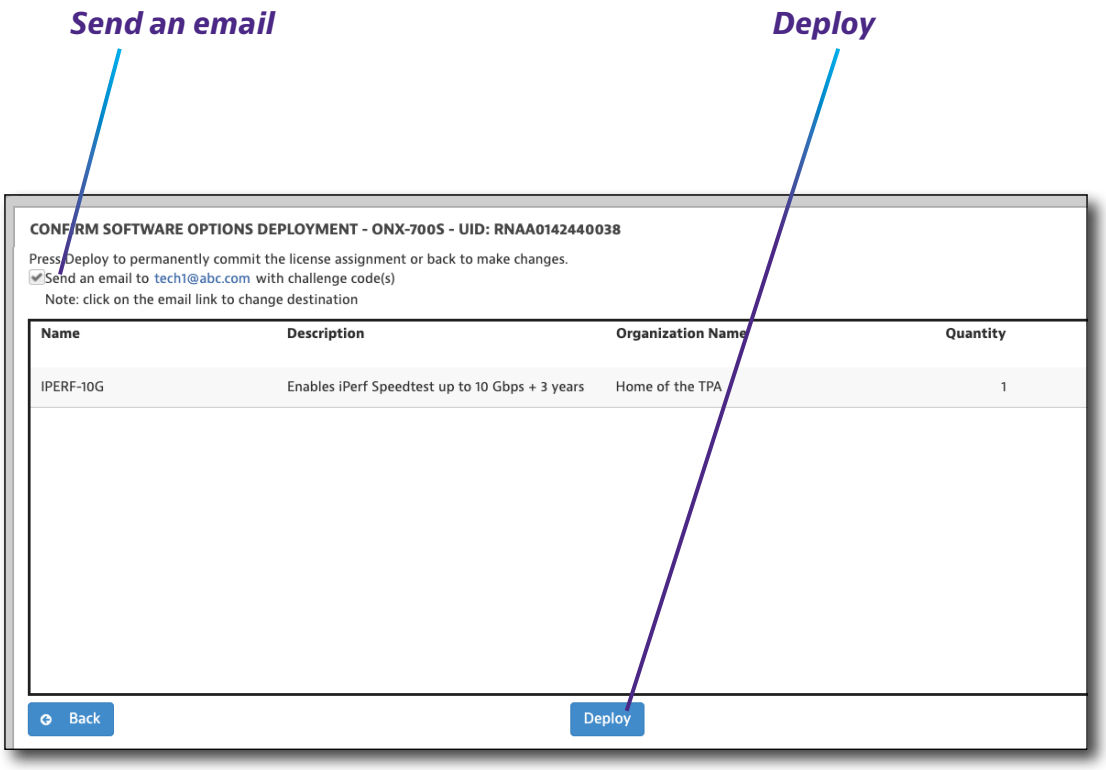
5. Verify the options for the asset.

   You can also receive the options file via email. Select the **Send an email with challenge codes** checkbox. Or click the email to change it.

6. Select **Deploy.**

   On the next instrument sync, the options will be deployed to the asset(s).

   If you chose to send an email, the options file will be emailed to you as a JSON file. To install, see *"Installing software options from a USB drive" on page 65.*



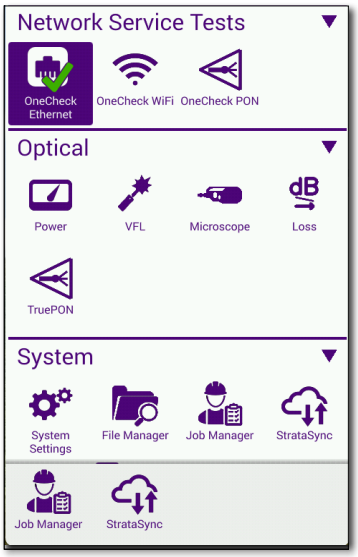
Confirm Software Options Deployment screen

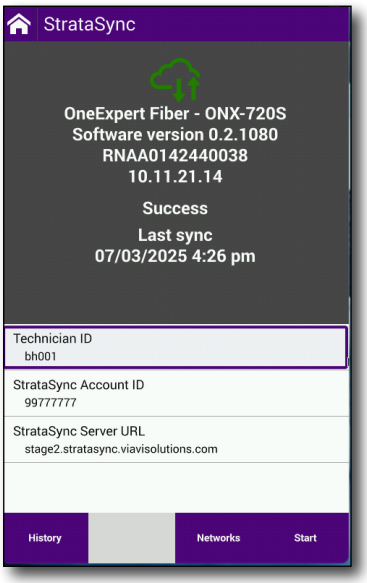
Syncing to StrataSync to install options

1. Connect the OneExpert to the AC charger adapter to ensure an uninterrupted supply of power during the update.
2. Using an ethernet cable, connect the instrument to the network.
3. Verify the ONX has a valid IP address (it should have been changed from the default address of 192.168.0.*)
4. Go back to the Home screen, scroll down to the bottom, and select **StrataSync**.
5. On the **StrataSync** screen, enter the following:
   - **Technician ID**
   - **StrataSync Account ID**
   - **StrataSync Server URL** – stratasync.viavisolutions.com (US) or eu.stratasync.viavisolutions.com (Europe)

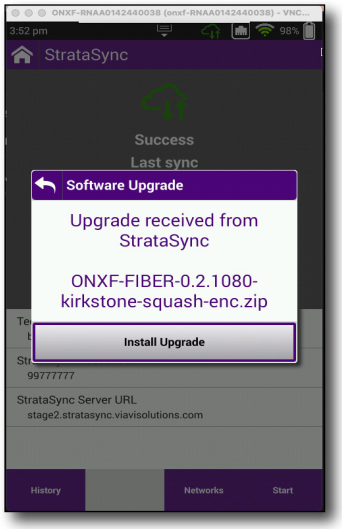
   This information can also be set in the **System Settings > User Info** settings.
6. When finished, select **Start**.

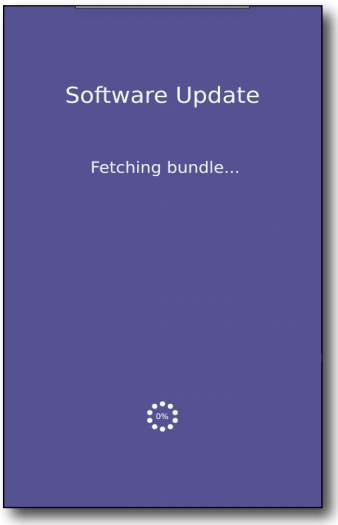
   The ONX will connect to StrataSync and determine if there is a software update or new software options available.
7. If an update is available, select **Install Upgrade**. If an option is available, select **Install Option**.

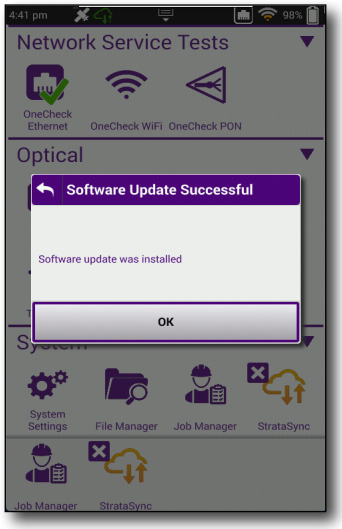




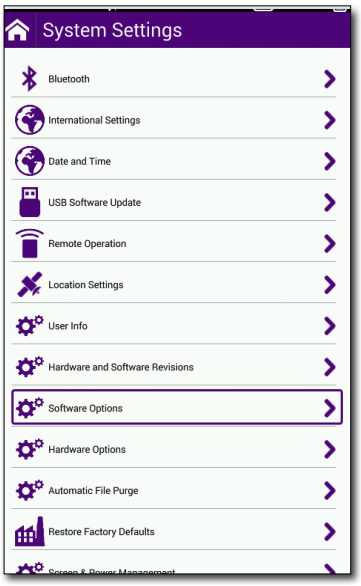
The update will begin and the meter will power off when finished. Please wait as this could take 10-15 minutes, based on the size of the update file and connection speed.







Installing software options from a USB drive



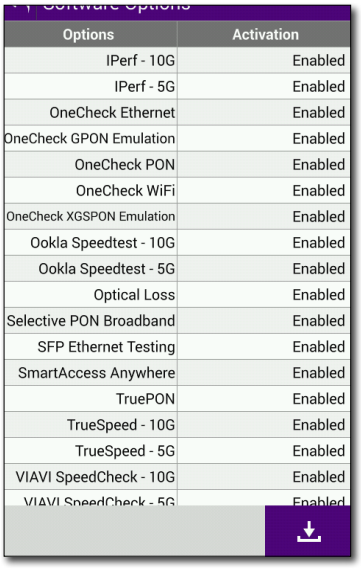
You can also install software options on your instrument vis USB drive. Options can be installed from a USB drive where the options have been stored.

The preferred method of option installation is via StrataSync, as shown in the previous section. See *"Updating the options from StrataSync" on page 61.*

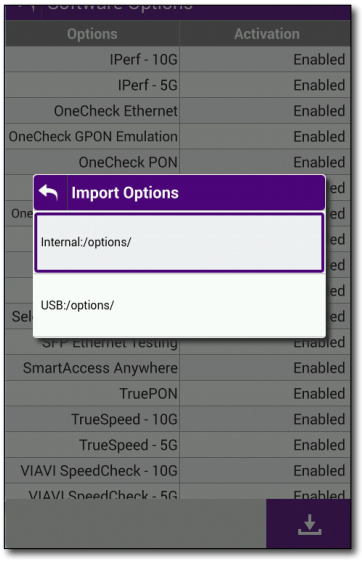
1. Before installing options, upgrade to the latest firmware, as shown in the previous sections.

   If you received the option file by email, save the option file to a USB drive.

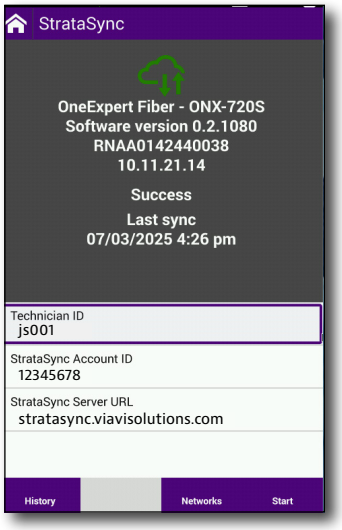
2. Insert the USB drive into the OneExpert.
3. From the main menu, select **System Settings**.
   The System Settings menu opens.
4. Select **Software Options**. The Software Options menu appears.
5. Select the **Upload** arrow at the bottom. The Import Options screen appears.
6. Select the **USB /options**.
7. On the USB drive, select the option file you want to import.
8. Reboot the instrument (turn off the power, then turn it back on). The option is installed.



Options	Activation
IPerf - 10G	Enabled
IPerf - 5G	Enabled
OneCheck Ethernet	Enabled
OneCheck GPON Emulation	Enabled
OneCheck PON	Enabled
OneCheck WiFi	Enabled
OneCheck XGSPON Emulation	Enabled
Ookla Speedtest - 10G	Enabled
Ookla Speedtest - 5G	Enabled
Optical Loss	Enabled
Selective PON Broadband	Enabled
SFP Ethernet Testing	Enabled
SmartAccess Anywhere	Enabled
TruePON	Enabled
TrueSpeed - 10G	Enabled
TrueSpeed - 5G	Enabled
VIAVI SpeedCheck - 10G	Enabled



Synchronizing to the StrataSync server



StrataSync® is a hosted, cloud-based software application that provides VIAVI instrument asset, configuration, and test-data management. StrataSync manages inventory, test results, and performance data anywhere with browser-based ease and improves technician and instrument efficiency. This service is provided free of charge for the first year.

Features include the following:

- Tracking ownership of the OneExpert
- Pushing certain configuration settings to the OneExpert
- Pushing work orders to the OneExpert and keeping in sync with the server
- Receiving certain configuration setting from the OneExpert
- Adding and/or removing software options on the OneExpert
- Updating the software on the OneExpert
- Updating the software on the modem
- Cloning a device (create a “golden” unit)
- Uploading and storing of test reports, screenshots, OneCheck profiles, and configurations
- Manage OneExpert homescreen settings via templates

To obtain the latest configuration settings, software options and updates, and ownership registration information, the OneExpert CATV can synchronize with a VIAVI server via the internet. The synchronization also stores any user files saved on the unit to the StrataSync server.

This procedure should be undertaken immediately upon receipt of the unit and on a regular (daily) basis thereafter to ensure that the unit is as up-to- date as possible and to allow all user information to be backed up. Before attempting to synchronize with StrataSync, please confirm your server settings with your manger or your company's IT organization.

To sync with StrataSync

1. If you haven’t already done so, specify the user information on the User Info menu (see *"Specifying user information" on page 46*). A valid account ID must be entered in order to synchronize with the StrataSync server.
2. Connect the ONX to an active internet connection (Ethernet cable from cable modem or router to ONX port 1 RJ-45 connector).
3. Verify the ONX has a valid IP Address.
    - From the System menu, select Network.
    - Check the IP addresses displayed.

  - The ONX IP address is configured as 192.168.0.*
  - The Gateway should be configured as 192.168.0.1

4. From the **System** menu, press the **StrataSync** icon. The StrataSync settings menu appears.
5. Press the **Start** button. As the process runs, the sync state is displayed on the screen.
   - Upon synchronization with the StrataSync server, the unit will send to the server the following information:
     - The unit's serial number.
     - The unit's hardware information (constituent assemblies and their revision levels).
     - The unit's MAC address.
     - The unit's user settings - name (user/technician) and ID.
     - Software update milestones (includes status and warnings, if applicable)

       If the configuration information contained on the server is newer than that on the unit, the server will be considered to be the most up-to-date.
   - The server will then send any files to the unit being synchronized that it determines are newer than those on the unit.
   - The unit will then send any reports, configuration profiles, XML results, screen shots, etc. that have been saved on the unit since the last configuration.
   - The server then applies any applicable options to the unit.

NOTE:

If an Option file was installed as a part of synchronization, power must be cycled to the unit to complete the process and initialize the option.

   - Copy ("clone") the configuration settings for the base unit, as well as any company-specific configurations such as custom filters, web bookmarks, and FTP passwords. This can be used to create a "golden" unit.
   - Lastly, if any upgrades are available, the user will be informed of their availability and asked to verify their desire to receive the upgrade.

When synchronization is complete, the Status will indicate "Success". The unit may be disconnected from the server.

NOTE:

If StrataSync determines your ONX needs a firmware update, it updates the ONX, then reboots, and autosyncs to StrataSync again to ensure your unit has the latest version.

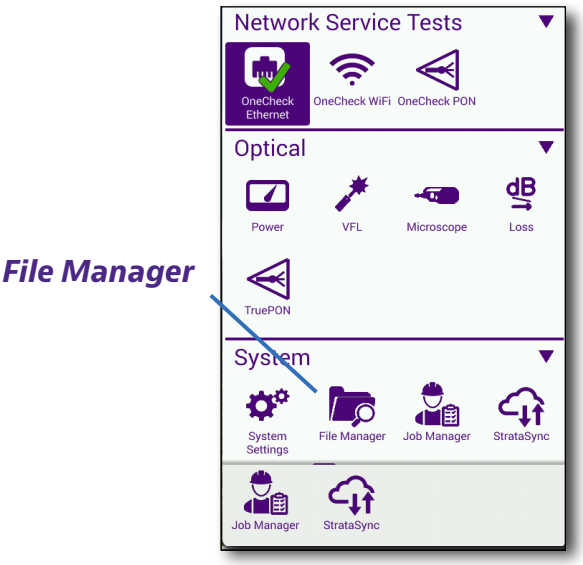
File Manager

The File Manager is used to open, rename, copy, or delete saved result files, screen shots, or other files stored on your instrument or on a USB flash drive that is connected to your instrument.

