



2000 Platform

**Handheld, modular Platform
designed for the construction,
turn-up and maintenance of fiber
networks**

User Manual

2000 Platform

**Handheld, modular Platform designed
for the construction, turn-up and
maintenance of FTTx networks**

User Manual



Viavi Solutions
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About This Guide

The MTS/T-BERD 2000 of Viavi provides a handheld modular platform designed for the construction, turn-up and maintenance of fiber networks.

The topics discussed in this chapter are as follows:

- [“Purpose and scope” on page xviii](#)
- [“Assumptions” on page xviii](#)
- [“Technical assistance” on page xviii](#)
- [“Conventions” on page xviii](#)

Purpose and scope

The purpose of this guide is to help you successfully use the MTS/T-BERD 2000 features and capabilities. This guide includes task-based instructions that describe how to install, configure, use, and troubleshoot the MTS/T-BERD 2000.

Additionally, this guide provides a complete description of Viavi's warranty, services, and repair information, including terms and conditions of the licensing agreement.

Assumptions

This guide is intended for novice, intermediate, and experienced users who want to use the MTS/T-BERD 2000 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. For the latest TAC information, go to <http://www.viavisolutions.com/en/services-and-support/support/technical-assistance>.

Conventions

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

Table 1 Typographical conventions

Description	Example
User interface actions appear in this typeface .	On the Status bar, click Start .
Buttons or switches that you press on a unit appear in this TYPEFACE .	Press the ON switch.
Code and output messages appear in this <code>typeface</code> .	All results okay
Text you must type exactly as shown appears in this <code>typeface</code> .	Type: a: \set.exe in the dialog box
Variables appear in this typeface .	Type the new <i>hostname</i>
Book references appear in this typeface .	Refer to <i>Newton's Telecom Dictionary</i>
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>

Table 2 Keyboard and menu conventions

Description	Example
A plus sign + indicates simultaneous key-strokes.	Press Ctrl+s
A comma indicates consecutive key strokes.	Press Alt+f,s

Table 2 Keyboard and menu conventions (Continued)

Description	Example
A slanted bracket indicates choosing a sub-menu from menu.	On the menu bar, click Start > Program Files.

Table 3 Symbol conventions



This symbol represents a general hazard.

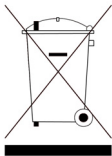


This symbol represents a risk of electrical shock.



NOTE

This symbol represents a Note indicating related information or tip.



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

Table 4 Safety definitions



WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

2000 Platform Overview

This chapter provides a general description of the 2000 Platform.

Topics discussed in this chapter include the following:

- [“Unpacking the instrument” on page 2](#)
- [“About the 2000 Platform” on page 2](#)
- [“Main features” on page 3](#)
- [“Hard keys and Indicators” on page 6](#)
- [“Power Supply” on page 8](#)

Unpacking the instrument

- 1 Remove the 2000 Platform and its accessories from the packing case.
- 2 Check that the module and accessories ordered are all there.

If any part is missing or damaged please contact your local Viavi agent.

The 2000 Platform is delivered as standard with:

Table 1 Elements delivered on standard with the 2000 Platform

A Getting Started Manual
A Li-Polymer battery, set into the equipment and which must be charged before use
A mains adapter used for mains operation of the instrument and battery charging
5 country adaptable plugs (Europe / UK / US / Australia / Japan)
A hands-free soft case for the 2000 Platform
A USB cable, to directly connect the 2000 Platform to a PC
A shoulder strap

About the 2000 Platform

The architecture of the 2000 Platform is made of one Platform, to which a module can be added to perform tests on fiber networks.

The modules that can be fitted to the 2000 Platform are interchangeable in the field and different kinds of module are usable:

- OTDR Modules

- PON Selective Power Meter (OLP)
- CWDM Analyzer Modules (C-OSA)

The 2000 Platform employs multi-tasking for the simultaneous performance of several operations:

- acquisitions
- modifications of parameters
- trace analysis
- report management

It also allows to use simultaneously several functions:

- Power Meter
- Scope
- OTDR measurements...

Main features

The 2000 Platform is equipped with the following elements:

- A 5 inch TFT color touchscreen, high visibility
- RJ45 plug for Ethernet interface
- Two USB 2.0 host connectors for Microscope, USB memory stick, mouse, keyboard...
- One mini USB 2.0 device connector to connect the 2000 Platform to a PC
- An audio jack to connect a headset
- A connection socket for the mains adapter providing the 12 V power supply and used to charge the battery.
- LED indicators for Charge, On status and Test
- A Li-Polymer battery
- A module interchangeable in the field: OTDR, OLP, or C-OSA.
- Built-in Power Meter, VFL and/or Talkset (options)

With the 2000 Platform, the user can:

- Open and/or transfer files to a PC via a USB memory stick, USB cable or Bluetooth (option)
- Generate pdf reports
- Open all user documentations included into the 2000 Platform
- Update the 2000 Platform firmware
- Remote the screen of the 2000 Platform onto a PC and issue commands from the keyboard of the PC
- ...

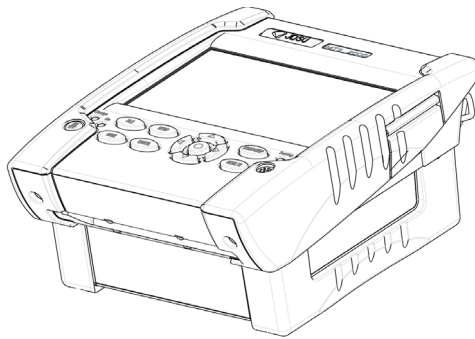


Figure 1 2000 Platform with module

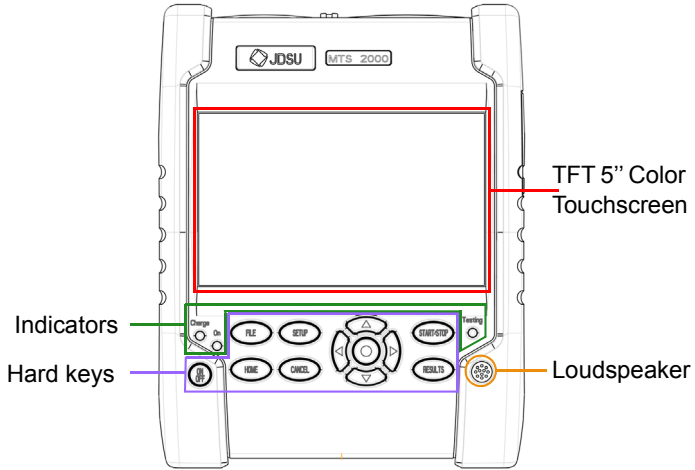


Figure 2 2000 Platform: Front view

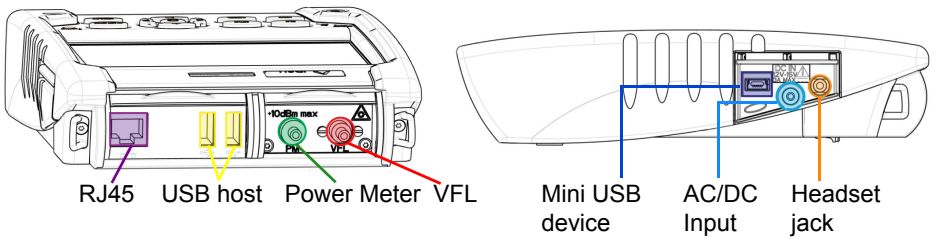


Figure 3 2000 Platform: Connectors View

Hard keys and Indicators

Front panel hard keys

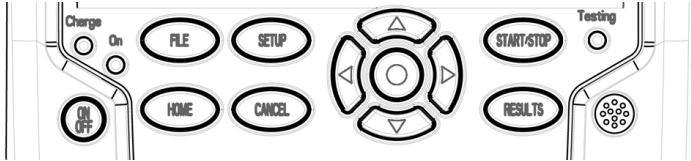


Figure 4 Hard keys and Indicators

Table 2 Hard keys description








Hard key	Function
	Main on/off switch
	This button calls up the file explorer. It allows to: <ul style="list-style-type: none">choose the storage medium: internal memory, USB key.manage files; with facilities for classifying them in directories and sub-directories.
	Gives access to: <ul style="list-style-type: none">selection of the different measurement or functionsthe settings of the instrumentthe help page
	This button calls up the measurement configuration menu. This menu depends on the function in use.
	This button allows to deselect a function or escape a menu
	Starts and stops the measurement.

Table 2 Hard keys description

Hard key	Function
	This button calls up the results page (e.g. with OTDR module: reflectometry trace and table of results).



NOTE

All these functions, except **HOME**, depend on the modules used and the measurements made: refer to the user manuals of the corresponding modules of the 2000 Platform.

The direction keys have two principal functions:



- on the Results page, they are used to move the cursors or modify the zoom factor.
- on the set-up pages, they are used to scroll through the menus, the central button serving to select or confirm the parameter chosen.

Front panel indicators

The 2000 Platform is equipped with three indicators, lit into a different color according to the status of the unit.

Table 3 Indicators Status



On indicator		
	<i>Blinking</i>	The instrument, though connected to an external power source, is switched off.
	<i>Solid green</i>	The instrument is operating, either by battery or on an external power supply.

Table 3 Indicators Status

Charge indicator		
Charge	<i>Solid green</i>	The instrument is connected to an external power source and the battery is fully charged.
Charge	<i>Solid red</i>	The instrument is connected to an external power source, and the battery is on charge.
Testing indicator		
Testing	<i>Solid red</i>	At least one function is in measurement phase (for example, the laser emission pilot for an OTDR measurement)

Power Supply

The 2000 Platform may operate with

- the Li-Polymer battery, already set into the equipment on delivery.
- an AC adapter/charger, via a power cable on which has been set the correct country adaptable plug.

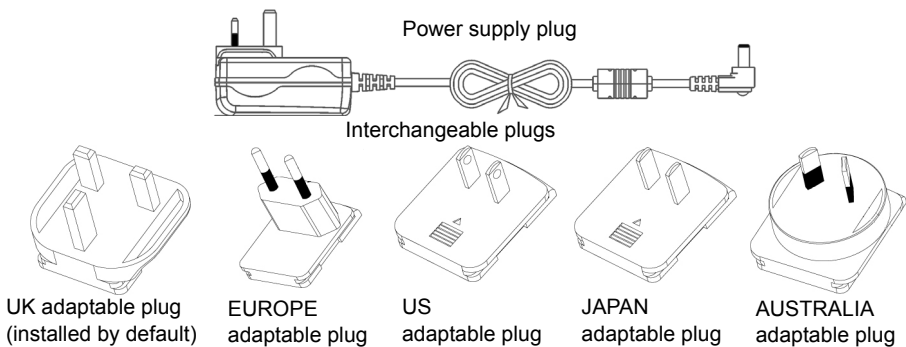


Figure 5 Delivered elements for 2000 Platform supplying

Safety information

This chapter gives the main information on the safety conditions when using the 2000 Platform:

- [“Battery and AC/DC safety information” on page 10](#)
- [“Precautions relating to optical connections” on page 11](#)
- [“Laser Safety instructions” on page 11](#)

Battery and AC/DC safety information

- The Li-Polymer battery is designed for maximum safety.

In particular, each cell is provided with a safety valve to prevent excessive internal pressure in the event of overcharging or exposure to very high temperatures.

- Battery supplied by Viavi incorporate protection means.

Do not use any mains adaptor or battery other than those supplied with the instrument, or supplied by Viavi as an option for this instrument.

If another adapter or battery is used, it may damage the 2000 Platform itself.

Using the 2000 Platform with a battery other than the one supplied by the manufacturer of the 2000 Platform may entail risks of fire or explosion.

The battery may explode, leak or catch fire:

- if it is exposed to high temperature or fire
- if it is opened or dismantled.

Other basic safety precautions are as follows:

- Do not use AC/Adapter/Charger outdoors or in wet or damp locations
- Connect the AC/Adapter/Charger to the correct mains voltage, as indicated on the ratings label.
- Do not allow anything to rest on the power cord, and do not locate the product where people can walk on the power cord.
- Avoid using this product during an electrical storm. There may be a remote risk of electric chock from lightning.
- Do not use this product in the vicinity of a gas leak or in any explosive environment.

- Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous, high voltage points and other hazards. Contact qualified service personnel for all service.

Precautions relating to optical connections

- The normal operating life of an optical connector is usually of the order of a few hundred manipulations. It is then advisable to manipulate the optical connections of the Platform as rarely as possible.
- The proper operation of the instrument and its accuracy of measurement are dependent on the cleanliness of the environment and the optical connectors as well as the care taken in its manipulation.
- The optical connectors must therefore be clean and dust-free. If the optical connection is not being used, protect the connections of 2000 Platform using the protective caps.

Laser Safety instructions

The provisions contained in two standards define the safety procedures to be observed both by users and by manufacturers when utilizing laser products:

- EN 60825-1: 2001 - Safety of laser products – Part 1: Classification of products, requirements and user guidelines.
- FDA 21 CFR § 1040.10 - Performance standards for light-emitting products - Laser products.

Due to the range of possible wavelengths, power values and injection characteristics of a laser beam, the risks inherent in its usage vary. The laser classes form groups representing different safety thresholds.




Laser classes

Standards EN 60825-1, Edition 1.2, 2001-08 and FDA21CFR§1040.10:

- VFL option: Class 2.

Warning labels for the laser classes

Due to the reduced dimensions of the optical modules, it is not possible to attach the required warning labels to them. In line with the provisions of Article 5.1 of the EN 60825-1 standard, the laser class identification labels are shown below:

Reference standard	EN 60825-1, Edition 1.2, 2001-08	FDA21CFR§1040.10
Class 1		
Class 2		

The user must take the necessary precautions concerning the optical output of the instrument and follow the manufacturer's instructions.



Measurements on optical fibers are difficult to execute and the precision of the results obtained depends largely on the precautions taken by the user.

Starting up

This chapter describes the first steps to perform when using the 2000 Platform.

The topics discussed in this chapter are as follows:

- [“Fitting and removing a module” on page 14](#)
- [“Setting the adaptable plug to the mains adapter” on page 16](#)
- [“Charging the battery” on page 17](#)
- [“Switching the 2000 Platform on and off” on page 20](#)
- [“First start: configuring your regional settings” on page 21](#)

Fitting and removing a module



The 2000 Platform must be switched off, and if it is operating on the mains, its supply cable must be unplugged.

Fitting a module

- 1 Turn the instrument face down on the work surface.
- 2 Set the two notches on the module part **(1a)** into the two holes provided for that purpose on the Base **(1b)**.
- 3 Make flush the 2 connections **(2a & 2b)**, on module and base.
- 4 Once positioned, fix the module to the base screwing the 2 screws **(3a)** fixing the receptacle.

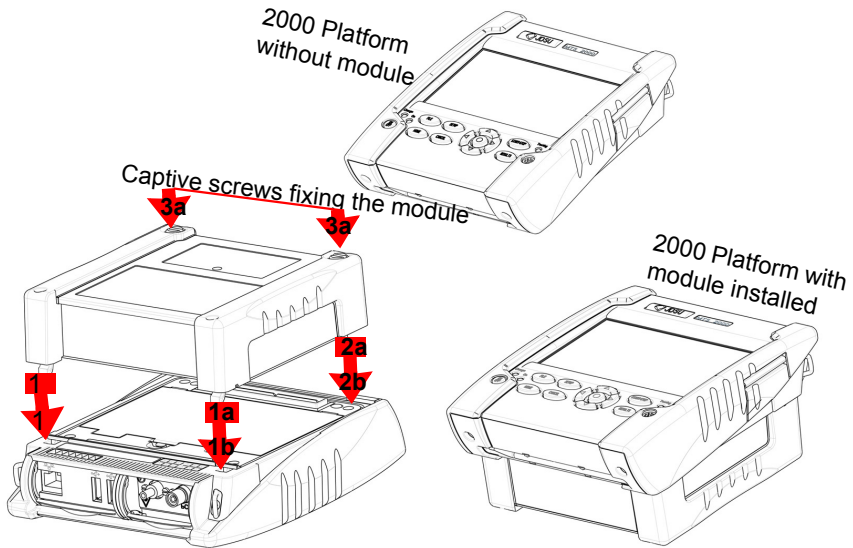


Figure 6 Fixing the module to the base

Removing a module

- 1 Unscrew the two captive fixing screws of the module completely (up to the stop).
- 2 Remove the two slots of the module from their housing onto the base.
- 3 Carefully remove the module out of its slot.

Setting the adaptable plug to the mains adapter

The 2000 Platform is supplied as standard with a mains adapter and 5 country adaptable plugs (Europe / UK / US / Australia/Japan).

To set the correct plug to the mains adapter:

- 1 Make flush the connector onto the mains adapter with the adaptable plug slots.
- 2 Push the adaptable plug until it stops.

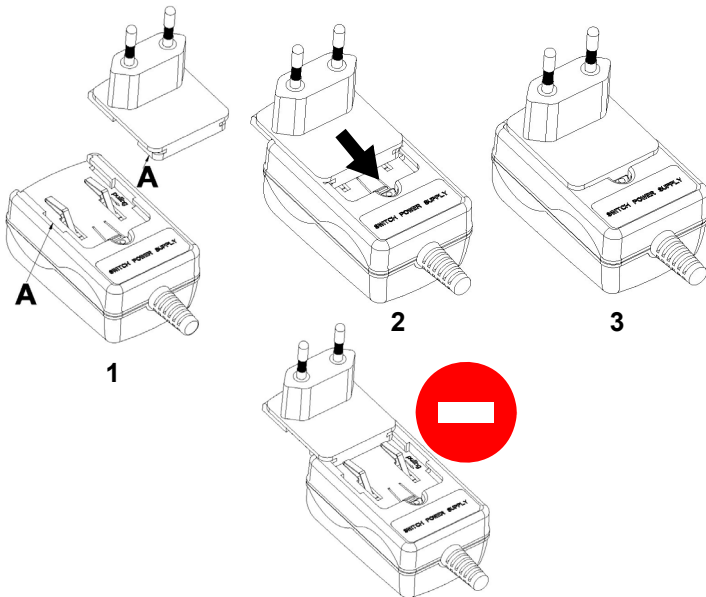


Figure 7 Setting the adaptable plug onto the mains adapter



If the adapter plug is not correctly set onto the mains adapter, the connector may be damaged.



NOTE

The AC/DC adapter/chargers from the 4000 platform (referenced E40PWxx) can also be used to connect the 2000 Platform to mains

Charging the battery

Connecting the mains adapter


- 1 Set the appropriate adaptable plug to the power supply cable, according to your country (see [page 16](#)).
- 2 At the right side of the 2000 Platform, lift up the power supply socket protector and plug in the mains adapter.
- 3 Connect the adapter to the mains.
The **On** indicator lamp starts to blink in green.



Use only the mains adapter supplied with the 2000 Platform. The adapter for some other electronic device may appear to be identical, but entails a risk of damage to the 2000 Platform.

First use of the battery

At the delivery, the battery is already set into the Platform, but its charge level is not «recognized» by the equipment.

The icon  is displayed on the upper banner of the screen.

To get a valid indication of the battery, and be able to use correctly the Platform:

- 1 Charge fully the battery
- 2 Once fully charged, discharge the battery by keeping the Platform switched on, but not plugged to mains.
- 3 The battery can then be charged, and the Platform used simultaneously.

Charging the battery

On connection to the mains:

- if the user does not press **On**, the battery will start the charge. In this case, the **Charge** indicator will be lit in red.
- when the user presses the **On** key, the instrument starts up and the battery will charge during use (**Charge** indicator in solid red).

Once the battery is fully charged, the **Charge** indicator is lit in solid green.