1. From the Main menu, System Menu, select **File Manager**. The File Manager screen appears listing all folders (or files).

   Here you will see the following directories:

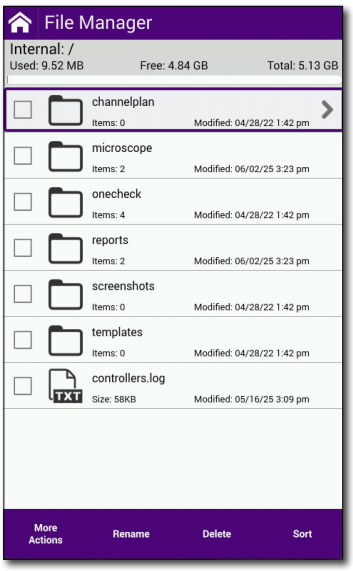
   - Channel Plan
   - Microscope
   - OneCheck
   - Reports
   - Screenshots
   - Templates



2. Select the folder you want to open. The files in the folder will be displayed.

   To return to the Main menu at any time, select **Home** at the top. You can also go up a folder by selecting the **Back** button at the top.

   - To open a file, select it, and it will be displayed.
   - To select a single file or folder, press the checkbox to the left of the file or folder.
   - To select multiple files or folders (for example, if you want to copy multiple files to USB, press the checkbox to the left of each folder.
   - To delete a file or folder, select it and then select **Delete** at the bottom. You can also rename a file by selecting **Rename**.
   - To sort files, select **Sort** at the bottom and then choose the sort method.
   - To create a folder, select **New Folder** at the bottom.

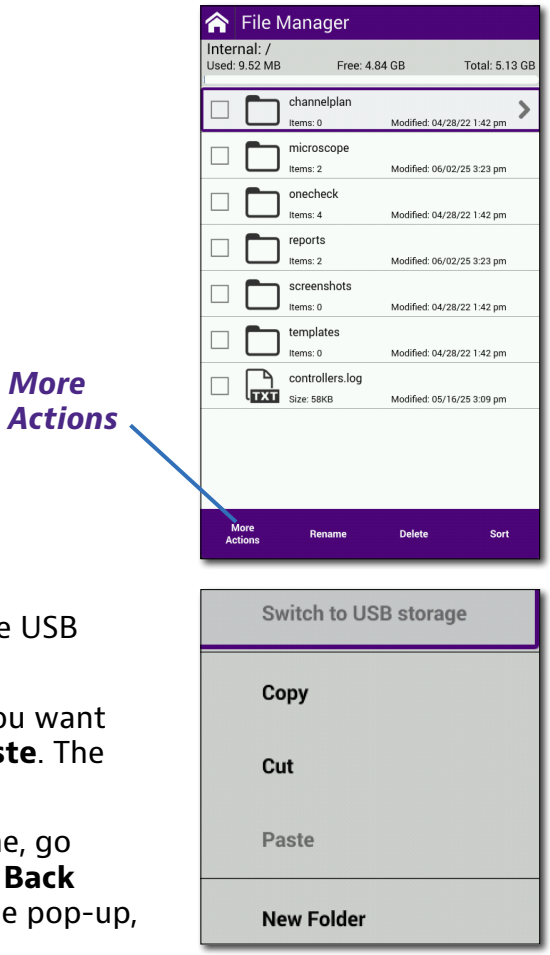


Copying and pasting files or folders to USB

Keep in mind when changing the internal drive to USB, you need to be on the File Manager Main menu (in a folder, select the **Back** button at the top).

1. From the Main menu, System Menu, select **File Manager**. The File Manager screen appears listing all folders (or files).
2. Select the file or folder.
   - To select a single file or folder, press the checkbox to the left of the file or folder.
   - To select multiple files or folders, select the checkbox for each file or folder.
3. Select **More Actions** at the bottom. From the pop-up, select **Copy** or **Cut**.
4. Go back to the File Manager Main menu by selecting the **Back** button at the top.
5. Select **More Actions** at the bottom. From the pop-up, select **Switch to USB Storage**. The USB drive screen appears listing all folders (or files).
6. Select **More Actions**. Navigate to the folder you want to copy the file to. From the pop-up, select **Paste**. The file will be copied to the folder.

To switch back to the ONX internal storage at any time, go back to the File Manager Main menu by selecting the **Back** button at the top. Then select **More Actions**. From the pop-up, select **Switch to Internal Storage**.



Managing files with StrataSync

When the OneExpert syncs with StrataSync, various files are uploaded and stored in the StrataSync cloud, such as test reports, screenshots, work orders, and configurations.

You can access these files via the StrataSync website. For more information see *"Synchronizing to the StrataSync server" on page 66.*

Viewing the User Guide on your instrument

Using the instrument's PDF viewer, you can view the User Guide on the instrument. The file must be on a USB stick or copied to the OneExpert.

1. From the Main menu, System Menu, select **File Manager**. The File Manager screen appears listing all folders (or files).
2. Navigate to find the OneExpert User-Guide PDF.
3. Press the file name to open it. The User Guide is displayed.

Remotely operating the instrument

The optional Remote Operation features allows you to access the OneExpert user interface from the VIAVI Mobile Tech app, your computer, or mobile device through a virtual network connection (VNC), connecting over an Ethernet interface or WiFi network. The is a great way to capture screens shots for additional troubleshooting, etc.

To use this feature, 1) you must have a VNC viewer program on the PC or mobile device, 2) the OneExpert must be connected to the same network as the PC or device, and 3) you must know the IP address of the OneExpert.

Establishing a VNC connection involves the following tasks:

- Establishing a connection between the instrument and a PC or laptop
  - See *"Ethernet connections" on page 48*
  - See *"WiFi connections" on page 49*
- Enabling remote operation using VNC
- Control the instrument using a PC keyboard or mobile device

Each of these operations is described in the following sections.

You can also use Smart Access Anywhere to provide support access to the ONX over any network, without the need for a VPN. See *SmartAccess Anywhere – Remote Coaching on page 75.*

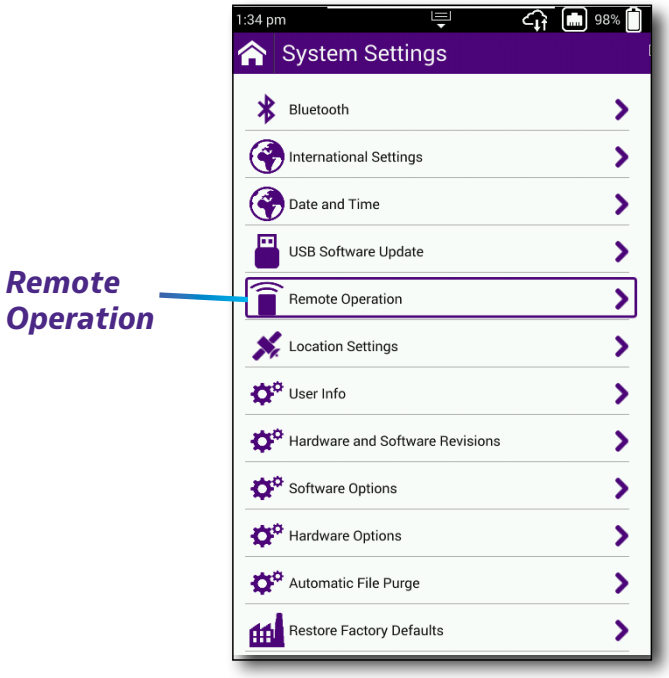
NOTE:

You need to enable Remote Operation to remote control the meter through the VIAVI Mobile Tech app, as well.

Setting up the ONX for VNC

In order to use VNC Viewer with your ONX and connect to it remotely, you need to enable it in System Settings.

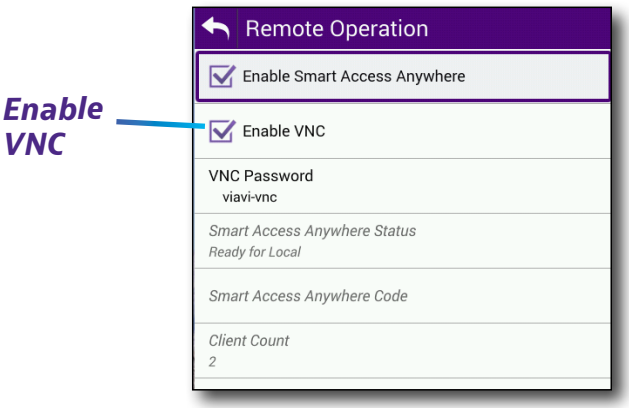
1. Go to the **System Settings** menu, then select **Remote Operation.** The Remote Operation menu appears.



2. Select **Enable VNC** and note the VNC password underneath:

   viavi-vnc

   You will need it to connect via VNC Viewer.



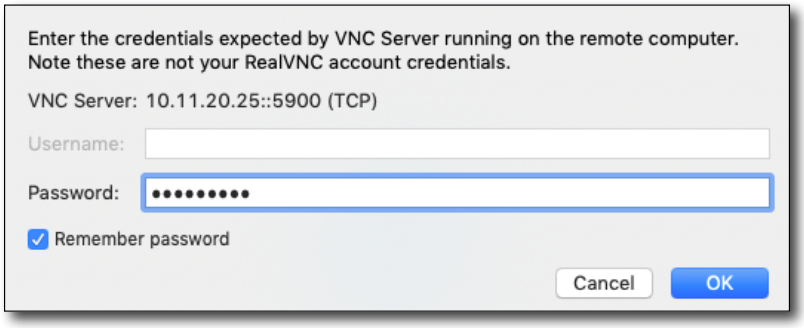
Connecting to your ONX via VNC on your PC or Mobile Device

After you have established an Ethernet or WiFi connection and set up the ONX for remote operation, you can launch the VNC viewer program to operate the ONX on your computer, smart phone, or tablet.

1. Download a VNC viewer application from your App Store or available from your VIAVI representative. VNS apps are available for PC and mobile devices.

1. Launch the app.

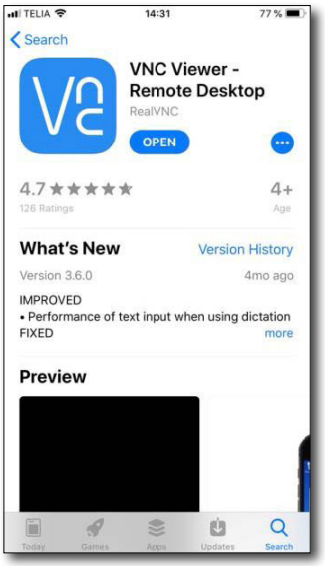
2. In the viewer's server address field, enter the OneExpert's IP address, and click **OK**. A password entry box appears.

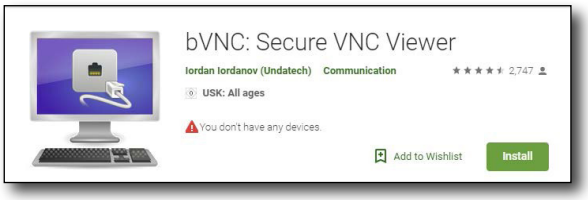


3. Enter the VNC password you noted before, ***viavi-vnc*** (found in the Remote Operation menu) and then click **OK**. The OneExpert user interface appears in the VNC viewer, and works similarly to using the unit itself. See the next section for details.

4. If the message, "Failed to connect to server" appears, the VNC viewer was not able to communicate with the OneExpert. If this happens, try the following solutions:

    - Make sure you are using the correct IP address for the OneExpert
    - From the PC or mobile device, ping the OneExpert IP address to verify the network link is working. If the link is not working, restart the OneExpert and try again..





Using a PC keyboard

After you have connected to the OneExpert from a PC using the VNC viewer, you can use the computer's mouse or keyboard to control the OneExpert.

The following table shows how the PC keys map to the OneExpert keypad.

VNC availability

In Ethernet, you can do a ping, trace route, and similar data tests, but *you cannot change* any data settings.

Ending a remote operation session

To end a remote operation session, either exit the VNC session on the PC or app, or turn the OneExpert off and then on again (power cycle).

SmartAccess Anywhere – Remote Coaching

SmartAccess Anywhere offers remote access and operation of the OneExpert in the field. This capability gives the workforce direct onsite support and coaching by a specialist, fixing issues immediately without additional truck rolls.

The SmartAccess Anywhere client (PC, Android, or Apple) can connect to your device via local area connection or Internet connection.

For client downloads and more information, see:

https://www.viavisolutions.com/en-us/products/smart-access-anywhere-saa

https://www.viavisolutions.com/en-us/software-download/smart-access-anywhere-saa-software

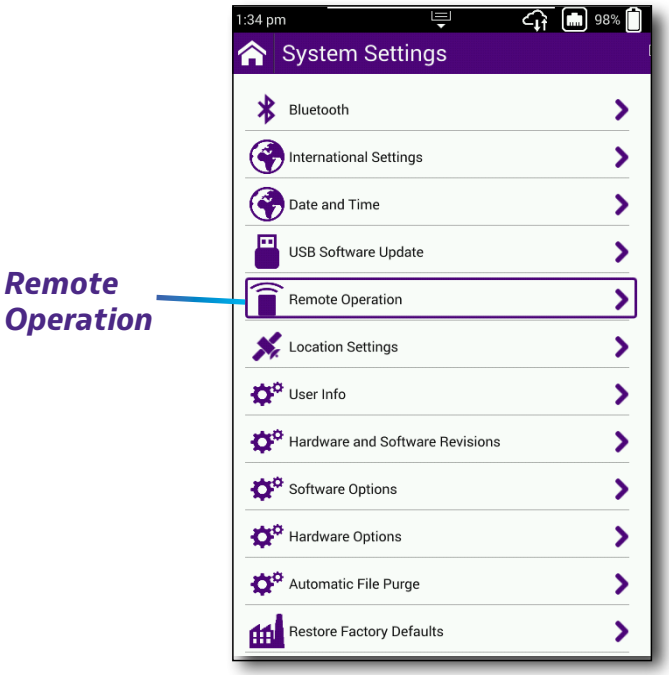
VIAVI provides links to Android and PC only. You can find the iOS version in the Apple App store.

SmartAccess is also provided in the Mobile Tech app. For details, see the ***Cloud Services User Guide***.

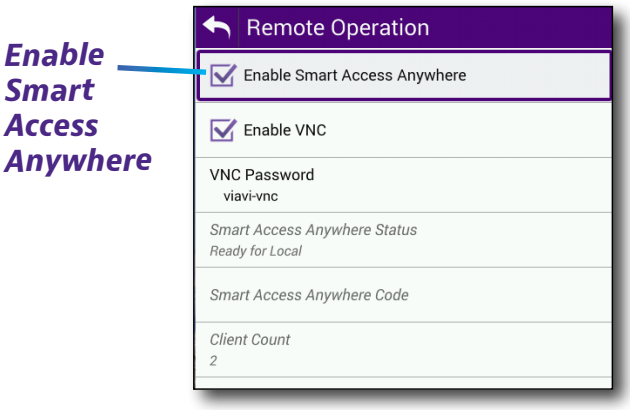
Setting up the ONX for Smart Access Anywhere

In order to use Smart Access Anywhere with your ONX and connect to it remotely, you need to enable it in System Settings.

1. Go to the **System Settings** menu, then select **Remote Operation.** The Remote Operation menu appears.

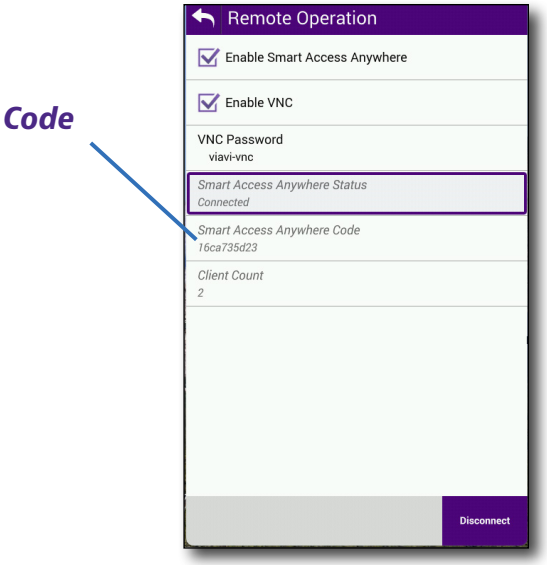


2. Select **Enable Smart Access Anywhere**.
3. Select **Connect** at the bottom. The unit will connect to the Smart Access Anywhere server.