When the **Charge** indicator is blinking red, this mean the power supply is not compatible with the battery used. Charge is disabled.



It is essential to wait until charging is complete to ensure maximum independent operating time, which may otherwise be considerably reduced.

Battery charging time

If the battery is completely discharged, the time taken to recharge is:

- approximately 3.5 hours, if the apparatus is not in use (**Charge** indicator solid red)

- about 9.5 hours if the instrument is used during charging (**On** indicator lit in fix green, **Charge** indicator lit in solid red).

Battery charge level display







When the battery is installed in the instrument, a battery icon is displayed in the top right-hand corner of the screen. Example: .

Table 4 Battery icons

	The battery capacity is superior to 75%
	The battery capacity is set between 50% and 75%
	The battery capacity is set between 25% and 50%
	The battery capacity is inferior to 25%
	The battery capacity is unknown. Perform a full charge/discharge of the battery to get back to a valid indication. This icon may appear if battery is changed or if the battery auto discharges at a very low level (example: if a Platform switches off as battery is empty, and the charge is not done during several months (= auto discharge)).

- When the level becomes too low, the instrument emits a beep ton inform the user until it switches off automatically after saving the current configuration and measurement.

Switching the 2000 Platform on and off

Switching on the 2000 Platform

- 1 Press the **ON/OFF** key.

If the Platform is powered to mains, the battery will charge.

The **On** indicator pass from blinking to solid green.

The Viavi logo appears on the screen briefly, then an auto test is carried out.

The equipment is ready to be used once all the applications are installed.



NOTE

It is possible to switch over from battery to mains operation, or vice versa, without loss of data.



The module cannot be swapped when the unit is ON or AC powered



In the event of an unexpected mains power cut, if there is no battery, the current results and configuration will not be saved. Next time the instrument is switched on, it will return to its initial configuration.

Switching off the 2000 Platform

While the 2000 Platform is operating, press the **ON/OFF** button to switch it off.



NOTE

When the instrument is switched off using the **ON/OFF** button, current results and configuration are saved. Next time the **ON/OFF** key is pressed, they are recalled.

Resetting the 2000 Platform

If the 2000 Platform freezes, prolonged pressure (about 4 s.) on the **ON/OFF** key will reset the instrument.

First start: configuring your regional settings

Once the 2000 Platform is switched on, the first screen displayed allows to configure the regional settings.

Those settings will be kept in memory and automatically applied on the instrument each time it is restarted.



Figure 8 Regional Settings

- 1 Click on **Language** and select the language to be used for the equipment.
- 2 Click on **Date** and enter the current date, using the numeric keypad displayed using the menu key **Edit Number**.
- 3 Click on **Time** and enter the current time, using the numeric keypad displayed using the menu key **Edit Number**.
- 4 Click on **Date Time Format** and configure the following parameters:
 - **Date format**: select one of the option **dd/mm/yy** or **mm/dd/yy**.
 - **Time format**: select one of the option **24 hour clock** or **12 hour clock**.
- 5 Click on **Net Time** parameter to configure the date and time according to a network.

Dynamic Mode: the time is synchronized according to the local network.

The two lines **Server Name** are displayed but cannot be modified.

Static Mode: in this case, the time is synchronized to the network server which is defined in the two following parameters.

On the parameter **Address Type**, select if the address of the server which will be used for synchronization is entered via its **IP Address** or via the **Server Name**..

If **IP Address** is selected, enter one or two server addresses in the following parameters. During synchronization, the first address will always be used, but if a fail occurs, the second one will be used.

If **Server Name** is selected, enter the name of the server, and if necessary a name for second server. During synchronization, the first server name will always be used, but if a fail occurs, the second one will be used.

During synchronization the icon  displays on the upper banner between the date and time.

- 1 Once all parameters have been defined, press **Exit** menu key to return to **System Settings** page.

Chapter 3 Starting up

First start: configuring your regional settings

Configuring the 2000 Platform

This chapter describes the operations for configuring the instrument.

The topics discussed in this chapter are as follows:

- [“Displaying the System Settings screen” on page 26](#)
- [“Defining the screen parameters of the 2000 Platform” on page 27](#)
- [“Defining the Audio parameters of the 2000 Platform” on page 28](#)
- [“Defining the Automatic shutdown of the 2000 Platform” on page 29](#)

Displaying the System Settings screen

To display the **System Settings** screen, you must:

- 1 Press the **HOME** hard key to reach the **Home** page.



Figure 9 Home page

- 2 Activate the **Settings** icon  to open the **System Settings** screen.

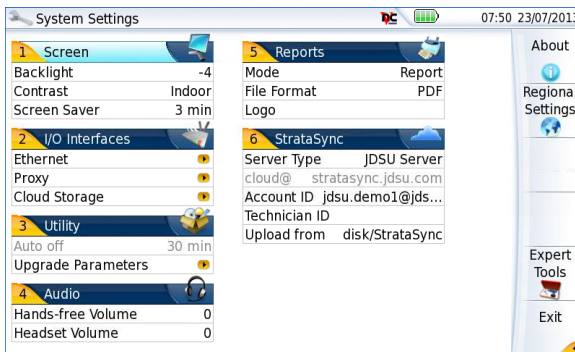


Figure 10 System Settings page



NOTE

If you are in the Regional Settings page, and you press **Exit**, then the **System Settings** page automatically displays.

Defining the screen parameters of the 2000 Platform

In the **System Settings** page, the following parameters can be defined:

Backlight

- 1 Click on **Backlight**
- 2 Define the backlight level of the screen, using the left and right direction keys, or clicking on **Edit Number** softkey and using the keypad displayed.
 - Min backlight level: -5
 - Max backlight level: +5



If the 2000 Platform is operating on battery, it is advisable to choose a minimum lighting level, acceptable for the user, to keep endurance as long as possible.

Contrast

- 1 Click on **Contrast**
- 2 Select the type of environment into which the instrument is used:
 - **Indoor**: to be selected when the instrument is used inside (see [Figure 10 on page 26](#))
 - **Outdoor**: to be selected in order to optimize the readability of the screen for an outside use.

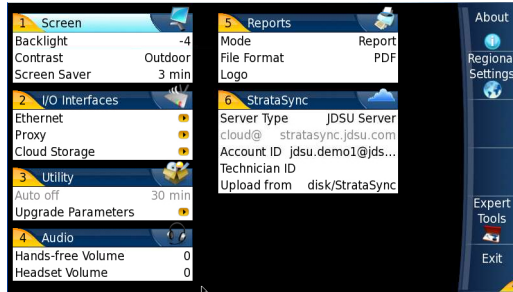


Figure 11 Example of outdoor contrast

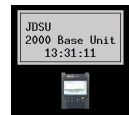
Screen Saver

Click on **Screen Save** if you wish to activate a screen saver to the equipment, to extend the life of the battery, in case the 2000 Platform is not used for some time.

Instead of the normal screen, a small animated picture of the 2000 Platform is displayed on the blackened screen.

To configure the screen saver:

- 1 Click on **Delay** and select the time of inactivity before the screen saver starts: **60s, 3 min, 5 min.**
The parameter **No** deactivates the screen saver function.



Defining the Audio parameters of the 2000 Platform

In the **Audio** box of the **System Settings** screen, you can configure the audio parameters according you are using a headset with the 2000 Platform.

- 1 Adjust the volume on the line **Hands-free Volume** using the left and right direction keys, or the Numeric keypad (displayed with the softkey **Edit Number**)
 - Min volume for Hands-free function: 0
 - Max volume for Hands-free function: 100
- 2 If a headset is used, adjust the volume on the line **Headset Volume**, using the left and right direction keys, or the Numeric keypad (displayed with the softkey **Edit Number**):
 - Min volume for Headset function: 0
 - Max volume for Headset function: 100

Defining the Automatic shutdown of the 2000 Platform

The automatic shutdown function switches off the 2000 Platform automatically if no operation has been performed and no key actuated for a period selected from this menu. Work in progress is automatically saved.



The function for automatically switching off the 2000 Platform is available only on battery operation, to save the battery.

- 1 In the **Utility** box, click on **Auto off** parameter.
- 2 Choose a time after which the 2000 Platform will be switched off automatically, if no action has been done for that period: **5**, **10** or **30 minutes**.

Select **No** if the 2000 Platform must not be switched off, even if there is inactivity on the equipment.

Power meter, VFL (Visual Fault Locator) & Talkset

A variety of built-in optical options are available when ordering. See references in [Chapter 15 “Options and accessories”](#), for details.

The topics discussed in this chapter are as follows:

- [“Connection to the power meter, VFL and Talkset” on page 32](#)
- [“Using the Power meter” on page 32](#)
- [“VFL Function” on page 39](#)
- [“Storing and reloading results” on page 40](#)
- [“Talkset and Datalink Functions” on page 41](#)

Connection to the power meter, VFL and Talkset

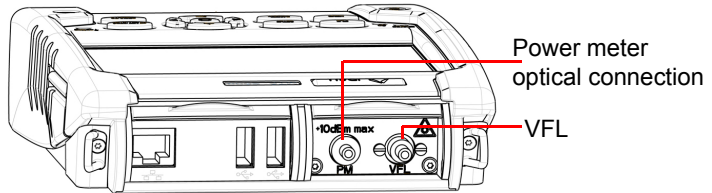


Figure 12 Optical connectors

The type of optical connector used for the power meter is UPP (Universal Push Pull), which is compatible with all diameter 2.5 mm connectors (FC, SC, ST, DIN, E2000, etc.)



Accuracy of measurements

A high degree of accuracy is often required. It is then necessary to perform a preliminary calibration without the fiber under test to eliminate the losses due to connections as far as this is possible. To do this, use the «Reference Value» function.

Using the Power meter

The power meter function is an option chosen at the time of order and incorporated into the 2000 Platform in the factory.

To activate the function:

- 1 Press the **HOME** button
- 2 Activate the power meter icon of the Platform



The effect of this action will be to bring the power meter into use and to display the Results page for Power Meter.

Configuring the power meter

Configuring measurement parameters

The measurement parameters can be accessed with the **SETUP** key.

1 Measurement					
Wavelength	1510 nm	Auto	850 nm	980 nm	1300 nm
User	1550 nm	1310 nm	1420 nm	1450 nm	1480 nm
Beep on modulation	Yes	1490 nm	1510 nm	1550 nm	1625 nm
Unit	Watts	1650 nm	User		
Reference Level	+0.0 dBm				
Attenuator compensation	0...				
2 Alarms					
Alarms	No				
Min Threshold	-60 dBm				
Max Threshold	+40 dBm				

Figure 13 Configuration of power measurement

- Wavelength** Selecting wavelength:
- Auto: the wavelength of the input signal will be automatically detected and selected to perform the measurement:
850, 980, 1300, 1310, 1420, 1450, 1480, 1490, 1510, 1550 or 1625 nm: measurement performed at specified wavelength.
 - User: choice of wavelength on the next line
- User choice** (if the **User** option was selected in the **Lambda** line) enter the wavelength between 800 and 1650 nm, using the numeric keypad, displayed via the **Edit Value** key.
- Beep on Modulation** Select if a sound must be heard when a modulation occurs (Yes / No)
- Unit** Unit of power displayed:

- Watt, dBm for displaying absolute power
- dB for displaying a result relative to a reference (link loss)

Reference level If dB units were chosen in the previous line, selection of the reference value for the wavelength selected. First select the wavelength, then press the > key to access choice of the value (+XXX.XX).

This reference is also automatically available, in the **Results** page, using the **Set as Reference** key.

Attenuator compensation

Choice of level to be applied to the wavelength chosen for measurement to compensate for the loss due to the external attenuator (+XX.XX dB). First use the direction keys to choose the wavelength, then press > to access choice of value.



NOTE

To copy a Reference Level or a Attenuator Compensator on all wavelengths, select the reference wavelength and click on **Update for All Wavel.**

Configuring the alarm parameters of the power meter

Alarm Activation of the Alarm function: any result below the lower threshold or above the upper threshold will be displayed in red on the **Results** page.

Min and max thresholds:

Choice of lower and upper thresholds for each available wavelength, from -60 to +40 dBm (selected with the direction keys).



NOTENOTE

To copy one value of the Lower or/and Upper threshold for all wavelengths, select the reference value and click on **Update for All Wavel..**



NOTENOTE

A continuous push on direction keys increments the value by 10 dBm.

Display of results and commands

The results page called up by the **RESULTS** button, gives the information relating to the measurement in progress, results previously saved and the commands available for measurement and saving.

Result of the measurement in progress

The power measured by the power meter is displayed in large characters, in the units selected in the **SETUP** menu, together with:

- the mode of transmission of the signal measured: continuous (CW) or modulated to a frequency of 270Hz, 330Hz, 1KHz, or 2KHz.
- the wavelength of the signal measured.
- the reference level expressed in dB.
- the level of Attenuation Compensation.

Table of results

For one and the same fiber, the power meter displays a table of 9 results corresponding to the different possible wavelengths. The first 4 results are

displayed on the screen; to scroll through the other results, use the direction key ▼. The table shows the power measured in dBm, the relative power (in dB) and the reference level in dBm (if units = dB), together with the mode.

- A measurement result is displayed in the table when the **Keep Result** softkey is pressed.
- The **Clear Table** softkey orders deletion of all the results displayed in the table.
- If the Alarm function has been activated, any result that exceeds the selected thresholds appears in red in the table. Otherwise, results are shown in the table in green.
- When the instrument is switched off, results present in the table are saved.

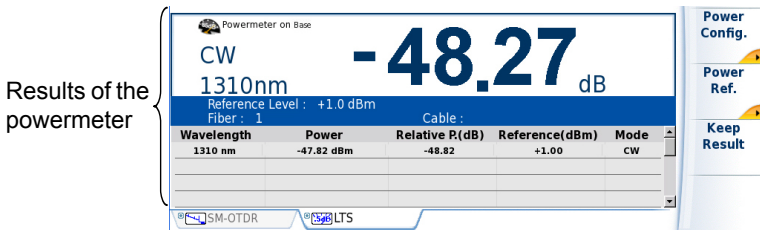


Figure 14 Results and commands of the power meter

Commands of the power meter parameters

When the Powermeter function is selected, the following softkeys are available on the results page:

The different configuration buttons are displayed:

Wavelength selection of the wavelength

Unit choice of the unit

Zero Adjustment of the Zero value when the power meter's optical input is closed with a plug (a validation is required).

On the results page, the following actions are available:

Standard Reference

Selects the current result as reference value to measure the attenuation of a link. This reference is displayed under the measurement result until a new reference value is chosen.


Keep Result Saves the result on the corresponding line of the table.

Clear Table Deletes all the results recorded in the table.

If the Source function is selected (either on this Platform, on the base Unit or on an OTDR module, or on another Platform), the Power meter results page is different:

- The **Wavelength**, **Unit** and **Zero** menu keys are accessible via the menu key Power Config.
- The **Power Ref.** menu key allows to reach the **Standard Ref** menu key. It also allows to reach the **Jumper Ref** menu key if Power meter function is associated with Source function onto another unit (see 2100/4100 Module User Manual).

Performing a measurement

The power meter is started up as soon as the function  is activated in the HOME menu.



Power measurement is automatically updated in consequence. The value «<-60 dB» is displayed when the laser is switched off and if the source output is looped on to the power meter input.

Power measurement

- 1 Connect the light source to be tested to the rear connector (see ["Connection to the power meter, VFL and Talkset" page 32](#)).
- 2 In the **SETUP** menu, choose the units dBm, dB or Watts.
- 3 Press the **START/STOP** key to start the measurement.
The result will appear in the results page and can be memorized in the table (see ["Table of results" page 35](#)).
- 4 Press the **START/STOP** key to stop the measurement.

Optical link loss

Setting the zero value of the power meter



It is important to set the zero of the power meter before making any measurements where accuracy is required, as the noise from the germanium photodiode fluctuates over time and with variations in temperature.

- 1 Fix the plug over the optical input of the power meter so that no light can reach the photodiode of the power meter. If the zero adjustment is made without this plug, an error message may be displayed, as the photodiode will detect too much light.
- 2 In the **Results** page, press the **Powermeter Config. > Zero** soft key and validate.

Carrying out the reference measurement

- 1 Fix the adapter corresponding to the jumper to the optical connector of the power meter.
- 2 Connect the jumper between the input of the power meter and the output of the source.

- 3 Configure the same wavelength on the source and the power meter. The power measured is displayed in the results page of the power meter.
- 4 Press the **Standard Ref** soft key to save the result displayed as reference value.

Measurements on the fiber under test

After defining the reference value, proceed as follows to make the measurement:

- 1 Fix the jumpers and connectors needed to connect the fiber to be tested between the source output and the power meter input.
- 2 In the set-up menu, select dB units.
- 3 The power displayed in the Power Meter window corresponds to the optical loss of the link tested. It can be displayed in the table (see ["Table of results" page 35](#)).

VFL Function

VFL connector

The type of optical connector used for the VFL source is UPP (Universal Push Pull), which is compatible with all diameter 2.5 mm connectors (FC, SC, ST, DIN, E2000, etc.)

See [Figure 12 on page 32](#) to visualize the VFL connector.

Visual Fault Locator function (VFL)

This function is used to emit a red light signal of frequency 1 Hz or in continuous mode into a fiber to detect any defects in the dead zone of the reflectometer, or to identify it.

This function is suitable for short fibers (length < 5 km) or the first few metres of a long fiber.






NOTE

Identification is facilitated by the blinking of light in the fiber.

To emit a light signal into a fiber:

1 Connect the fiber to the VFL port on the connectors panel.

2 Press the **HOME** key and activate the VFL 

The icons   display on the upper banner of the screen.

The signal mode of the VFL can be modified in the **System Settings** page, in **Utility > VFL Mode** parameter.

Storing and reloading results

File Setup


Click on the button **FILE** to access the **File** setup. See the chapter «File management» in the user manual «2100 modules series» for a complete description of all parameters, options and description of the explorer.

Storing results

In order to save the results of a measurement, click on **FILE** and select **Store trace**. Two files are being saved:

- The first file is used with the 2000 Platform and allows to retrieve all measurement results. It is saved with the extension «.Lts».
- The second file is a ASCII file using tabulations to separate values. It is saved with the extension «.txt» and can be opened by the 2000 Platform. It has been designed to be used with a spreadsheet program on a PC where it allows to retrieve all measurement results and format them in a nice customized table.

Loading results

In order to load the results of a measurement, select a file  with the extension «.Lts» in the file explorer (see the chapter «File management» in the user manual for «2100 modules series»), click on **Load**. The LTS tab is displayed with the loaded results in the table

Talkset and Datalink Functions

The Talkset option enables two operators at opposite ends of an optical link:

- To communicate along the fiber.
- To transfer data along the fiber.

Each end of the optical link must be provided with a 2000 Platform equipped with the Talkset option.



NOTE

It is possible to use the talkset of the 2000 Platform and to carry out measurements at the same time, on a different fiber.



NOTE

It is possible to use the Data transfer feature while using the optical telephone of the 2000 Platform. Nevertheless, the data transfer speed will be slightly decreased.

Talkset configuration

The talkset configuration is set in the **System Settings** screen, in the **Channel** box (see ["Defining the Audio parameters of the 2000 Platform" page 28](#))

Connections

At each end of the fiber:

- 1 Connect the fiber to the Talkset port of the 2000 Platform, either directly or through jumpers.



NOTE

The Talkset option is delivered with a FC adapter mounted on standard on the talkset connector.

In addition to the FC adapter, a SC adapter is also delivered with the Talkset option.



Viavi recommends you to use the following connections:

- PC Fiber Connection (APC is not recommended)
- SC or FC connection (UPP is supplied but not recommended).