Once connected, the Smart Access Anywhere Code is displayed.

Take note of this code as you will need to enter it in the Smart Access Anywhere mobile app or PC client.

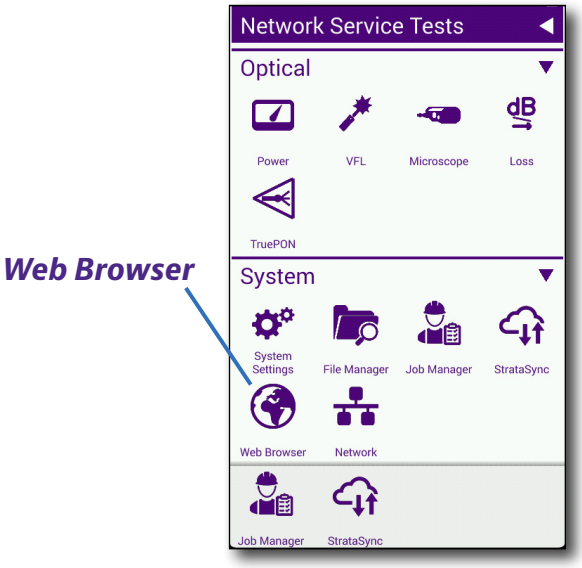


Web Browser

With the Web Browser, you can provide visual proof to customers that a circuit is correctly provisioned all the way to the Internet. The browser works over Ethernet, allowing you to surf the web from the customer's NID or demarcation point using only the OneExpert.

For testing applications, the browser is a separate mode that allows you to connect to any public web site on the Internet through an internet service provider.

Because the browser's primary purpose is to demonstrate connectivity, it does not have all the capabilities of typical web browsers, such as Internet Explorer. The web browser has the following limitations:



- The browser does not cache web pages. The OneExpert does not have sufficient memory to cache web pages. Each time a page is selected, the OneExpert re-loads the page.
- The browser does not currently support data entry through the browser. For example, you cannot log into a web mail account. The browser does not currently support Java applets, and will not display web pages written in Java. Sites optimized for quick downloads, such as DSLReports.com, are not supported because they are based on Java.

The following sections in this chapter describe how to access and use the web browser.

Accessing the web browser

Like IP ping, you must have an established underlying network connection, such as PPP over Ethernet, before you can use the browser. .

In the **System** menu, press the **Web Browser** button. The web browser display appears.

Navigating the browser

You can navigate the browser as you would with a mobile device, with tapping in text boxes to display the keypad and enter the data, swiping your fingers to scroll, pressing links to select them, and so on.

In addition, you can connect a USB mouse or a USB keyboard/mouse combination to the OneExpert to navigate the web browser as you would with a desktop computer. Going back or forward one page

Opening a web page

There are two ways to open a web page:

- **Enter the address** – Tap the address box, and then use the keypad on the screen to enter the address.
- **Use a bookmark** – Press the **Bookmarks** button and then select a bookmark.

Adding bookmarks

If there is a specific page that you would like to view or if you visit a site frequently, you can bookmark it. There are six bookmark slots available: one for your Home URL and five others.

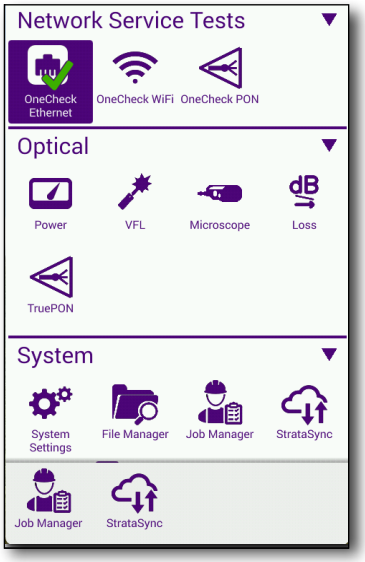
1. On the main Web Browser page, select **Bookmarks**.
2. Select Add a Bookmark, then enter the URL., and select OK. The bookmark will be added to the list.

3

Network Service Testing

This chapter provides steps for using the Network Service testing features of the OneExpert, include the following:

About Network Service testing



With the Network Service test suite, you can use the OneExpert to connect to a port on the customer's modem, WiFi, or fiber network.

To bring up the Network service tests, select **Network Service Tests** from the Main menu. You can then test for connectivity and throughput, using **OneCheck Ethernet, OneCheck WiFi, and OneCheck PON**.

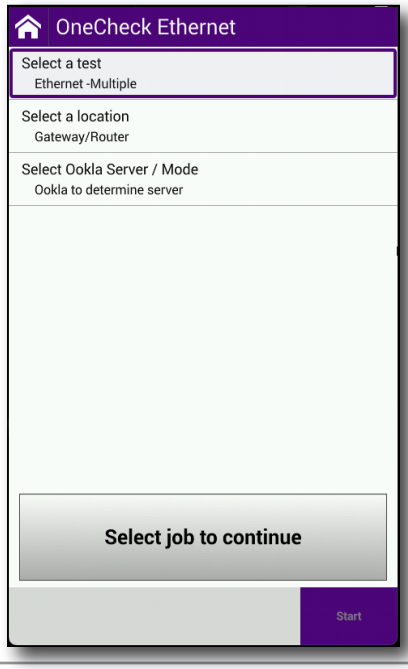
You can also ping through the modem or network to a network switch or web address to test for connectivity and run Traceroute to record and observe the route of traffic through the network.

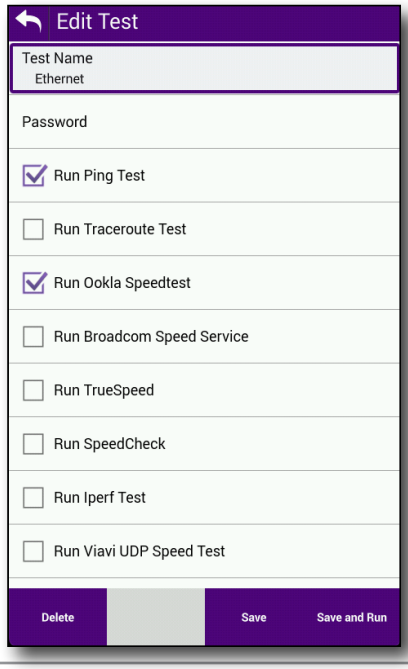
The tests involve the following steps:

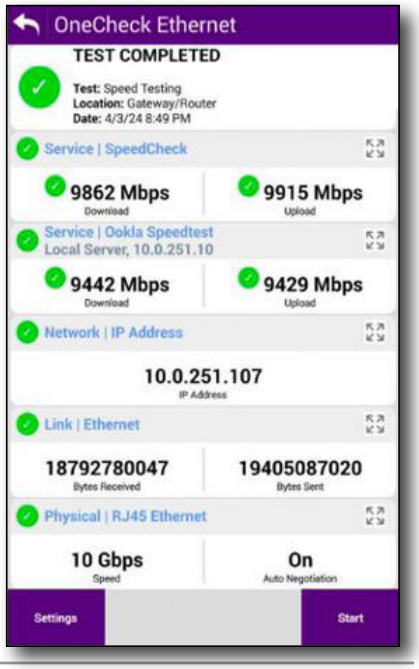
- Specifying test settings
- Performing tests
- Viewing results

OneCheck Ethernet

1. Using an Ethernet cable, connect the instrument to the LAN.
    - Connect one end of the Ethernet cable to the 10G connector on the top of the unit, under the rubber door.
    - Connect the other end to the LAN.
2. Verify that network connectivity is enabled on the display.
3. From the Network Service Tests menu, select **OneCheck Ethernet.** The OneCheck Ethernet screens appears.
4. Select a test. The test select screen appears. To edit, or create a new one, see *"OneCheck test profiles" on page 86.*
5. With the test highlighted, choose **Select**. The OneCheck Ethernet screen appears again.
6. Select the location for the test, or create a new one.
7. Example setting up optional Ookla Speedtest: Select the Ookla server / mode (***Ookla to determine server*** or ***User to select server from Ookla list***).
8. Select the job to save the test, or create a new one.
9. Start the test by selecting **Start** at the bottom of the screen. After a few minutes, the results are displayed.
    - For more details, select a section of the test.
    - To see all tests or save the reports, select **Job Manager** on the main menu. See *"Job Manager" on page 106.*

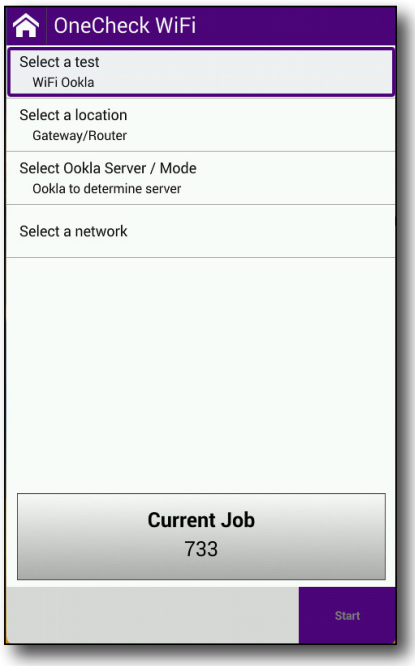


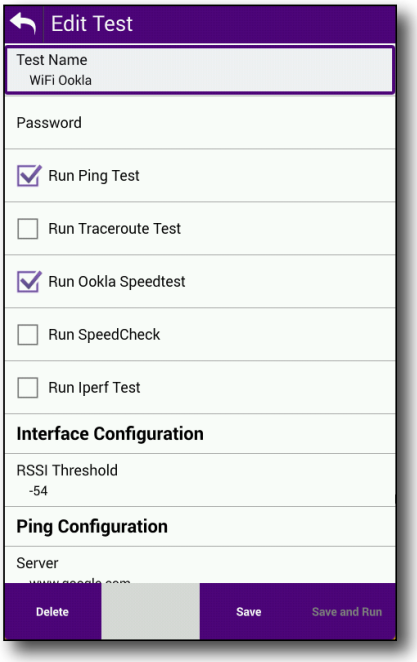


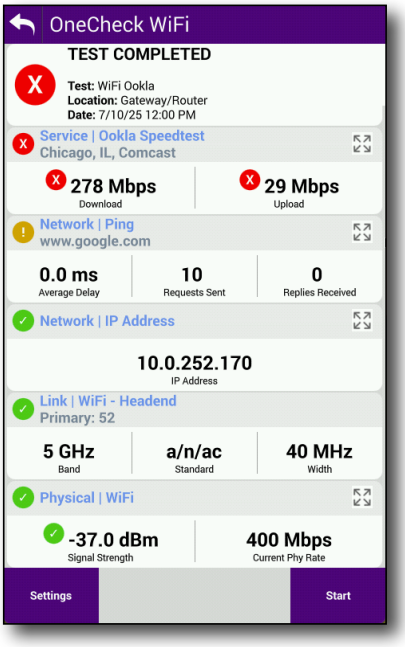


OneCheck WiFi

1. Connect the meter to the WiFi network and enter the password, as necessary.
2. Verify that network connectivity is enabled on the display.
3. From the Network Service Tests menu, select **OneCheck WiFi.** The OneCheck WiFi screen appears.
4. Select a test. The test select screen appears. To edit, or create a new one, see *"OneCheck test profiles" on page 86.*
5. With the test highlighted, choose **Select**. The OneCheck WiFi screen appears again.
6. Select the location for the test, or create a new one.
7. Example setting up optional Ookla Speedtest: Select the Ookla server / mode (***Ookla to determine server*** or ***User to select server from Ookla list***).
8. Select the network, if necessary. When done, select **Back** to return to the OneCheck WiFi menu.
9. Select the job to save the test, or create a new one.
10. Start the test by selecting **Start** at the bottom of the screen. After a few minutes, the results are displayed.
    - For more details, select a section of the test.
    - To see all tests or save the reports, select **Job Manager** on the main menu. See *"Job Manager" on page 106.*



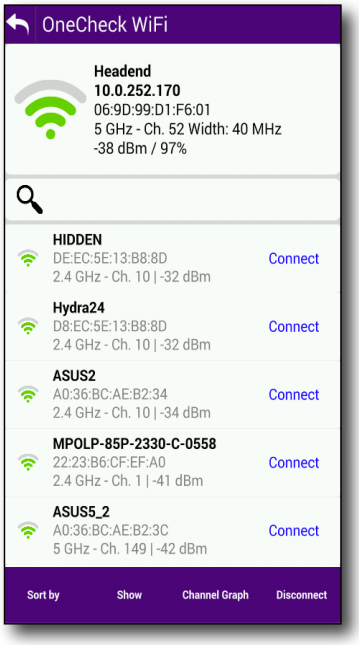


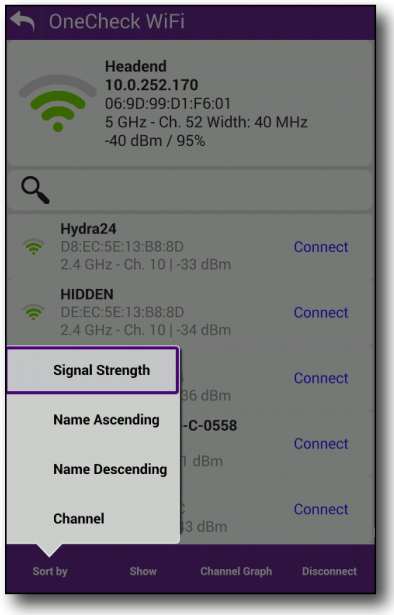


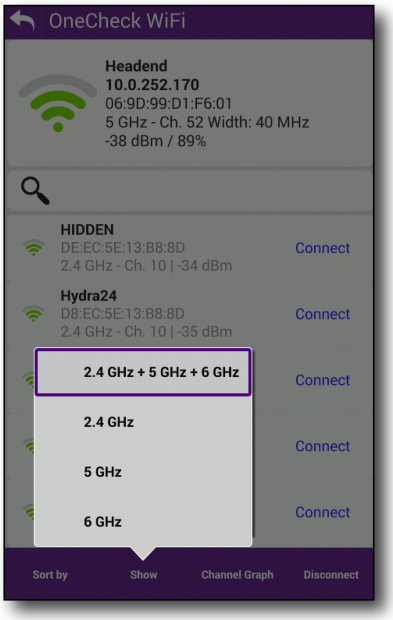
Network select

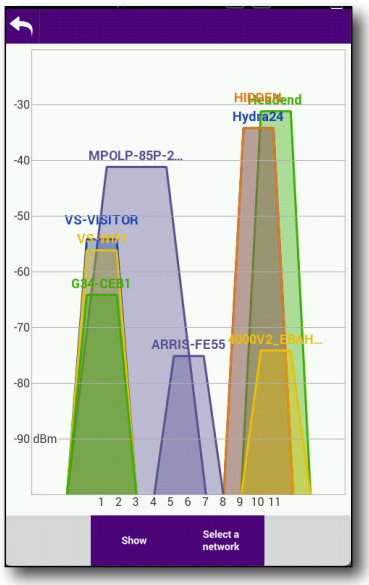
From the Access Points screen, you can sort and view the APs in a few ways.

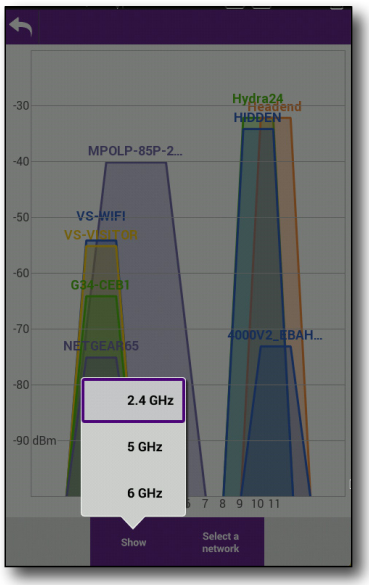
- **Sort by** – Select to sort by signal strength, ascending and descending names, or channel.
- **Show** – Show by bands, combined 2.4 GHz + 5 GHz + 6 GHz, or individual bands (2.4 GHz, 5 GHz, or 6 GHz).
- **Channel Graph** – Show a comparison of all the networks. You can choose from individual bands 2.4 GHz, 5 GHz, 6 GHz.





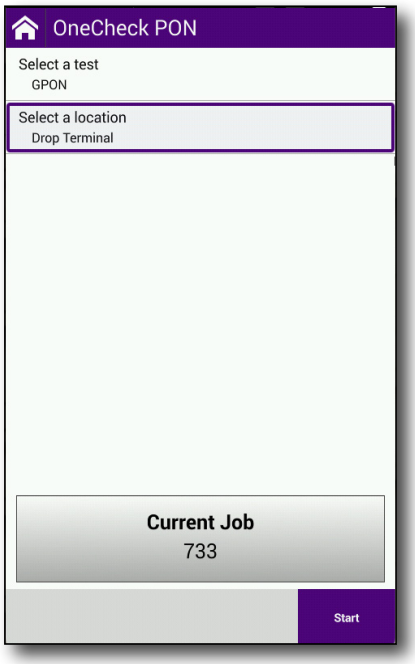


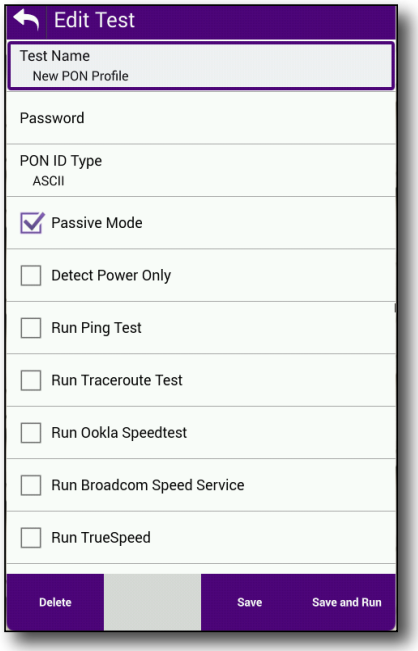


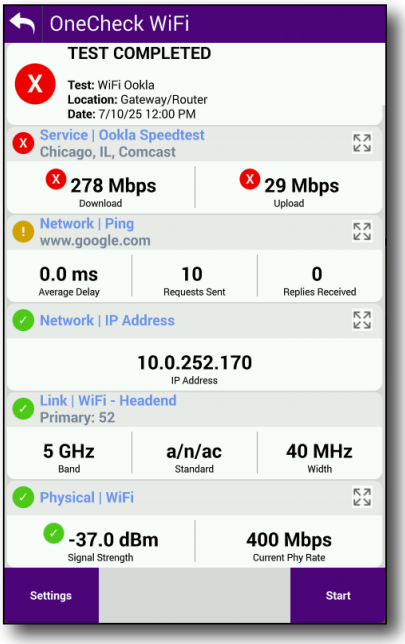


OneCheck PON

1. Make sure all fiber cables and fiber ports are clean. Dirty fiber connections will result in erroneous measurements.
2. Using a fiber cable, connect the instrument to the GPON / XGSPON network:
    - Connect one end of the fiber cable to the ONX's SFP connector on the top of the unit using an SFP adapter, under the rubber door.
    - Connect the other end of the fiber cable to the network.
3. Verify that network connectivity is enabled via the display.
4. From the Network Service Tests menu, select **OneCheck PON.** The OneCheck PON screens appears.
5. Select a test. The test select screen appears. To edit, or create a new one, see *"OneCheck test profiles" on page 86.*
6. With the test highlighted, choose **Select**. The OneCheck PON screen appears again
7. Select the location for the test, or create a new one.
8. Select the job to save the test, or create a new one.
9. Start the test by selecting **Start** at the bottom of the screen. After a few minutes, the results are displayed.
    - For more details, select a section of the test.
    - To see all tests or save the reports, select **Job Manager** on the main menu. See *"Job Manager" on page 106.*







CAUTION:

Before testing, ensure the GPON signal is not above -7dbM. Otherwise, the SFP could be damaged.

NOTE:

Running IP, Ping, Web Connectivity, and speed tests over the PON network requires purchase of VIAVI PON SFPs, the OneCheck PON option, and the GPON Emulation or XGSPON Emulation options.

ONXF-OC-PON, ONXF-OC-GPON-EMUL, ONXF-OC-XGSPON-EMUL

For more information, contact your local VIAVI representative or visit www.viavisolutions.com.

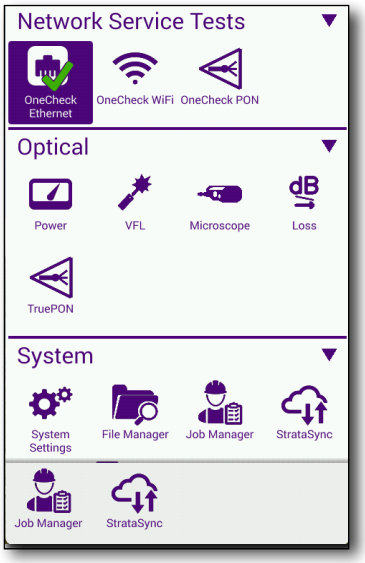
OneCheck test profiles

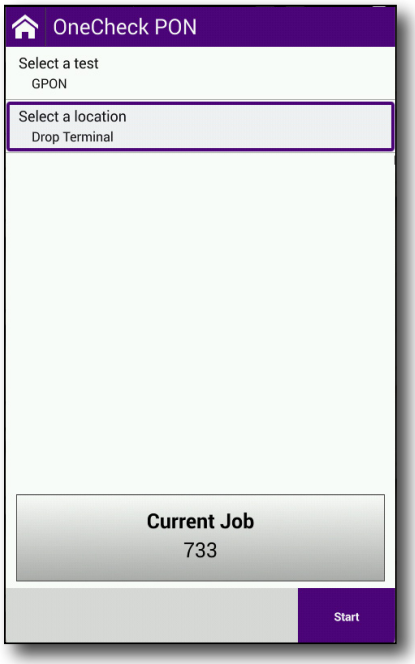
You can set up and manage testing profiles for your meter. Default profiles are included, but you can also customize your own.

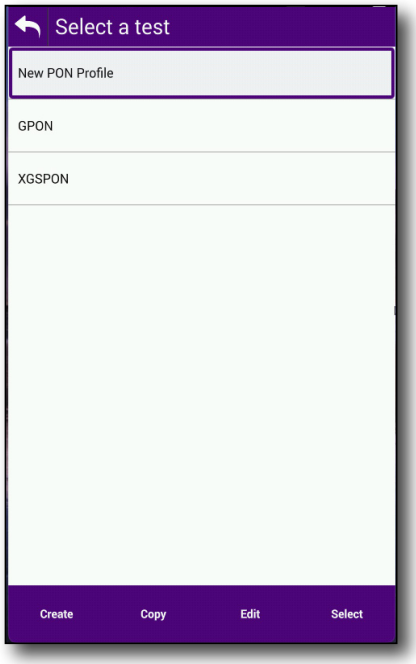
See the following sections that detail the setup for each type of testing profile.

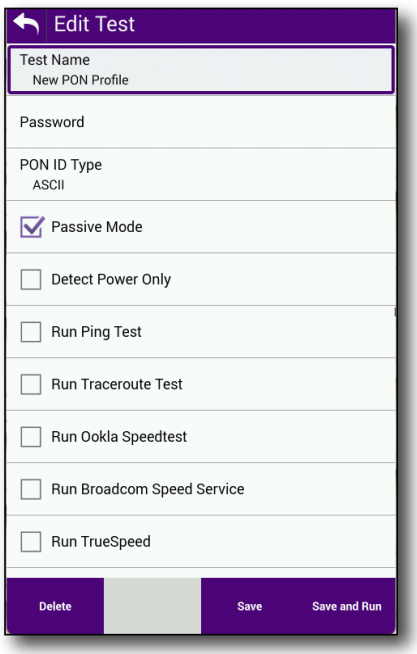
Creating a profile

1. From the Network Service Tests menu, select **OneCheck Ethernet, OneCheck WiFi,** or **OneCheck PON.** The corresponding OneCheck screen appears.
2. Select a test. The test select screen appears.
3. Select **Create** at the bottom of the screen. The Edit Test screens appears.
4. Enter a name for the test at the top, and password, if necessary.
5. Use the check boxes to add tests to the profile.
6. When finished, select **Save** at the bottom, or **Save and Run** to run the test immediately.









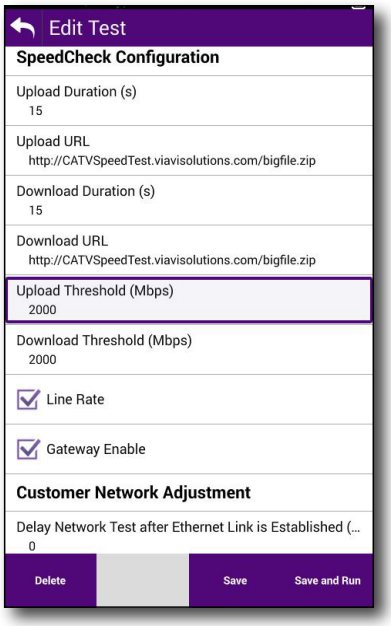
Copying a profile

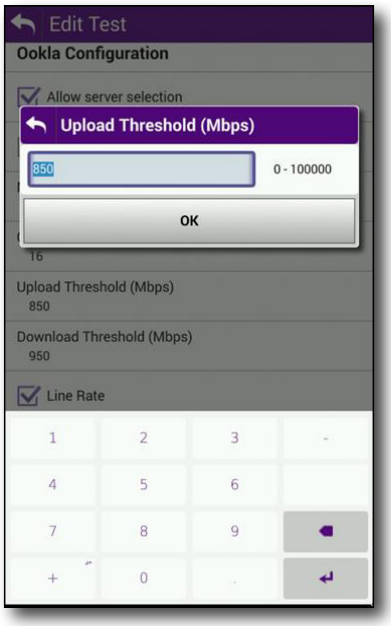
1. From the Network Service Tests menu, select **OneCheck Ethernet, OneCheck WiFi,** or **OneCheck PON.** The corresponding OneCheck screen appears.
2. Select a test. The test select screen appears.
3. Select the test you want to copy.
4. Select **Copy** at the bottom of the screen. The Edit Test screens appears.
5. Enter a name for the test at the top, and password, if necessary.
6. Use the check boxes to add /remove tests to the profile.
7. When finished, select **Save** at the bottom, or **Save and Run** to run the test immediately.

Editing a profile

1. From the Network Service Tests menu, select **OneCheck Ethernet, OneCheck WiFi,** or **OneCheck PON.** The corresponding OneCheck screen appears.
2. Select a test. The test select screen appears.
3. Select the test you want to edit.
4. Select **Edit** at the bottom of the screen. The Edit Test screens appears.
5. Enter a name for the test at the top, and password, if necessary.
6. Use the check boxes to add /remove tests to the profile.

   To edit a value, select the value. In the edit screen that appears, adjust the value as needed using the onscreen keyboard. Then select **OK** to confirm.
7. When finished, select **Save** at the bottom, or **Save and Run** to run the test immediately.





Deleting a profile

1. From the Network Service Tests menu, select **OneCheck Ethernet, OneCheck WiFi,** or **OneCheck PON.** The corresponding OneCheck screen appears.
2. Select a test. The test select screen appears.
3. Select the test you want to delete.
4. Select **Edit** at the bottom of the screen. The Edit Test screens appears.
5. Select **Delete**. The test profile is deleted from the list.

Profile setup

Use these settings to enable what test you want to run for each profile and customize for your network.

Make sure to enable the tests you want to configure so they show up in the list. Not all of these apply to each type of test, of course.

General

- Test Name
- Password
- PON ID Type
- Passive Mode
- Specify ONT Attributes
    - ONT Vendor
    - ONT Model
    - ONT Software Version
- Interface
- Run IP Test
- Detect Power Only
- Run Ping Test
- Run Traceroute Test
- Run Ookla Speedtest
- Run TrueSpeed
- Run SpeedCheck
- Run Iperf Test

Interface Configuration

- Interface Type
- RSSI Threshold
- Autonegotiation
- Interface Rate
- ONT Rx Min Threshold (Class B+ ODN: -28 dBm)
- Optical Loss Max Threshold (dB)

Data Interface

- Interface Protocol
- Customize MAC Address
- Custom MAC Address
- Address Type – DHCP or Static
- User Class
- Vendor
- VLAN
- VLAN ID
- VLAN Priority

Ping Configuration

- Server
- Tx Count (1-100000000)
- Tx Size (24-2000)
- Tx Packet Interval (ms)
- Max Loss Threshold (%)

Traceroute Configuration

- Destination IP / DNS Name
- DNS Lookup
- Packet Type
- Max Hops
- Max Delay Threshold (ms)

Ookla Configuration

- Allow server selection
- Local Server
- Server URL
- Server Location
- Number of Connections
- Connections
- Upload Threshold (Mbps)
- Download Threshold (Mbps)
- Line Rate
- Gateway Enable

TrueSpeed Configuration

- Host
- User
- Password
- Test Duration Per Direction (s)
- Saturation Window (%)
- Saturation Connections (%)
- Upload CIR (Mbps)
- Download CIR (Mbps)
- Upload Threshold (Mbps)
- Download Threshold (Mbps)
- Gateway Enable

SpeedCheck Configuration

- Upload Duration (s)
- Upload URL
- Download Duration (s)
- Download URL
- Upload Threshold (Mbps)
- Download Threshold (Mbps)

Iperf Configuration

- Iperf Version
- Host
- Port
- Test Duration (s)
- Transport Protocol
- Number of Streams
- Streams
- Window Size (KB)
- Window Size Unit
- Upload Threshold (Mbps)
- Download Threshold (Mbps)
- Gateway Enable

Customer Network Adjustment

- Delay Network Test after Ethernet Link is Established (s)

Testing the data layer

Using the data layer tests, you can test for connectivity and throughput. See ***Chapter 6: Data Testing***.

4

Optical Testing

This chapter provides steps for optical fiber testing and accessories, including the following:

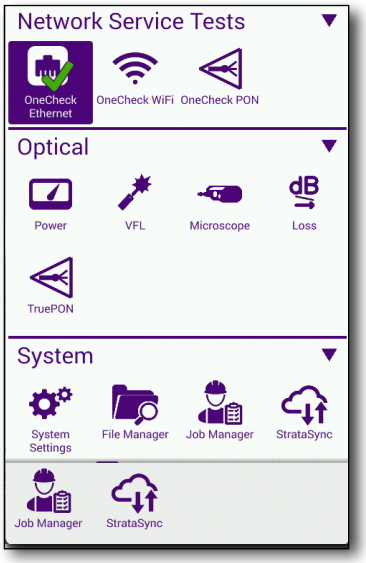
About optical testing

The fiber optic features provided by the OneExpert allow technicians to quickly turn up and perform basic troubleshooting of the fiber local loop.

To bring up the optical tests, select **Optical** from the Main menu.

If your OneExpert is configured and optioned to do so, you can perform specific measurements for the following tests:

- **Power**
- **VFL**
- **Microscope**
- **Loss**
- **TruePON**



Optical testing accessories

These accessories check whether the fiber connectors are clean and monitor the power of the fiber connection for your testing.