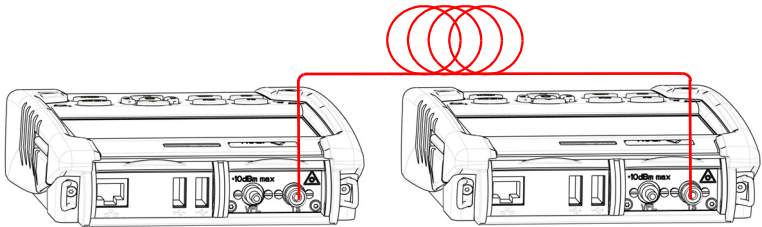


Figure 15 Installation for Talkset use

- 2 A headset (with earphones and a microphone) supplied with the option may also be plugged into the 2000 Audio jack.





NOTE



Data transfer uses the same fiber as the optical telephone

Establishing communication

On the caller 2000 Platform, press the **HOME** button, then validate the **desired function**:

- **Talkset**  (Optical Telephone): used to communicate via the fiber.
- **Datalink**  : used to transfer data along the fiber.

If the remote instrument is ready to receive (on standby), the Talkset/Data-link icon turns yellow, beeps are emitted, and

- the icon  appears at the top of the screen: telephone communication can now take place.
- the icon  appears at the top of the screen: data transfer can now take place.

If the remote instrument is not ready to receive, the icon does not change color and a message is emitted.



NOTE

The talkset icon is displayed on the top banner as long as communication remains established, letting the user know that the connection is working. When communication is established, the headset is automatically enabled if plugged in. However, the loud speaker must be correctly configured in the setup menu to work accordingly



NOTE

Data transfer varies according to the type of application you use. For Fiber Optics for example, you can use the explorer. The distant 2000 Platform will be shown just like a disk and all file and directory features can be used from and to that disk.

Adjusting volume level

The sound is transmitted to the earphones of the headset and, if this function has been activated, to the speaker in the 2000 Platform. To activate the base loudspeaker and adjust the volume:

- 1 Press the **HOME** key.
- 2 Validate **Settings** icon to reach the **System Settings** page.

- 3 Under the **Audio** box, adjust **Hands-free Volume** and/or **Headset Volume** (from 0 to 100).

Disconnection

When communication is over:

- 1 Deactivate the **Talkset/Datalink** function on one of the 2000 Platform.
This deactivation can be done by either 2000 Platform.
- 2 Then, the fiber used, can be disconnected safely.

Scope

The scope function is a hot-plug feature enabled directly when inserting a Viavi scope supplied as an accessory (see:

The topics discussed in this chapter are as follows:

- [“Scope feature” on page 48](#)
- [“Installation of tips” on page 49](#)
- [“Configuring the P5000i Scope” on page 49](#)
- [“Starting up with the scope” on page 55](#)
- [“Launching a test of the connector and fiber end-face” on page 57](#)
- [“File menu” on page 62](#)

Scope feature

Overview

This feature enables you to verify that your optical connectors are in perfect shape and very clean condition.

The P5000i Digital Probe Microscope is a portable handheld microscope used to view and inspect both the bulkhead (female) and patch cord (male) sides of fiber connectors as well as other optical devices, such as transceivers.

The P5000i requires an FBPT inspection tip and is connected to the 2000 Platform with a USB 2.0 connector.

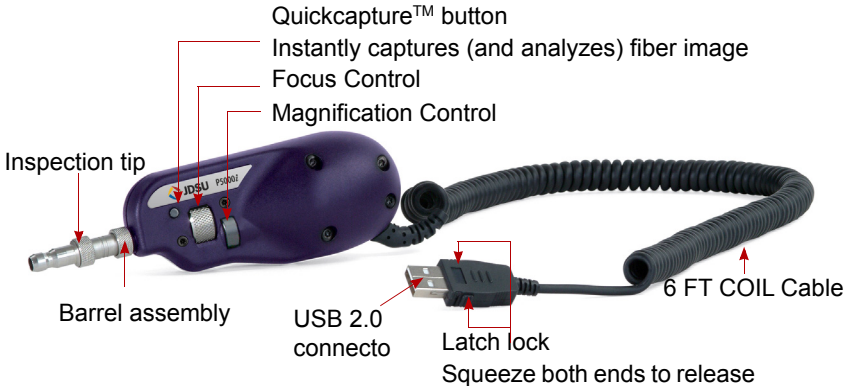


Figure 16 P5000i Probe components



Before using the P5000/P5000i scope, make sure the Bluetooth option has not been activated, even once, after the start of the MTS/ T-BERD 2000. If it has been activated, stop and restart the equipment before using the P5000/P5000i Scope.


Installation of tips

The Pass/Fail analysis function on the 2000 Platform can only be used with certain inspection tips mounted on the P5000i.

Seven tips, patchcords and bulkheads types, are delivered with the Video-scope Kit (EDFSCOPE5KI) but many others can be used.

Configuring the P5000i Scope

Scope connection

- 1 Plug in your Viavi scope into a USB port from the 2000 Platform.
- 2 Push the button Home
- 3 Validate the Scope function  .
- 4 Connect probe with the fiber being inspected.

You may select this option while other options are already selected (e.g. OTDR).

Configuring the Scope

- 1 Press **SETUP** key to configure the test.
The following screen displays:

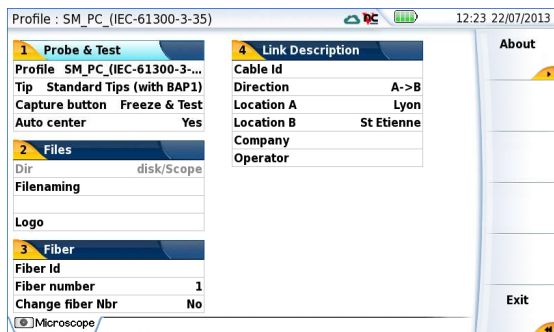


Figure 17 P5000i Scope Setup

Test

On the line **Profile**, select the Profile which will be used for the test of fiber connector:

- SM_UPC: Pass/Fail criteria for single-mode UPC connectors from IEC 61300-3-35 standard.
- SM_APC: Pass/Fail criteria for single-mode APC connectors from IEC 61300-3-35 standard.
- SM_PC: Pass/Fail criteria for single-mode PC connectors from IEC 61300-3-35 standard.
- MM_: Pass/Fail criteria for multimode connectors from IEC 61300-3-35 standard.

Profiles contain the analysis parameters by which PASS/FAIL criteria are determined.

Once the line is selected, you can also add a new profile, clicking on the **Add Button** (see [“Adding a new profile” on page 53](#)).

Tip (only with P5000i Scope)

On the line Tip, select the tip set onto the scope to connect fiber for inspection.

Capture button (only with P5000i Scope)

This parameter allows to select the action of the Quick Capture button onto the Scope (see [Figure 16 on page 48](#)):

- Freeze & Test** pressing the button will automatically perform a test of fiber and freeze the result
- Freeze image** pressing the button onto the Scope will automatically freeze the live image.

Auto Center (only with P5000i Scope)

This parameter allows to select if the scope image must be centered on screen (select **Yes**) or not (select **No**).

File

The File box allows to configure the saving of scope results.

The **Dir** parameter is displayed in grey, and indicates the directory into which the results will be saved. To change the directory, press **FILE** hardkey and select another directory from the file **Explorer** page; then press **SETUP** hard key to return to Scope Setup page.

On the line **File naming**, use the edition keypad, which will display by clicking on the right arrow key, to enter a specific name for the file. You can enter manually a name and/or use pre-defined parameters (Fiber Id, Cable Id, Locations...).

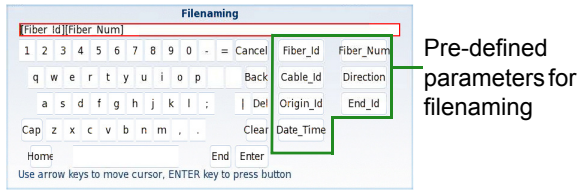


Figure 18 Edition keypad for filenaming

The line below **Filenaming** shows the name of the file according to the parameters entered.

In the **Logo** parameter, click on right arrow key and select in the Explorer a JPG file which will represent the Logo displayed on the upper left part of the report

Fiber

The Fiber box allows to configure the fiber plugged to the scope. On the line **Fiber Id**, use the edition keypad, which will display by clicking on the right arrow key, to enter a specific name for the fiber.

On the line **Fiber Number**, use the numeric keypad, which will display by clicking on the right arrow key, to enter the fiber number.

On the line **Change fiber Nbr**, select if the fiber number must be modified after each results saving:

No: the fiber number is not modified at each saving

Increment: the fiber number is automatically incremented at each results saving

Decrement: the fiber number is automatically decremented at each results saving.

Link Description

The information entered in the Link Description window concerns the editing and/or the modifications of the cable and fiber parameters.

Cable Id	This parameter allows to enter an identification of the cable, using the Edition menu.
Direction	The direction shows if the acquisition has been made from the origin to the extremity (A->B) or from the extremity to the origin (B->A). Changing direction makes it possible, when different extremities are handled, to see the parameters of the fiber for the other extremity.
Location A	The name of the Location A of the link may be entered.
Location B	The name of the Location B of the link may be entered.
Company	Enter the name of the company carrying out the test.
Operator	Enter the name of the operator carrying out the test.



NOTE

All parameters of the Link Description box will appear in the pdf report or jpg file generated from a test results page.


Press **Exit** to return to the Results screen of the scope.

Adding a new profile

Once the Setup screen of the scope is displayed, you can add a specific profile which will be used for the test.

The profile must be created via FiberChek2™, and stored on one storage media of the MTS/T-BERD 2000 (disk, or USB memory stick).

- 1 On the Setup screen, select **Profile** and press **Add** key.

- 2 On the explorer, select the file which will be used as profile (icon  ; extension: .PRO)
- 3 Press **Load**.
Once loaded, the display goes back automatically to **Setup** screen.
- 4 Select the profile just loaded.

Removing a profile

- 1 In the **Profile** list, select the profile to be deleted.
- 2 Press **Remove** key, then **Exit**.

About page

On the **Setup** screen, the softkey **About**, on the right of the screen, allows to display information on scope and current test result displayed (in Full Screen mode or mosaic mode - see “[Mosaic Mode](#)” on page 59).

- 1 Press **About** softkey to display a page as the following one:

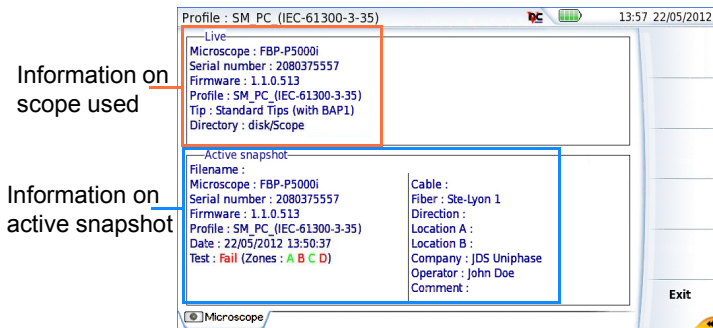


Figure 19 P5000i Scope: About page

Starting up with the scope

Once the FiberScope icon is validated:

- 1 Press **RESULTS** hard key

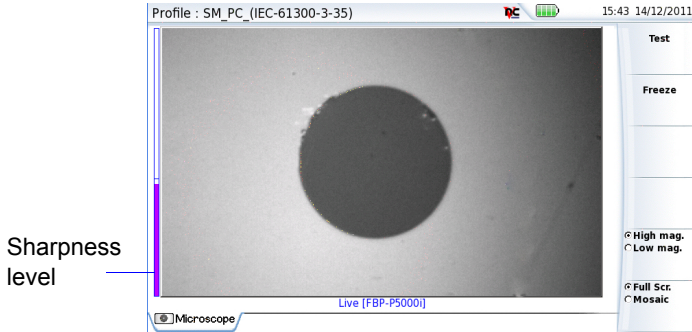


Figure 20 Example of the result using the P5000i scope

Use the **Focus Control** button onto the P5000i scope (see [Figure 16 on page 48](#)) to adjust the image quality and sharpness.



NOTE

To switch from Scope page to FO results page and vice-versa, press the **RESULTS** hard key for about 2 seconds (a beep is emitted).

Freeze mode

Once the image is acceptable, you may freeze the picture. This feature allows to store in memory the resulting picture.



Freezing a scope result does not store the picture in a file (see “File menu” on page 62). The result will be lost if the instrument is shut off, or if more than 3 pictures are frozen (see “Mosaic Mode” on page 59)



NOTE

The button set on the lead, or the QuickCapture™ on the P5000i allows to freeze the picture or to take a snapshot.

High Mag. / Low Mag.

The **High Mag./Low Mag.** menu key allows to switch the display from High to Low magnification and vice-versa.

This function is also available pressing the button directly on the P5000i (see Figure 16 on page 48).

Camera mode

If you are in Freeze mode, or in Mosaic mode, with a picture selected (see “Mosaic Mode” on page 59), press **Camera** menu key to return to live camera picture.



Use the focus control to adjust the focus of the image

Launching a test of the connector and fiber end-face


Launching a test of the connector and fiber end-face

Once the display is correctly adjusted (magnification, sharpness...), a test of fiber connector can be launched.

To launch the test:

- 1 Press **Test** key to launch the test of plugged fiber connector.

The test is completed:

- once the Led **Testing** is no more lit in red
- once the icon  is no more displayed on the upper banner
- once a screen as the following one displays:



NOTE

To configure Pass/Fail criteria, see "[Configuring the Scope](#)" page 49.

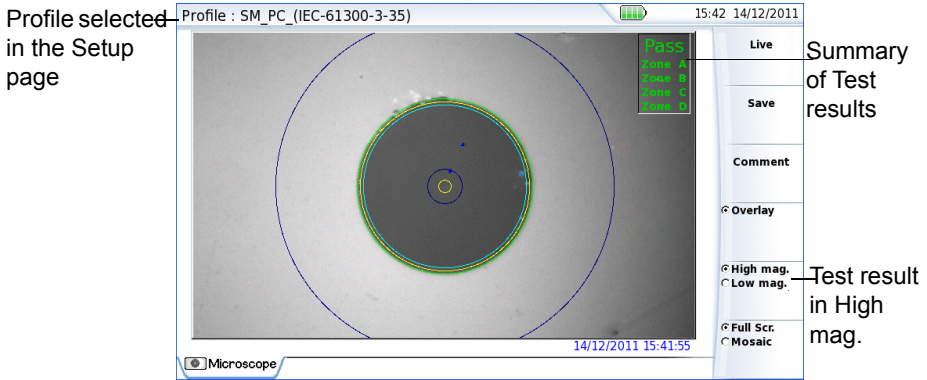
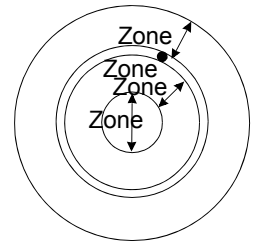


Figure 21 Test results

A summary of test results is displayed on the right, upper part of the screen.

- Zone A: **Core** zone: it is the area surrounding the core
- Zone B: **Cladding** zone. It surrounds the majority of the fiber cladding.
- Zone C: **Epoxy ring**.
- Zone D: **Ferrule/Contact** zone: it identifies a portion of the ferrule near and around the fiber



NOTE

To return to a Live Camera image, press the **Camera** key; or press the **Full Screen/Mosaic** key view both the live image and a test result simultaneously.

In **Mosaic** mode (see "**Mosaic Mode**" page 59), the result of the test only displays Pass or Fail information; the status of each zone is displayed only in full screen mode.

Overlay

The **Overlay** key allows, when selected, to display the limits of each zone and to display with colors the defaults on the image.

When the key is deselected, the zones and defaults are not graphically identified.

This function is also available in Mosaic Mode (see “Mosaic Mode” on page 59).

Mosaic Mode

It is possible to display only one picture in full screen (640 * 390 pixels) or up to four pictures (320*180 pixels each, including the live camera picture) in mosaic mode. Use the key **Full scr./Mosaic** to switch from one mode to another.

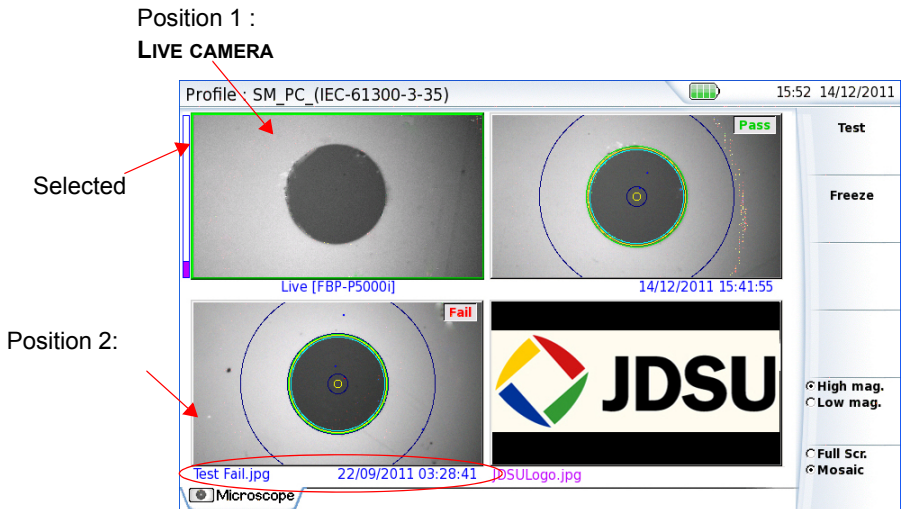


Figure 22 Mosaic mode

- You may select one of the pictures by clicking on it.
The selected picture is framed in green.

The tool bar on the right varies according to which picture is selected (camera, or static picture):

Picture selected: Camera

Test Allows to launch a (new) test of the connector (see [“Launching a test of the connector and fiber end-face” on page 57](#))

Freeze The live picture from the camera is frozen but does not replace the live picture at position 1. The new snapshot is placed at the second position, and all existing pictures are pushed to the next position.



If all positions were taken, the picture that was once at the fourth position is unloaded from memory. Frozen pictures and snapshots are lost, unless they were saved on the internal memory.

High mag./Low mag. allows to modify the live display from high to low magnification and vice-versa

Picture selected: Image

Comment allows to add a comment to the selected picture (see [“Adding a comment” on page 61](#))

Save allows to save the selected picture in the directory Scope, in the disk of the Platform. Press **Save** key, enter a name for the jpg file and validate. This key is not available with jpg files other than those resulting from scope application.

Overlay allows to display or hide the limits of each zone and the defaults on image from a test result (see [“Overlay” on page 59](#)).

High mag./Low mag. allows to switch all the images from scope test results from high to low magnification and vice-versa.

Adding a comment

The key **Comment** allows you to enter/modify a comment to your picture if necessary. This comment appears at the bottom left of the picture.

The right bottom of the frozen picture also contains the date of the acquisition (where the picture was frozen).



NOTE

Both the comment and the date will be saved with the picture.

Loading a picture

It is possible to retrieve and load a picture stored in the Scope directory and display it in the Scope page.

- 1 Press the **FILE** button.
- 2 Press **Explorer**.
- 3 Select the JPEG file to be loaded via the Explorer
- 4 Click on **Load**

Recognized pictures are images resulting from the Scope option and saved on disk via the 2000 Platform.



Some pictures resulting from the Scope option may appear nevertheless unrecognized, if they have been stored with a different Scope application, or if the JPG file has been opened and modified under another JPG editor.