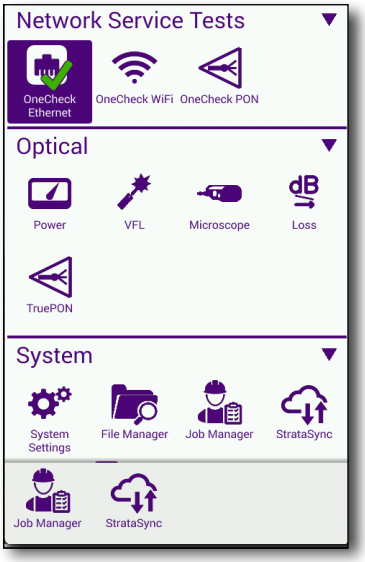
- **VIAVI fiberscope P5000i** (USB)

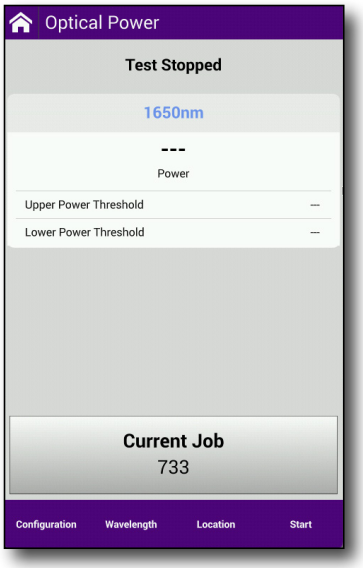
- **VIAVI FiberChek probe** (Bluetooth and USB**)**
  - Inspect both the bulkhead (female) and patch cord (male) sides of fiber interconnect.
  - Inspect both simplex connectors.
  - Use with a comprehensive selection of precision FBPT tips.

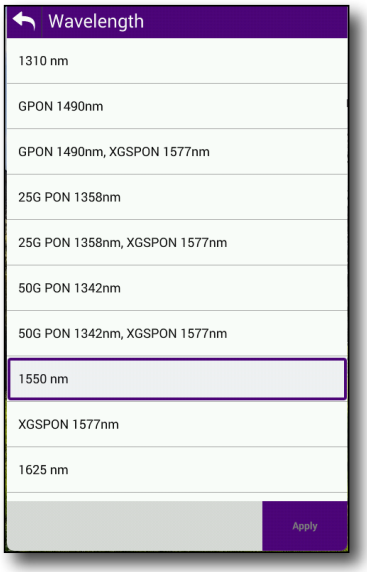
Optical power

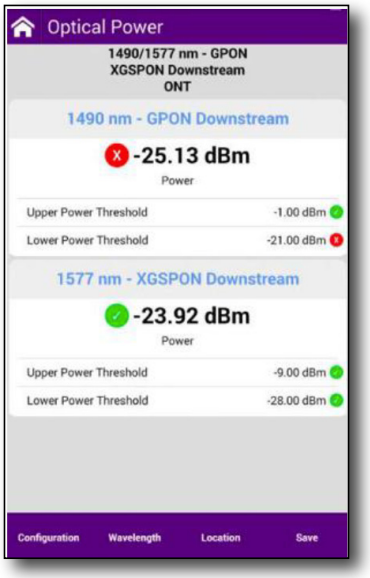
1. Connect the optical patch cord to the top of the OneExpert.
2. From the Optical menu, select **Power**. The Optical Power screen appears.
3. For details on the power meter, select **Configuration** and then **Powermeter Information**.
4. Select **Wavelength**. The Wavelength screen appears. Choose your wavelength.
5. Select Location. The Location screens appears. Choose your location.
6. Select **Start** to begin testing.
7. When done, select **Save** to save the test results. The Save screen appears.

   Choose the current job or create a new one. You can also change the file name, if nesessary. Select **Save** again.



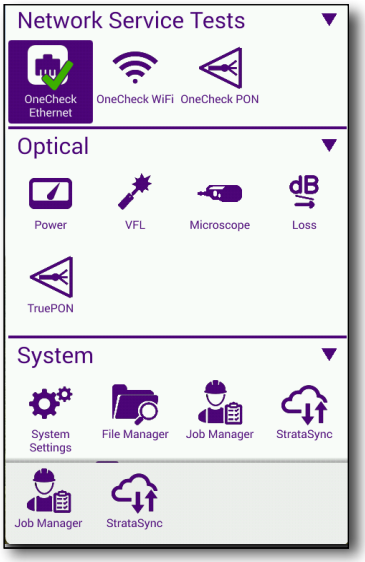






Visual fault locator (VFL)

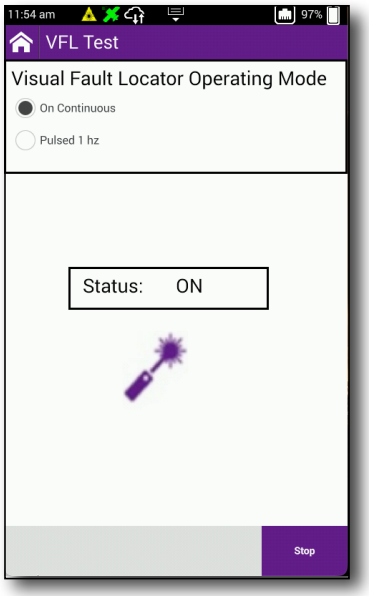
VFL uses a red laser to pinpoint issues, locate fibers, and troubleshoot.

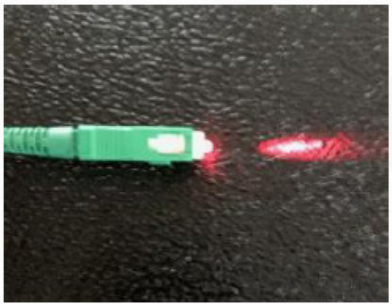


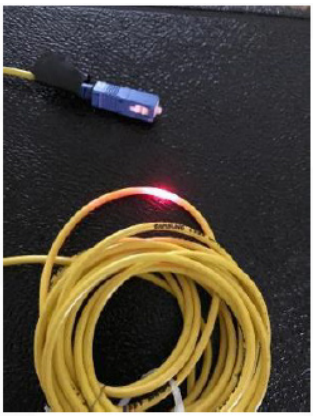
- Provides continuity verification (up to 5 miles)
- Confirms port to port routing
- Exits fiber if there is a break or severe bend

1. Connect the optical patch cord to the top of the OneExpert.
2. From the Optical menu, select **VFL**. The VFL Test screen appears.
3. Select the VFL mode at the top, **On Continuous** or **Pulsed 1 hz**.
4. Select **Start** to begin testing. The **Status** will change to **ON**, and a warning indicator appears in the top bar to show that the laser is being used.

   Use extreme caution and follow all safety information when using the laser.
5. When done, select **Stop**.

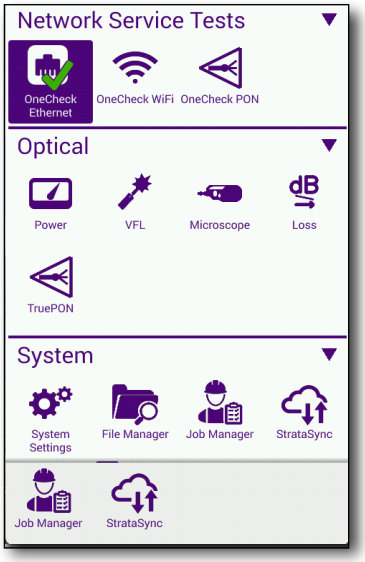






Microscope

The optional VIAVI P5000i probe microscope accessory is used to view a live video of a simplex fiber to determine if the fiber is clean.

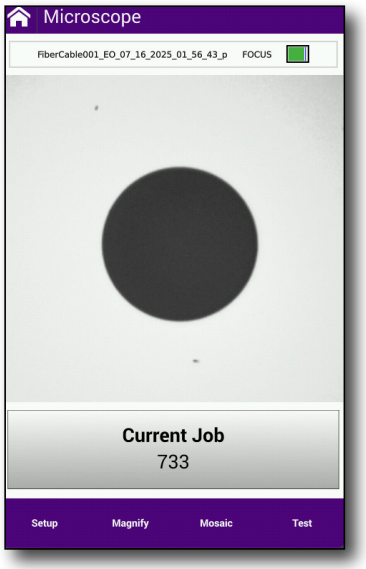


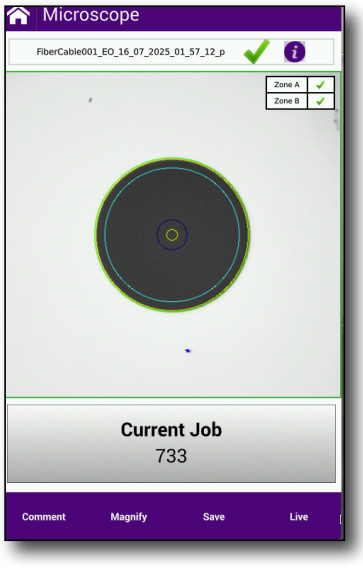
It can also capture a snap-shot and provide pass/fail analysis.

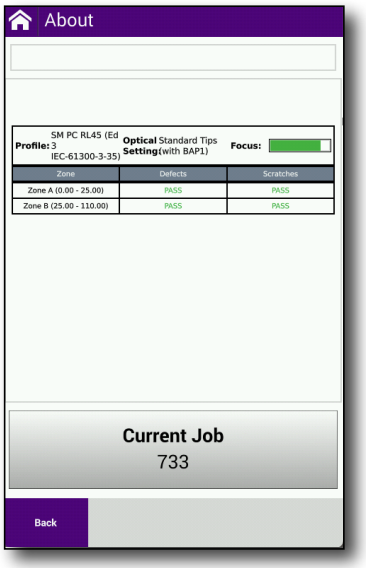
1. Connect the fiber microscope to the USB connector on the side of the instrument.
2. Connect the microscope to the optical patch cord or bulkhead.
3. From the Optical menu, select **Microscope**. The Microscope screen appears, showing live video of the fiber.
4. Set up the microscope as necessary, including test setup, link and file configuration. See *"Setup" on page 99*in the next section.
    - Select **Magnify** to zoom in (or the buttons on the microscope
    - Use the focus adjustments on the microscope to show a clear image of the fiber
    - Select **Mosaic** to toggle between a mosaic of all images and the full current image
5. Select **Test** to begin testing. The test automatically centers the view (if specified to do so), captures an image, and then analyzes it. The test result shows defects and scratches, and pass/fail results. For more detail, select the **Info** icon at the top of the screen.

    To add a comment to the results, select **Comment**.

    The results are automatically saved, but to save the results again, select **Save**. Choose the current job or create a new one. You can also change the file name, if nesessary.
6. To return to live view of the fiber, select **Live**.





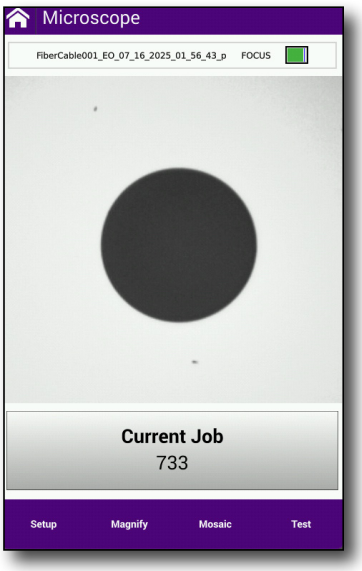


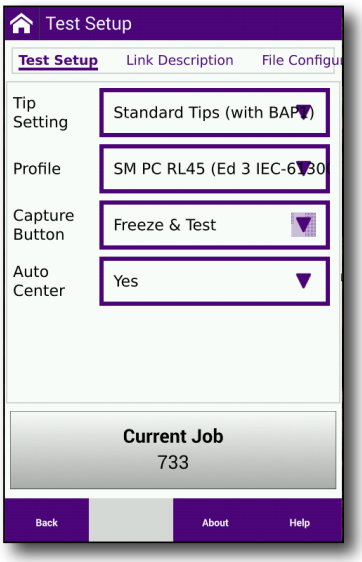
NOTE:

Although some microscopes can inspect multi-fiber or ribbon fiber (depending on the microscope and the tip used), the OneExpert's microscope application supports simplex fiber only.

Setup

Select **Setup** at the bottom of the screen to adjust the **Test Setup**, **Link Description**, and **File Configuration** menus.





Test Setup

You can choose the **Tip Setting**, **Profile**, **Capture Button** mode, and **Auto Center** settings.

Tip Setting – Select the type of tip being used for the fiber connector.

Profile – Select the inspection profile.

If you have a custom profile, you can import it via a USB drive using the into the File Manager. See *"File Manager" on page 69*.

Capture Button – Select **Freeze & Test** or **Freeze Image**.

Freeze & Test – The test automatically centers the view (if specified to do so), captures an image, and then analyzes it. The test result shows defects and scratches.

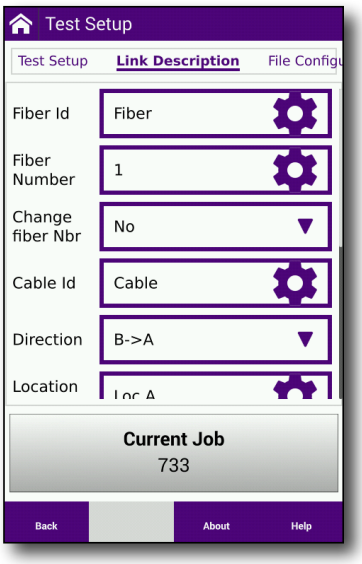
Freeze Image – The test automatically centers the view (if specified to do so) and captures the image. You have to then test manually.

Auto Center – Select **Yes** to automatically show the fiber center. If set to **No**, the image will center at the last location of the fiber following a test. High magnification is always automatically centered.

Link Description

Here you can include the various fiber link descriptions, including Fiber ID, Fiber Number, Cable ID, direction, technician, and job info, etc.

Enter the detail as necessary.

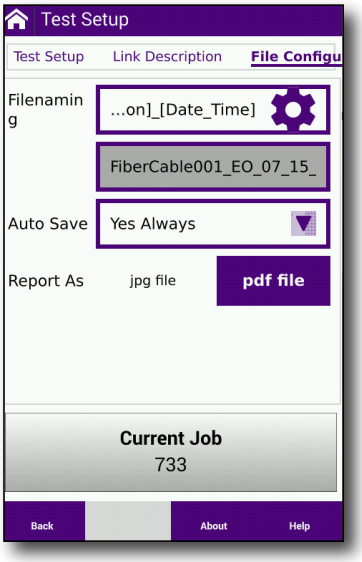


File Configuration

You can configure the file naming convention, auto save, and report formats.

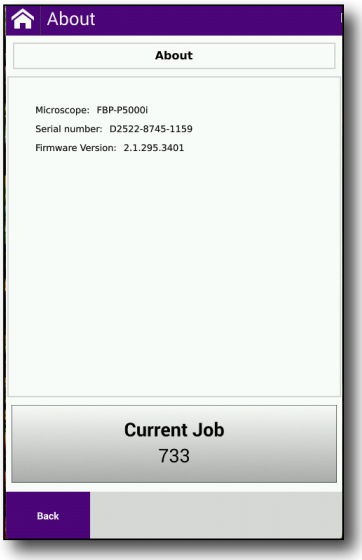
Auto Save allows you to choose from **No**, **Yes Always**, and **Yes on Pass**.

For reporting, select **jpg file**, **PDF file**, or both.



About

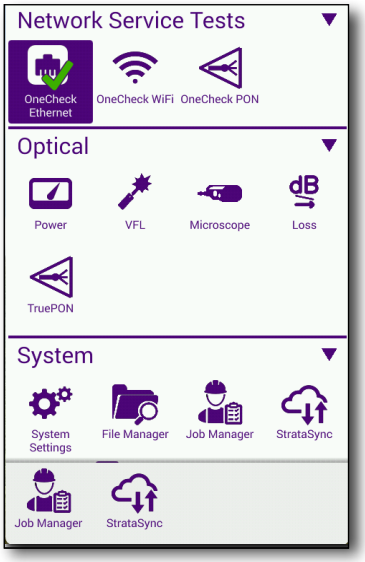
You can see details on the microscope, including model number, firmware version, and serial number..



Help

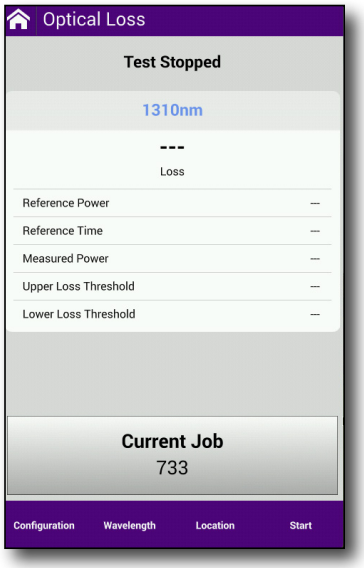
For helpful resources and contact information, scan the QR code.

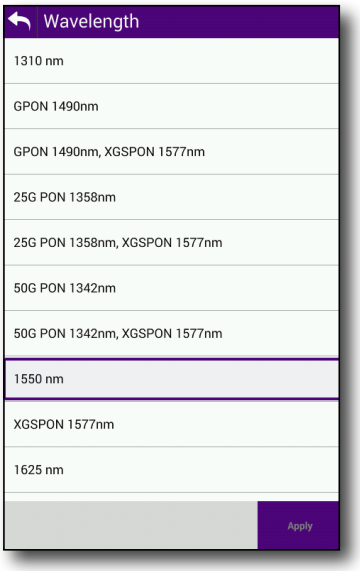
Optical loss

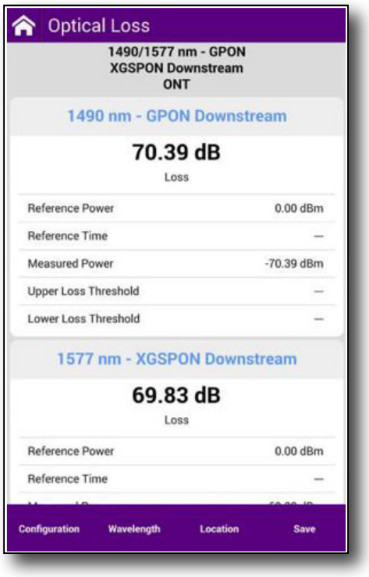


1. Connect the optical patch cord to the top of the OneExpert.
2. From the Optical menu, select **Loss**. The Optical Loss screen appears.
3. For details on the power meter and to set / clear the reference, select **Configuration** and then **Powermeter Information, Set Reference,** or **Clear Reference**.
4. Select **Wavelength**. The Wavelength screen appears. Choose your wavelength.
5. Select Location. The Location screens appears. Choose your location.
6. Select **Start** to begin testing.
7. When done, select **Save** to save the test results. The Save screen appears.

   Choose the current job or create a new one. You can also change the file name, if nesessary. Select **Save** again.



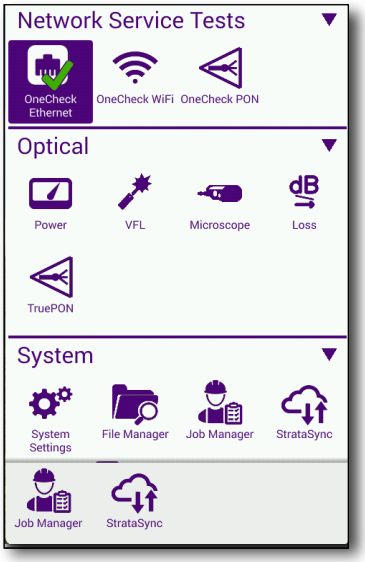


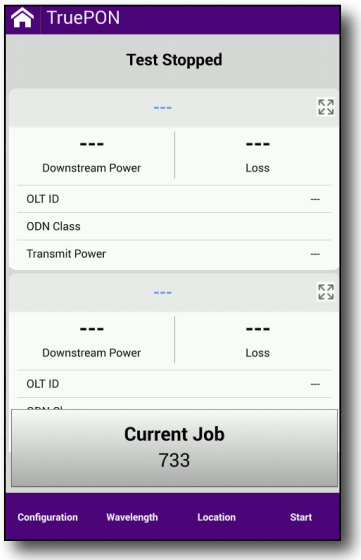


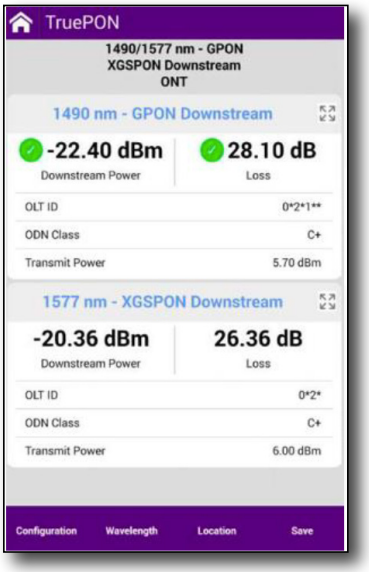
TruePON

1. Connect the optical patch cord to the top of the OneExpert.
2. From the Optical menu, select **TruePON**. The TruePON screen appears.
3. For details on the power meter, select **Configuration** and then **Powermeter Information**.
4. Select **Wavelength**. The Wavelength screen appears. Choose your wavelength.
5. Select Location. The Location screens appears. Choose your location.
6. Select **Start** to begin testing.
7. When done, select **Save** to save the test results. The Save screen appears.

   Choose the current job or create a new one. You can also change the file name, if nesessary. Select **Save** again.







5

Job Manager

This chapter covers the Job Manager features, including the following:

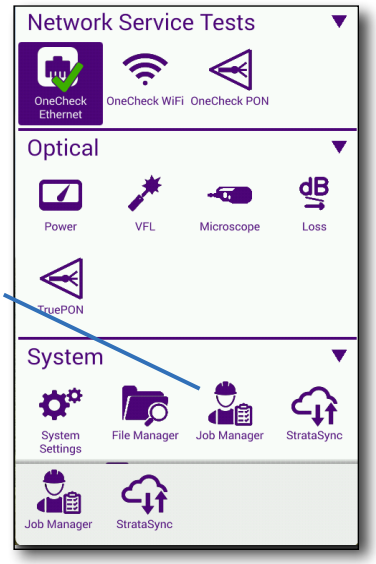
Job Manager

The Job Manager works in tandem with the StrataSync TPA Job Manager to use templates created in StrataSync to create jobs and then deploy to your OneExpert.

For details on creating and exporting job templates, see the ***Cloud Services User Guide, TPA chapter***. For a sample template file, contact us at ***TAC@viavisolutions.com***.

Tests for the jobs can be launched from here. Select a job to view it, and then choose a test to run it.

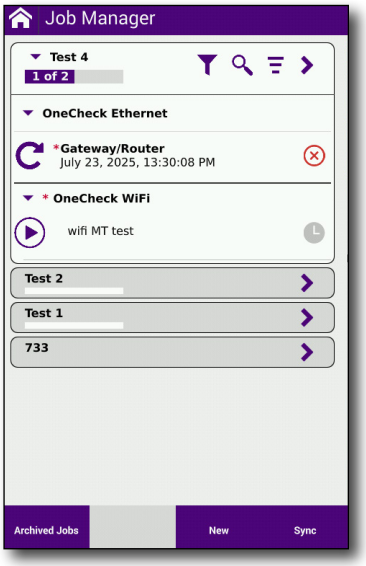
To bring up the Job Manager, from the System menu, select **Job Manager**. The Jobs List appears.



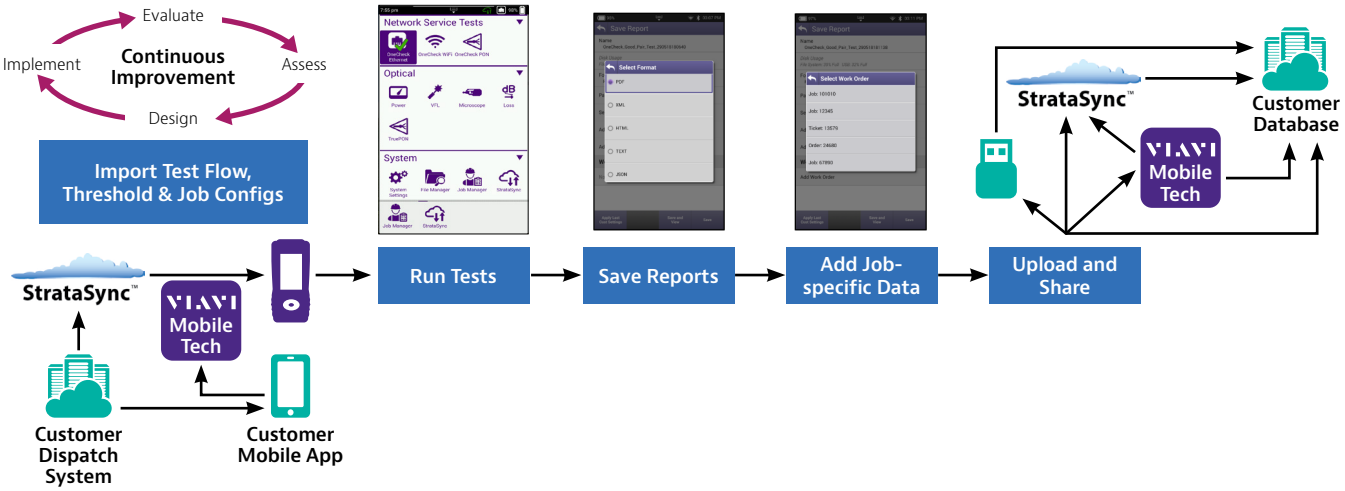
Job Manager

With the workflow option in StrataSync, each tech's meter can be updated with a day's jobs, enabling a tech to choose the job that matches the current task, perform the prescribed tests, and close it out with data uploaded for management—with a smooth, simple process. Get confirmation that techs and contractors have performed the work with geo-tagged test reports uploaded via the Mobile Tech App.

When jobs are added from StrataSync, the Mobile Tech app, or via USB, you'll see a notification in the Tray menu with the details.

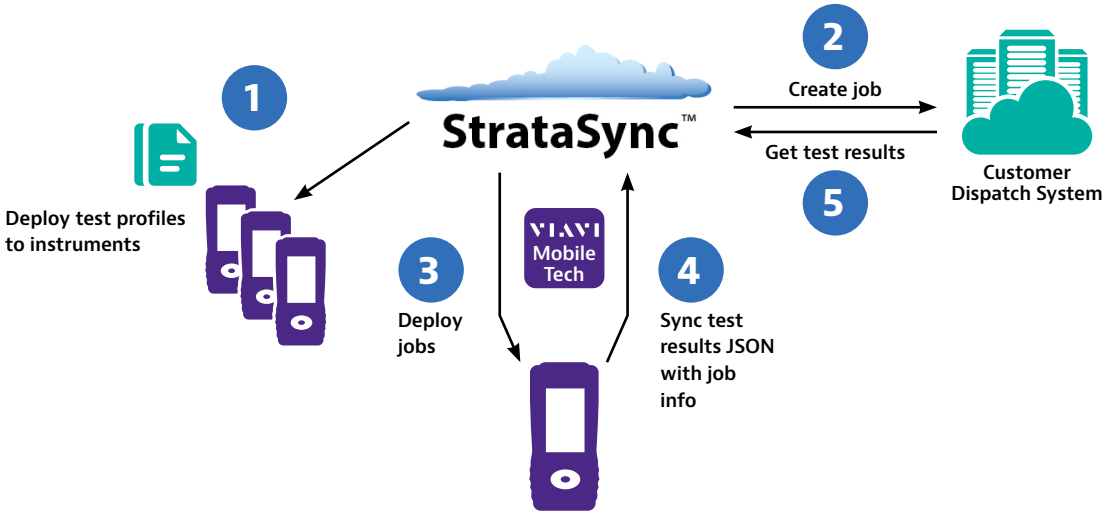


Jobs List

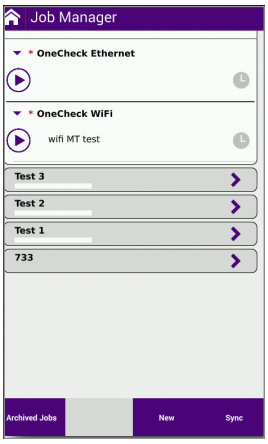


The test process is smoother and easier for techs with workflow enhanced with smooth job integration and closeout. The StrataSync workflow option enables simpler compatibility with service operator and contractor job management systems. This means that test flow, pass/fail thresholds, and jobs can be relayed to the ONX, enabling the tech to select an assigned job and perform tests to prescribed thresholds as guided through the flow. The job-related test data can then be included in a report and uploaded for management.

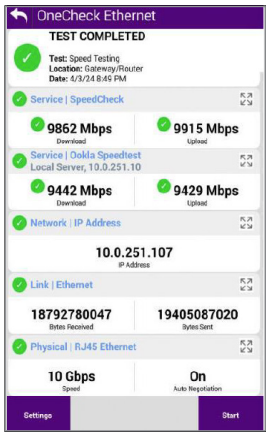
An example workflow is as follows:



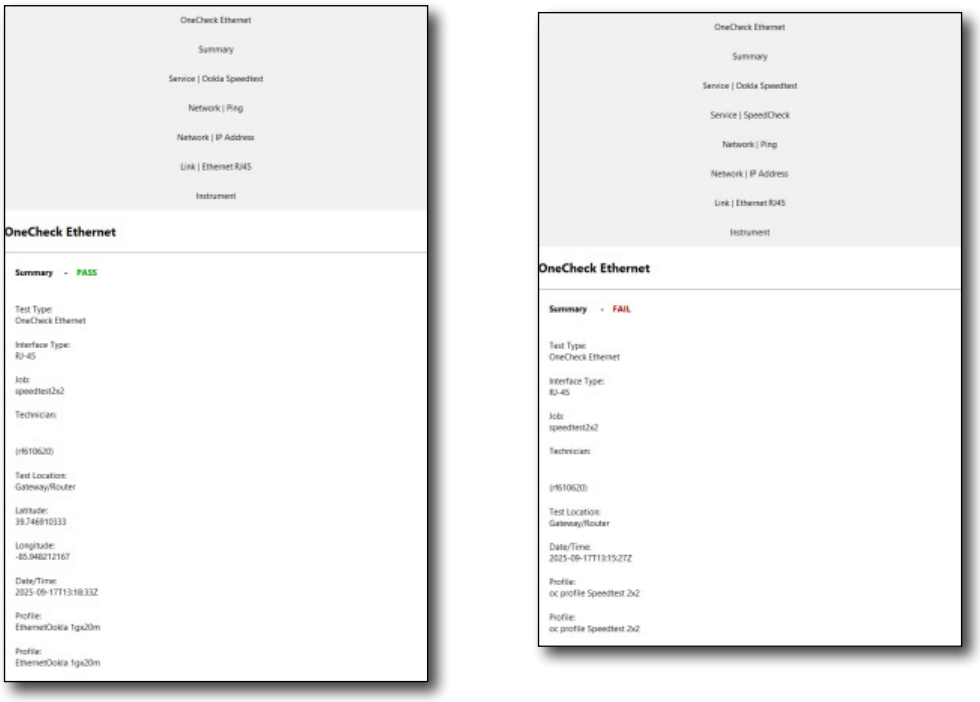
1. Deploy profiles/configuration files to instruments via sync (as part of standard procedure)
2. Create jobs and reference techId and test profile.
3. Deploy jobs to instrument (with test profile reference).
4. Sync to StrataSync with job info after testing and saving CDM reports (JSON).
5. View test results & associated job on StrataSync and/or (contractor) transfer to customer.