Even though the JPG editor of the Scope function has been designed to display Scope pictures in black & white, it is also possible to open any JPG valid file and display in color the corresponding picture. That picture is enlarged or shrunk to the size of the display (full screen or mosaic, see. "[Mosaic Mode](#)" page 59).

File menu


Saving the test result in a jpg file

Once the test has been performed, and the result is displayed on the 2000 Platform screen:

- 1 Press **FILE** key
- 2 Click on **Save** key to save a jpg file of the test result on the disk of the 2000 Platform.
- 3 On the edition keypad, enter the name of the jpg file
- 4 Press **Enter** to validate.

The file is automatically saved on the disk, in the directory **Scope** (icon ).

Generating a report

- 1 Check the correct test result is selected (framed in green in mosaic mode).
- 2 Press the **FILE** button, then the **Report** key
- 3 On the edition keypad, enter the name of the pdf file and press **ENTER**.
The report generation is completed once the icon  is no more displayed on the upper banner.



NOTE


The pdf report will be saved on the disk, in the directory **Scope**.

Display of the report

Once the report has been generated:

- 1 Press **FILE** hard key.
- 2 On the right menu keys, press **Explorer** soft key.
- 3 In the **File Explorer**, select the pdf report just created.
- 4 Press **Load**.

Logo, company & parameters selected in the Setup page (see “Configuring the Scope” on page 49)


03/08/2012 11:06

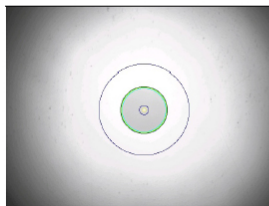
JDS Uniphase

Cable ID	Cable A	PASS
Fiber ID	Fibers 1 to 5 1	
Direction	A->B	
Location A	Saint Etienne	
Location B	Lyon	
Operator	Jhon Doe	
Probe	FBP-P5000i S/N 2080375557	
Test date	03/08/2012 11:06	
Profile	SM_PC_(IEC-61300-3-35)	

Inspection summary

Zone	Diameter		Defects		Scratches	
	Inner	Outer	Result	Count	Result	Count
Zone_A	0.000	25.000	PASS	0	PASS	0
Zone_B	25.000	120.000	PASS	0	PASS	0
Zone_C	120.000	130.000	PASS	0	PASS	0
Zone_D	130.000	250.000	PASS	0	PASS	0

Low magnification



High magnification

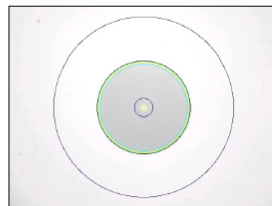


Figure 23 PDF report of Scope test result

Transferring the 2000 Platform Interface

The 2000 Platform can be used in combination with a PC in order to transfer the Platform Interface onto a PC, or to access the internal memory or USB memory stick contents on the PC.

Topics described in this chapter are as follows:

- [“Establishing connection” on page 66](#)
- [“Transferring the Interface” on page 69](#)
- [“Virtual control buttons bar” on page 70](#)
- [“Equivalence between the keyboard and 2000 Platform” on page 71](#)

Establishing connection

The connection between 2000 Platform and the PC can be done directly, or via a local network.

The transfer of the interface can be done using a VNC window on PC.



For an intensive use of the deport screen or when it is used via a WAN network, it is strongly recommended to use a dedicated VNC client. The VNC clients recommended are Tight VNC (V 1.2.9 or later) and Real VNC (V 4.1.1 or later).

Connecting the 2000 Platform and the PC

- 1 Connect the 2000 Platform to the PC via an Ethernet cable, using the RJ45 connectors set on both equipments.

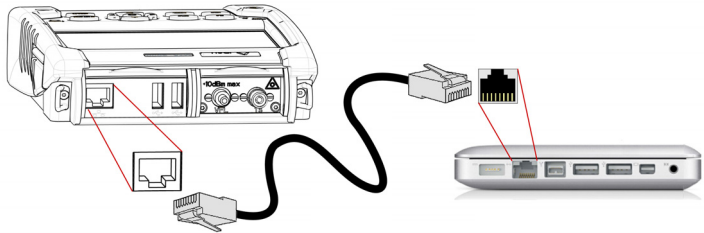


Figure 24 Connection 2000 Platform and PC

- 2 Check the network connection on the PC is set in Dynamic mode.

Configuring the 2000 Platform

- 1 In the **Home** page of the 2000 Platform, validate the **Settings** icon.

- 2 In the **System Settings** page, in the **I/O Interfaces** box, configure the following parameters:

Remote Screen

Remote screen = Session or Permanent must be confirmed in both cases, in the Interface E/S window.

No the screen cannot be remote on to a PC or on to another 2000 Platform.

Session Mode the Remote screen function is inactive once the 2000 Platform is switched off.

Permanent Mode the Remote screen function is still active when the 2000 Platform is switched off and restarted.

Permanent with password

same function as the Permanent mode, with an access to the equipment via VNC protected by a password: 42000

The password to access VNC can be modified:

- 1 Click on the menu key **Change password**.
- 2 Enter the current password in the Edition keypad and press **Enter** to validate.
- 3 Enter the new password and press **Enter** to validate.

Ethernet > Mode

Parameters of the local Ethernet network to which the 2000 Platform is connected:

Config 1 to 4 static mode enabling input of the configuration of 4 sites. If this parameter is selected, the following parameters must be entered:


- Site Name the user can enter the name of the site in the Edit menu.

- IP Address IP address of the 2000 Platform
- IP Mask address of the mask of the sub-network
- IP Gateway IP address of the machine enabling access outside the sub-network.
- DNS¹ IP address of the machine providing the IP address on the basis of the name
- Domain name name of the local network to which the 2000 Platform is connected.

Dynamic in this mode, which requires a DHCP server, the 2000 Platform requests an IP address from this server which will be allocated dynamically if dynamic host configuration is activated on the local network. After selecting this mode or after power-on, the 2000 Platform tries to establish a connection to obtain an address from a DHCP server. If for any reason, this process fails, the 2000 Platform reverts to static IP address mode with User1 IP address.



NOTE

Once the 2000 Platform is connected to the network, the icon  indicates the connection is working.

Proxy > Use proxy

- 1 Select **No** if no proxy is used.
- 2 If **Manual** has been selected, enter the **Proxy Address**.
- 3 If **Auto** has been selected, enter the **Pac Address**.

1.Domain Name Server

Note the 2000 Platform IP Address

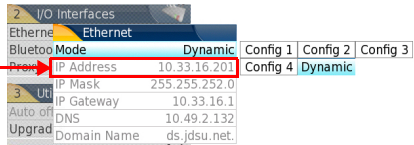


Figure 25 Example of configuration for I/O Interfaces box

- 1 Note the IP Address displayed in the System Settings page.
- 2 Wait about 10 seconds the connection is established.

The 2000 Platform Interface can now be transferred onto the PC, or the internal memory or USB key contents can be transferred on PC.

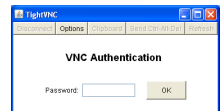
Transferring the Interface

Once the connection is established between the 2000 Platform and the PC, proceed as follow:

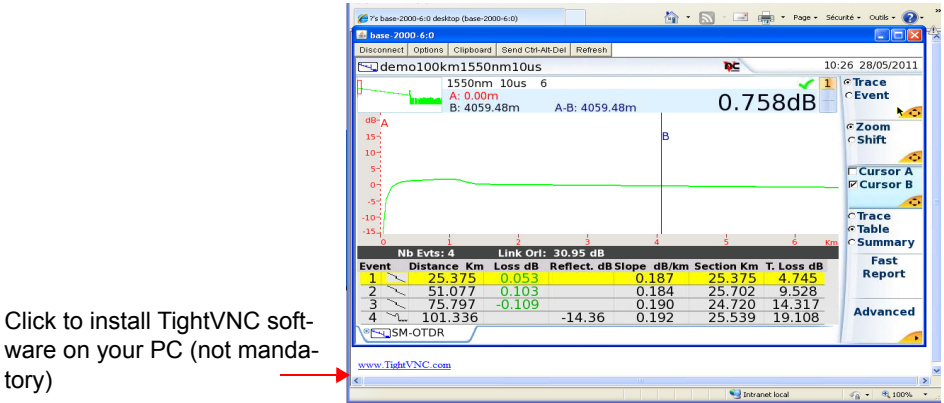
- 1 Open Internet Explorer on the PC.
- 2 Considering 10.33.18.93 is the IP Address of the 2000 Platform (as shown [Figure 25 on page 69](#)), enter the following address in the Internet Explorer window:

`http://10.33.18.93:5800`

- 3 Press **Enter** to validate.
A VNC window opens, demanding a password
- 4 Press **OK** without typing any password.



The screen of the 2000 Platform appears offset on your PC.




Click to install TightVNC software on your PC (not mandatory)

Figure 26 VNC window

You can use keyboard mouse of the PC to control the 2000 Platform (see “Equivalence between the keyboard and 2000 Platform” on page 71).



NOTE

Once Remote screen is accessible via VNC, the icon  displays on the upper banner of the screen until the connection is cut or the 2000 Platform is switched off.

Virtual control buttons bar

It is possible to emulate hard keys with Virtual Control buttons. This virtual control buttons bar is especially useful when the 2000 Platform screen is exported on a remote PC.

To display those buttons, click once on the top of the screen in the status bar, at the same height than the date and time.



Figure 27 Virtual control buttons bar

The virtual control buttons bar is displayed during a few seconds. You may click on any of these buttons to obtain exactly the same results than using the hard keys on the front panel of the 2000 Platform.

Equivalence between the keyboard and 2000 Platform

The PC keyboard can replaced all the buttons and keys of the 2000 Platform except the **ON/OFF** button:

- The menu keys to the right of the screen are replaced by the function keys **F1** to **F6**.
- The buttons below the screen are equivalent to **Ctrl + a letter** (see table below).
- The direction keys have the same function on the external keyboard and on the 2000 Platform.