List of assigned jobs and required tests



Test status



Report examples, Pass and Fail

The OneExpert has a variety of testing and reporting features that are enhanced through StrataSync. This helps to ensure complete test processes for performance to standards and to minimize return service calls.

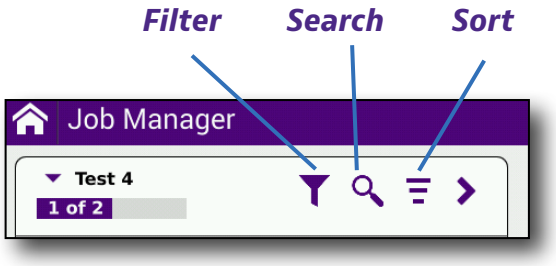
Filter, sorting, and searching jobs and tests

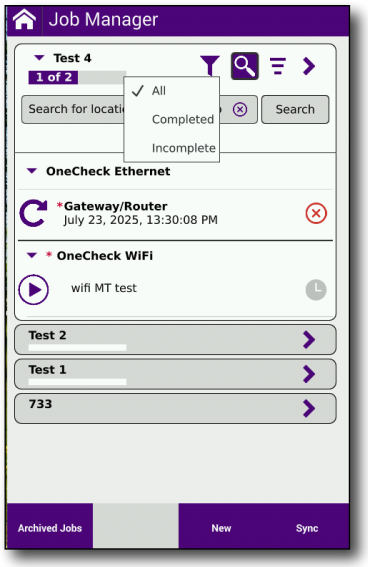
From the Jobs List, use the filter, search, and sort buttons at the top to easily find tests or jobs.

Filter – Use to filter the jobs (***All, Completed, or Incomplete***)

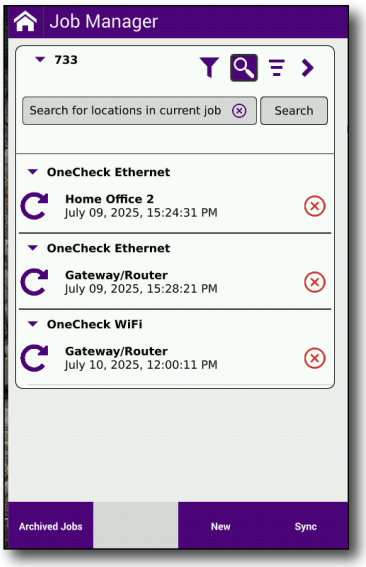
Search – Use to search for location in the current job

Sort – Use to sort the jobs and tests (***By Job Order, By Test Location, or By Test***)





Filter jobs



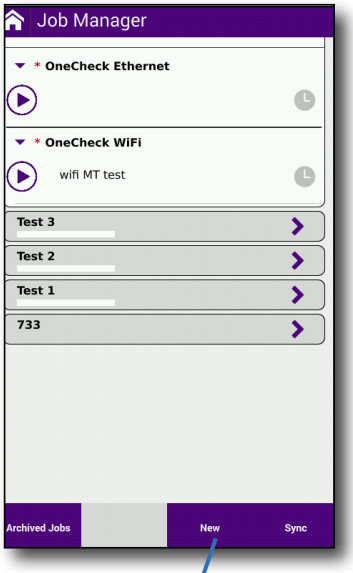
Search tests

Creating jobs from a template

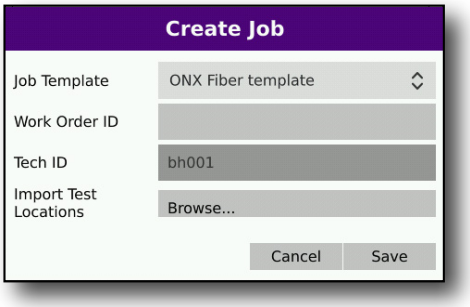
You can import jobs from StrataSync or create your own on the instrument.

1. From the Job List, select **New**. The Create Job screen appears.
2. From the **Job Template** dropdown, choose the template you want to use. The templates are created in StrataSync.
3. Enter a unique Work Order ID.
4. To import test locatitons from a CSV file, select **Browse.** The Select a CSV Label List screen appears.

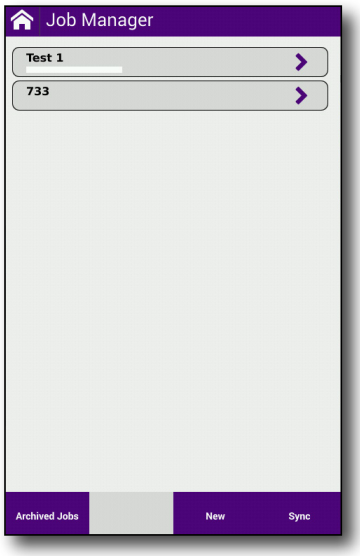
   Select the file you want to import from the internal storage or a USB flash drive. See "Managing files" for details.
5. When done, select **Save**. The job will be created and added to the list.



New



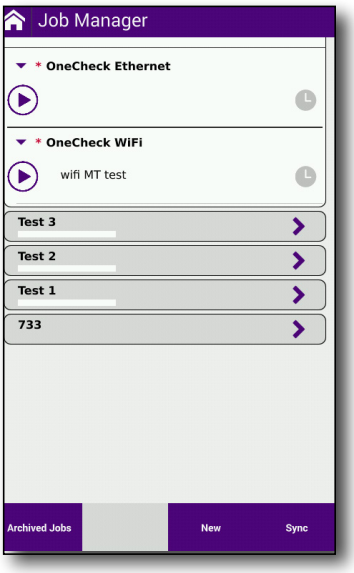
Creating jobs

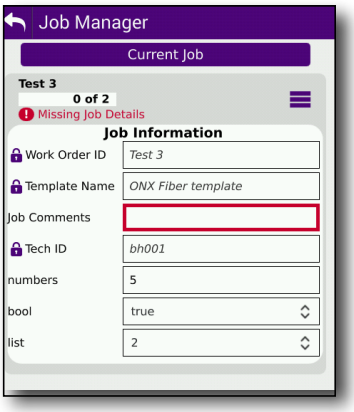


Missing details

Depending how the template was created in StrataSync and if there are required fields, you may have to enter additional details.

1. From the Jobs List, find the job you want to add detail, and select the arrow on the far right. The Job Information screen appears.
2. Enter the detail as necessary.
3. When done, select **Back** to return to the jobs list.

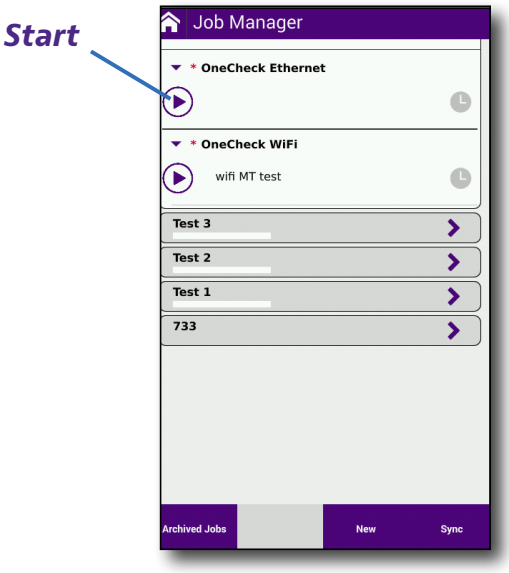


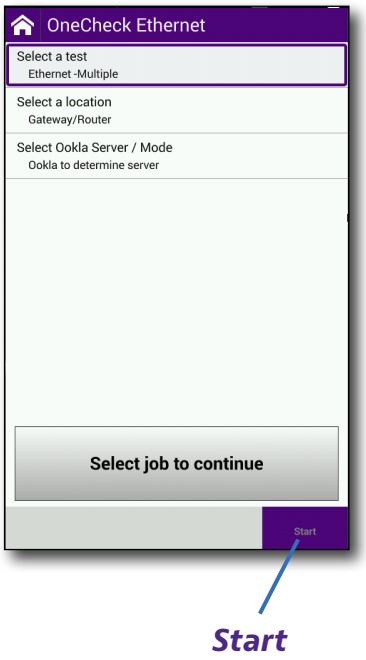


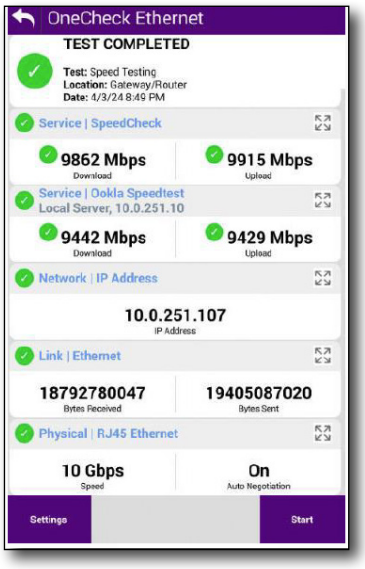
Running tests

You can also run tests associated to jobs from the Job Manager.

1. From the Jobs List, select a job to expand it. The tests included in the job appear below.
2. Next to the test you want to run, select **Start**. The screen for that test appears.
3. Select **Start** again to run it. The test runs and shows the results.

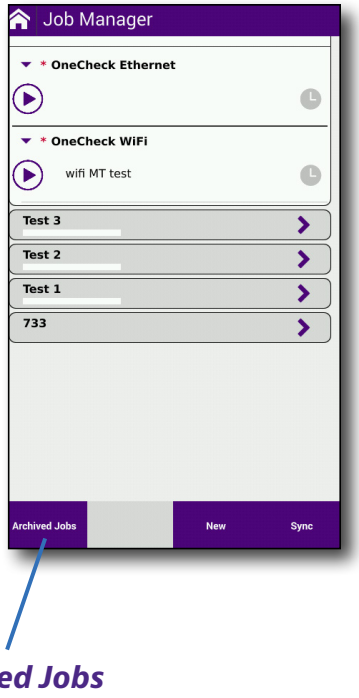






Archiving jobs

You can archive jobs from your jobs list.

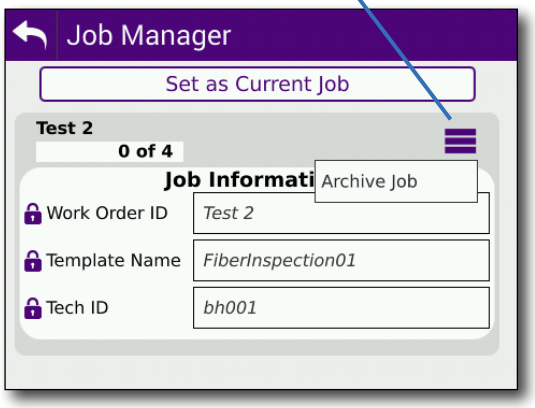


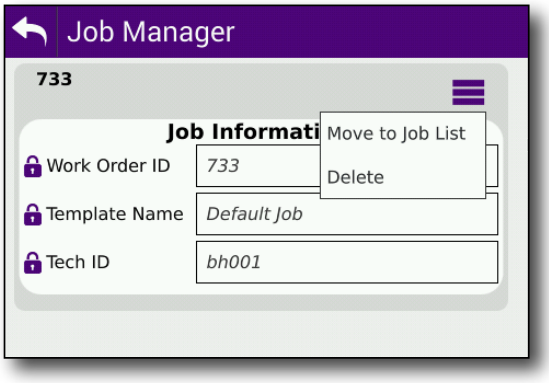
1. From the Jobs List, find the job you want to archive, and select the arrow on the far right. The Job Information screen appears.
2. Select the **Options** button at the top, and select ***Archive Job***. The job will be moved to the Archived Jobs list.
    - To see the Archived Jobs list, from the Job Manager main menu, select **Archived Jobs** at the bottom. The Archived Jobs list appears.
    - To move an archived job to the Jobs list, from the Archived Jobs List, find the job you want to add, and select the arrow on the far right. The Job Information screen appears.

      Select the **Options** button at the top, and select ***Move to Job List***. The job will be moved to the Jobs list.

Archived Jobs

Options





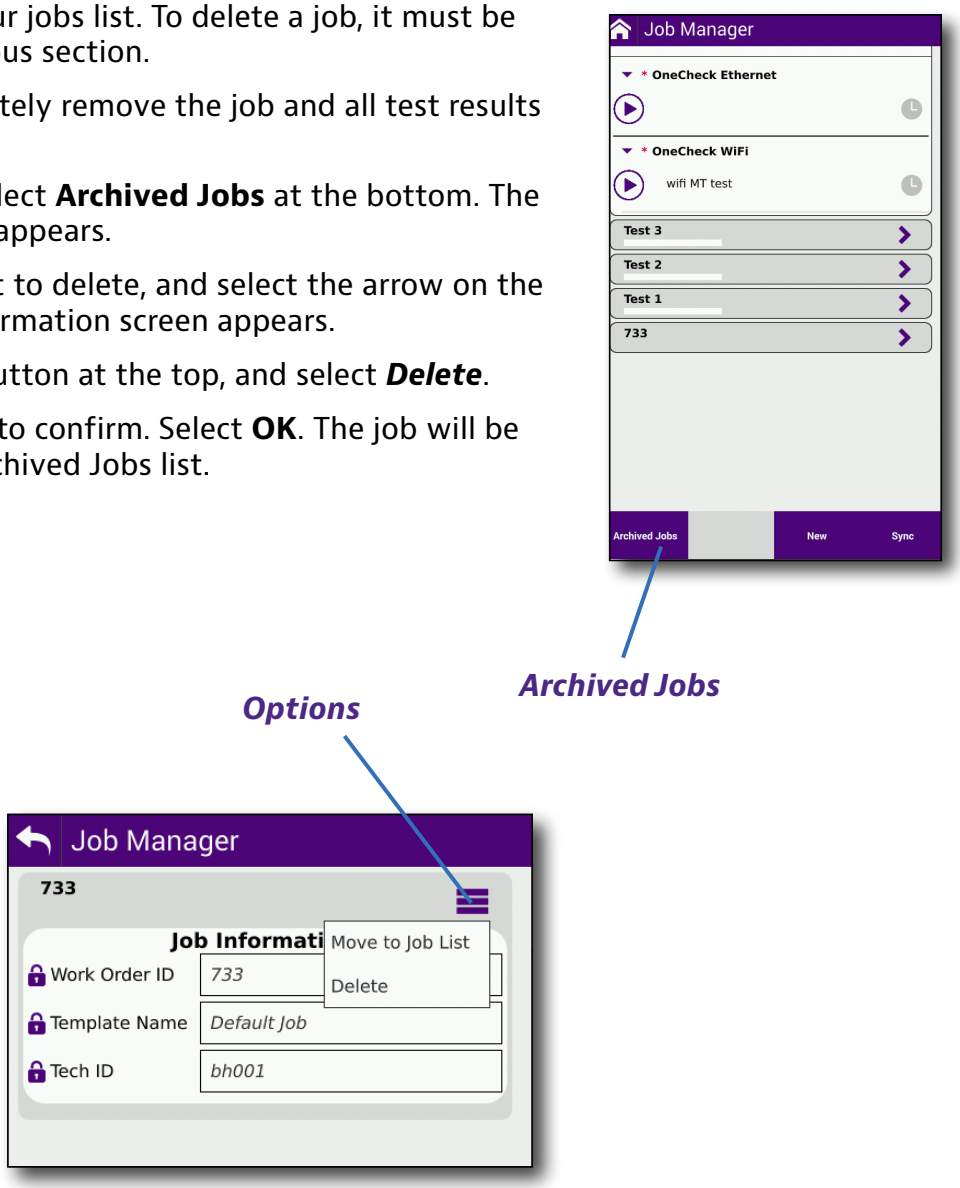
Archiving jobs

Deleting jobs

You can delete jobs from your jobs list. To delete a job, it must be archived first. See the previous section.

Important: This will completely remove the job and all test results associated to it.

1. From the Jobs List, select **Archived Jobs** at the bottom. The Archived Jobs screen appears.
2. Find the job you want to delete, and select the arrow on the far right. The Job Information screen appears.
3. Select the **Options** button at the top, and select ***Delete***.
4. A popup will ask you to confirm. Select **OK**. The job will be removed from the Archived Jobs list.



Deleting jobs

IMPORTANT:

If a job has been synced to StrataSync, it cannot be deleted on the instrument or in Mobile Tech, but can be archived to clean up the job list until it is removed by StrataSync.

Once the job is "Approved" in StrataSync, (either manually by a user with access or via the auto approval settings (if used)), it will be removed from your instrument or the Mobile Tech job list (whether it was archived or not).

If the job is deleted in StrataSync, it will be removed from the instrument and Mobile Tech.

For more details, see the Cloud Services User Guide.

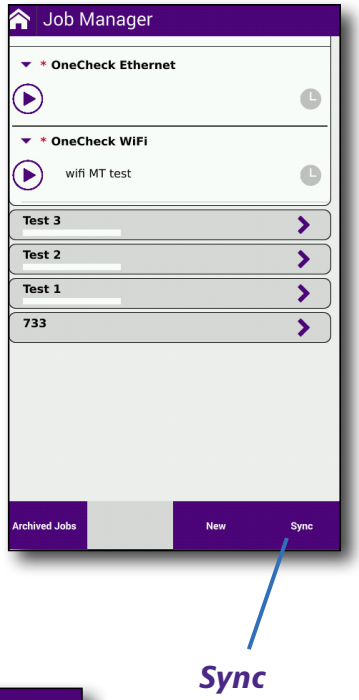
Syncing jobs

You can sync all files on the OneExpert to StrataSync, including jobs, screenshots, firmware updates, software options, etc.

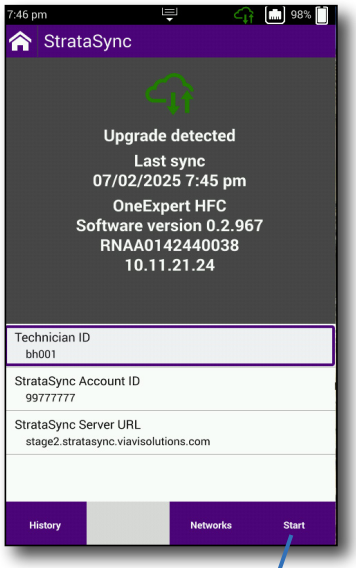
See *"Syncing to StrataSync and updating" on page 56.*

For more details, see the *Cloud Services User Guide*.

1. From the Jobs List, select **Sync** at the bottom. The StrataSync screen sppears.
2. Enter your StrataSync account information, if necessary.
3. Select **Start**. The files will be synced to StrataSync.
   - For sync history, select **History**.



Sync



Start

6

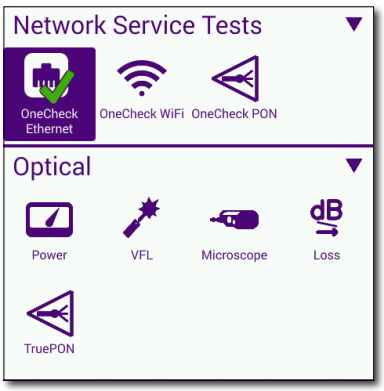
Data Testing

This chapter provides steps for using the data testing features of the OneExpert. The data layer tests allow you to test for connectivity and throughput, including the following:

About data tests

The following optional data tests are available for each connection method to verify connectivity and throughput:

- SpeedCheck
- Ping and Traceroute
- Ookla Speedtest
- TrueSpeed
- Iperf



NOTE:

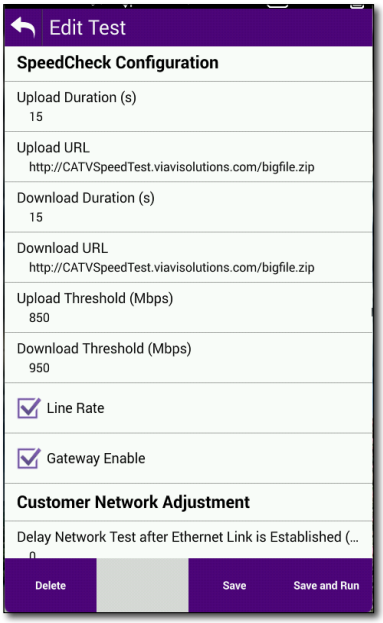
Several of the tests require additional setup before testing. See "OneCheck test profiles" on page 86 for more information.

SpeedCheck testing

The SpeedCheck test is used to check downstream and upstream throughput via Ethernet test interfaces. Its Download/ Upload rate is up to 10 Gbps for Ethernet. SpeedCheck uses an IPv4 interface that you established for testing. Once there is data over WiFi, it will also work over WiFi. This is an optional feature.

The ONX uses HTTP to perform a Speed Check test and requires access to an HTTP server. This server is a generic HTTP server with minor configuration changes to support high speed throughput. The server needs to be placed in the network in a way that will allow it to deliver very high data rate traffic to the ONX for downstream and upstream throughput testing. VIAVI recommends the Apache HTTP server (v 2.4) that is readily available from Apache and supports multiple operating systems.

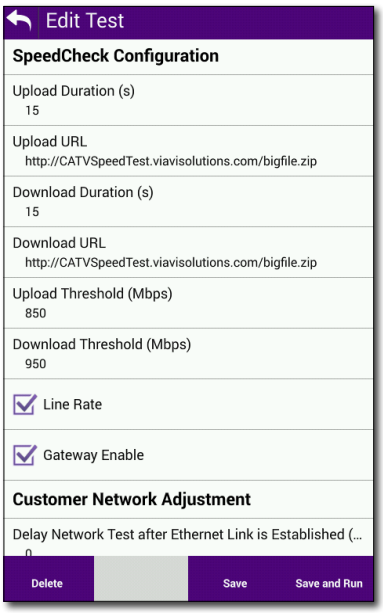
For details on setting up your SpeedCheck server, contact us at *CATVsupport@viavisolutions.com*.



Before you begin

Once you have your profile set up, you can run the test. Make sure the test is enabled in the profile, as well.

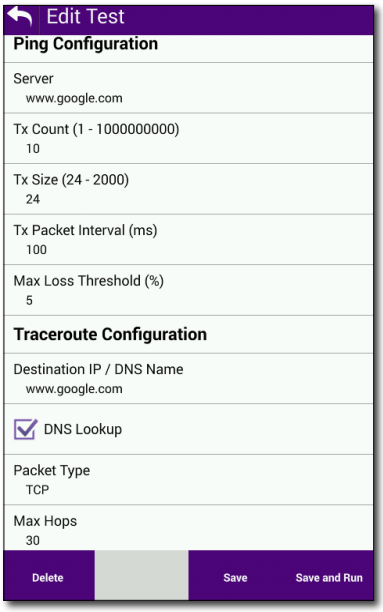
For additional configuration, select **Settings** from the test results screen. See *"OneCheck test profiles" on page 86.*



Ping and Traceroute testing

The Ping test sends a ping packet through the modem to an IP address or DNS name (could be a network switch or web address) to test for connectivity. This is an optional feature.

The Traceroute test sends a packet through the modem to an IP address or DNS name (could be a network switch or web address), then traces each hop from the source (your instrument) to its destination. When running the application, the response time and hops traversed by the packet appear on the Traceroute screen.



Before you begin

Once you have your profile set up, you can run the test. Make sure the test is enabled in the profile, as well.

For additional configuration, select **Settings** from the test results screen. See *"OneCheck test profiles" on page 86.*

Ookla Speedtest (optional)

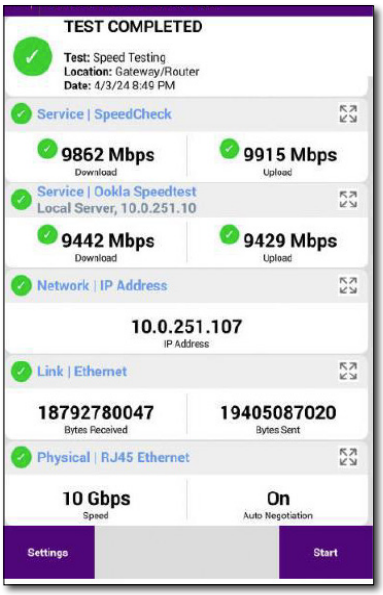
Speedtest is used to test servers all over the world. It determines the server name and checks downstream and upstream throughput via Ethernet test interfaces. Its download/upload rate is up to 10 Gbps. Speedtest uses any IP interface, including IPv4, that you established for testing. It does not require any additional configuring.

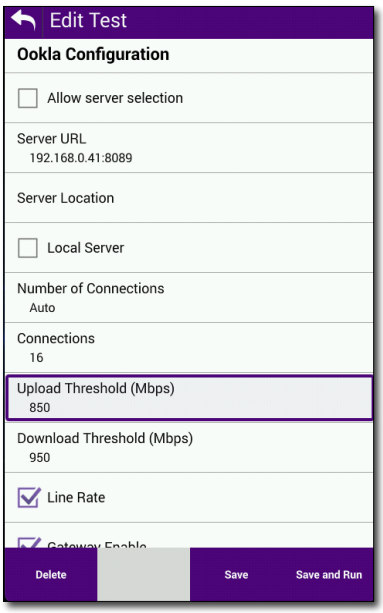
Before you begin

Once you have your profile set up, you can run the test. Make sure the test is enabled in the profile, as well.

For additional configuration, select **Settings** from the test results screen. See *"OneCheck test profiles" on page 86.*

The Speedtest application will require you to accept the Terms of Use before allowing to proceed. The Terms of Use must be accepted every thirty to ninety days.





Latency measurement

The ONX will ping the Speedtest server the number of times specified in the Speedtest configuration. The pings occur at whole millisecond intervals slightly greater than the server connection phase's latency measurement. For example, if the server connection phase's latency measurement for the server was 3.2 milliseconds, then the ping intervals will occur at 4 milliseconds. An average ping delay value and a ping delay jitter value (both in milliseconds) are provided for each ping. The final ping average result (in milliseconds) is then derived.

Upload measurement

The unit opens multiple connections to the Speedtest server. The upload transfer begins, followed by updates of percentage complete and average upload rate (in bytes/sec). Once the upload transfer has completed, the final upload rate measurement is then provided.

Download measurement

The unit opens multiple connections to the Speedtest server. The download transfer then begins followed by updates of percentage complete and average download rate (in bytes/sec). Once the download transfer has completed, the final download rate measurement is provided.

Measurements upload

The following final result values are again provided:

- Latency, upload, and download rates
- Total bytes uploaded
- Upload stage duration
- Total bytes downloaded
- Download stage duration

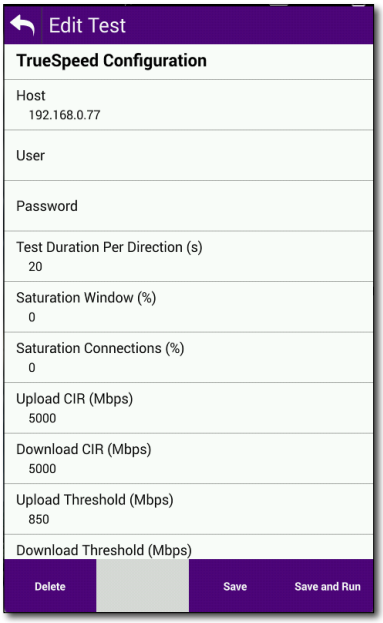
An HTTP connection then opens to the URL: http://www.speedtest.net/api/embed/api.php, and the measurements are uploaded.

The Speedtest results are also available in all Save Report formats (XML, HTML, and PDF).

TrueSpeed testing (optional)

The optional TrueSpeed test provides a repeatable, standards-based test methodology to resolve complaints about poor network performance. Its Download/ Upload rate is up to 10 Gbps for Ethernet. With TrueSpeed, you can quickly evaluate the customer experience of their network and provide actionable information to resolve problems.

Based on the IETF RFC 6349 TCP throughput testing methodology, TrueSpeed provides metrics that can be used to tune TCP parameters for obtaining maximum throughput.



Before you begin

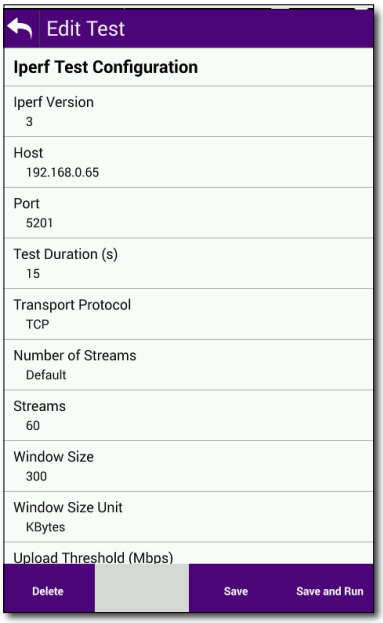
Once you have your profile set up, you can run the test. Make sure the test is enabled in the profile, as well.

For additional configuration, select **Settings** from the test results screen. See *"OneCheck test profiles" on page 86.*

Iperf testing (optional)

The optional Iperf test is a commonly used network testing tool that can create TCP and UDP data streams and measure the throughput of a network that is carrying them.

It is particularly useful when experiencing network speed issues, as you can use Iperf to determine which server is unable to reach maximum throughput.



Before you begin

Once you have your profile set up, you can run the test. Make sure the test is enabled in the profile, as well.

For additional configuration, select **Settings** from the test results screen. See *"OneCheck test profiles" on page 86.*

7

Appendix

This appendix includes troubleshooting and supplemental information, including the following:

Cleaning the instrument

The instrument itself does not require any specialized cleaning. An occasional wipe with a damp cloth is sufficient.

NOTE:

When cleaning the instrument, use a damp cloth and water only. Cleaning with chemicals could cause damage to the plastic case, buttons, or removal of markings.

Resolving problems

If you are having trouble with the OneExpert, the following sections describe common problems and solutions. You should verify whether your problem is listed here before contacting technical assistance.

General testing

- **Inconsistent test results** – Verify that your test leads are good and are connected properly for the test you are performing.

Data testing

- **The IP ping menu says pings are being sent, but the network statistics are not incrementing**

  Verify the IP address and netmask.

  Make sure you are not behind a firewall; they can block ping responses from reaching the host.

  The IP ping function only *attempts* to send a ping every second. Depending on certain conditions, a physical ping packet may not be sent.

  If IPoE standards require that the device has to ARP the address first. If this fails eventually you will see a ARP HOST UNREACHABLE message.

  Check to see that the destination IP address and your configured IP parameters are correct.

  Make sure that the Ethernet interface cabling is correct. If the Ethernet cable is not hooked up, or is hooked up incorrectly, a packet will not be sent. Thus the Ethernet statistics will not increment.

Limited warranty

For the latest warranty information, visit

https://www.viavisolutions.com/literature/viavi-solutions-inc-general-terms-en.pdf

https://www.viavisolutions.com/en-us/literature/viavi-manufacturer-warranty-nse-products-en.pdf

Technical assistance

If you require technical assistance, call 1-844-GO-VIAVI / 1.844.468.4284.

Outside US: +1-855-275-5378

Email: **CATVsupport@viavisolutions.com**

For the latest TAC information, visit

https://support.viavisolutions.com

https://www.viavisolutions.com/en/services-and-support/support/technical-assistance

Additional information

For more detailed information, contact us at **CATVsupport@viavisolutions.com** for these additional documents.

ONX-700 Quick Start Guide

NOTE:

If you do not yet have a StrataSync account, please request one at the following link:

https://comms.viavisolutions.com/StrataSync-Account-Request-en-vi107732 (or https://tinyurl.com/wyb69a6f)

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March 2026
English

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