Function on the 2000 Platform	External keyboard
HOME	Ctrl + H
SYSTEM SETTINGS	F12
SET-UP	Ctrl + U
FILE	Ctrl + F
RESULTS	Ctrl + R
START/STOP	Ctrl + S
EXPORT	Ctrl + P ^a
◀ ▲ ▶ ▼	← ↑ → ↓
Menu keys 1 to 6 (from top to bottom)	F1 → F6

Function on the 2000 Platform	External keyboard
ABOUT	F11
Save and quit (Exit)	Entrée/Enter
Quit without saving (Abort)	Escape/Echap.

- a. The Export function is available directly on the 2000 Platform pushing simultaneously the left and right arrow keys.



NOTE

Those equivalences are also valid with a keyboard directly connected to the 2000 Platform via one USB port.

Stratasync

This chapter describes how to synchronize your 2000 Platform to the Stratasync application.

The topics discussed in this chapter are as follows:

- ["Principle and prerequisites of the Stratasync" page 74](#)
- ["Configuring and synchronizing the 2000 Platform" page 75](#)

Principle and prerequisites of the Stratasync

Stratasync is a new solution that provides network operators with an agile and centralized way to manage and analyze data from thousands of deployed Viavi test instruments directly from the cloud.

StrataSync is a hosted, cloud-based software application that provides Viavi instrument asset, configuration, and test-date management.

StrataSync improves technician and instrument efficiency.

StrataSync allows to:

- Manages and tracks test instruments
- Collects and analyzes results from the entire network
- Informs and trains the workforce

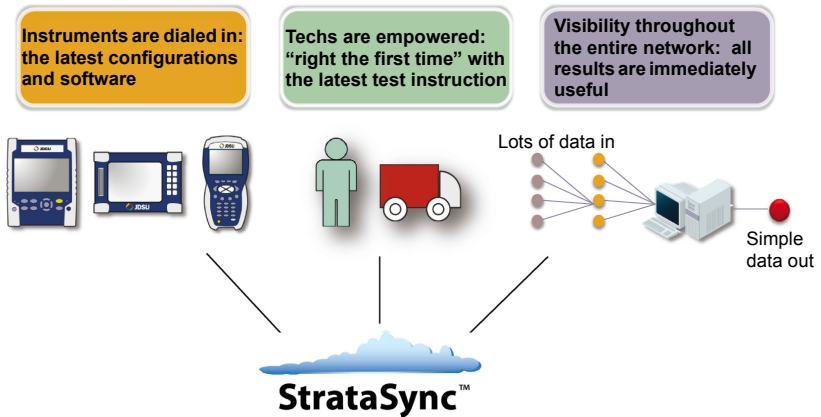


Figure 28 Principle of the Stratasync application

Pre-requisites for using the Stratasync with the 2000 Platform

The user must have subscribed to Stratasync, and by consequence, he must have acquired an **account Identifier** and a **password**.

The Ethernet and Proxy parameters must have been correctly configured in the System Settings page of the 2000 Platform (see [“Ethernet > Mode” on page 67](#) and [“Proxy > Use proxy” on page 68](#)).

Configuring and synchronizing the 2000 Platform

The 2000 Platform can be configured to be synchronized with the Stratasync.

- 1 Press **Settings** in the **Home** page
- 2 Check the configuration of the **Ethernet** and **Proxy** parameters.
- 3 Configure the Stratasync parameters:
 - a In the **Server Type** parameter, the **Viavi Server** is selected by default and it is recommended to keep this parameter. However, the user can select if necessary the **Server Name** parameter and enter the name in the following parameter.
 - b In the **Account ID** parameter, enter the same identifier as the one used to access to Stratasync.
 - c The **Technician ID** parameter is automatically fulfilled after synchronization (if it has been defined by the administrator of the Stratasync)
 - d To upload the files from a directory onto the 2000 Platform toward Stratasync, select the parameter **Upload from** and press right arrow key to enter the directory path (example: `disk/Stratasync`). The directory Stratasync is defined by default.

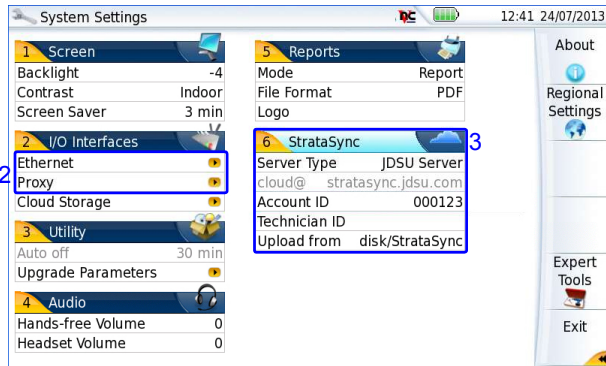


Figure 29 System Settings - Stratasync


Connecting the 2000 Platform to Stratasync

Once 2000 Platform is configured in the **System Settings** page:

1 Press **Expert Tools > Upgrades** menu keys.

2 Press **Stratasync** menu key .

The synchronization with Stratasync starts

The icon  displays on the upper banner of the 2000 Platform during synchronization.

Once the icon is no more displayed, this mean that the synchronization is completed.

3 For the first synchronization only, a message displays on the 2000 Platform to indicate the addition of the equipment in Stratasync.

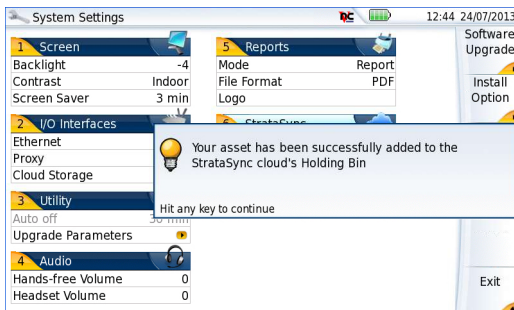


Figure 30 First synchronization - Message on 2000 Platform
The 2000 platform is now available in Stratasync.

Web browser

The 2000 Platform allows to access to internet, using the Web Browser installed on the equipment.

The topics discussed in this chapter are as follows:

- ["Configuring the Web access" on page 80](#)
- ["Starting the web browser" on page 80](#)
- ["Creating bookmarks" on page 83](#)
- ["Opening a PDF document" on page 83](#)
- ["Leaving the web browser" on page 84](#)

Configuring the Web access

Before using the Web Browser onto the 2000 Platform, check/modify the proxy configuration in the System Settings page:

- 1 On the **Home** page, press **Settings** key
The **System Settings** page displays.
- 2 Select **Proxy** parameter in the **I/O Interfaces** box to open a sub-menu.

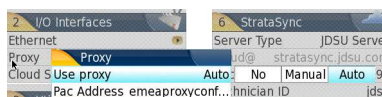



Figure 31 Proxy configuration

- 3 Configure the parameter **User Proxy**
 - If **Manual** is selected, enter the **Proxy Address** with edition keypad
 - If **Auto** is selected, enter the **Pac Address** using the edition keypad.

Starting the web browser

- 1 In the **Home** screen, select **Web Browser**  icon.
The web browser is launched.

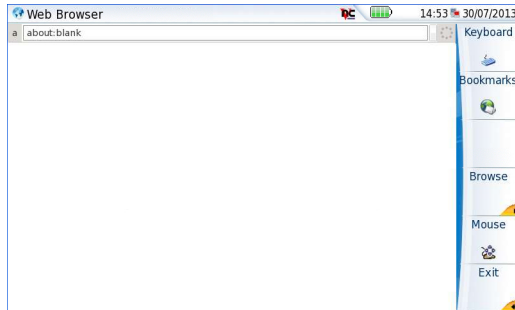





Figure 32 Web Browser page

Opening an internet page

Once the Web Browser is displayed, you must enter the internet address.

- 1 Set the cursor in the address bar:
 - a Use the mouse connected via USB port on the 2000 Platform or the mouse of the PC if the screen is deported via VNC application on the PC, or use the touchscreen.
 - b Click on the menu key  so that it becomes . This allows to move the cursor toward the address bar.
- 2 Once the cursor set onto the address bar, enter the address:
 - a Using a keyboard connected to the 2000 Platform USB port or the keyboard of the PC with a deport of the screen via VNC, enter the entire address of the site to be opened.
 - b If none keyboard is available:
 - click on the menu key  to display the virtual keyboard and enter the address using the buttons on the 2000 Platform or clicking directly on characters.
- 3 Push the **ENTER** hard key.
The page opens

If an error message is displayed in place of the internet page, verify the address you typed, or check the configuration (see "[Configuring the Web access](#)" on page 80).

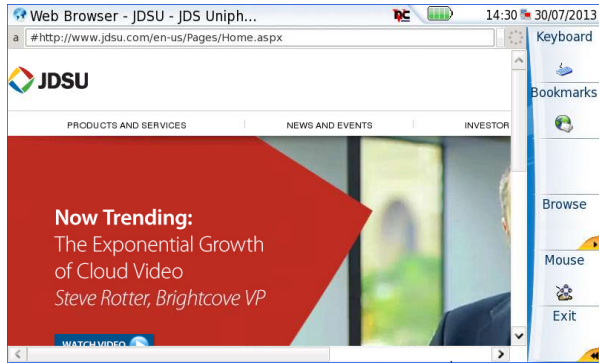






Figure 33 Internet page opened with the Web Browser

Navigation into the Web Browser

Once the Web Browser is open, press the key  to display on the right of the screen, the buttons used to navigate.




Icon	Definition
	Go to the previous or next page loaded
	Refresh the actual page
	Exit the Navigation menu

When a link is available, the arrow cursor becomes a hand cursor

Creating bookmarks

Once a page is opened, you can apply it a bookmark, in order to get a shortcut toward this page.

Once the internet page for which a bookmark must be created is opened:

- 1 Click on  to open the dialog box for bookmarks creation..
A new tools bar is displayed on the right of the screen.
- 2 Click on menu key  to add a bookmark for the page displayed
- 3 Click on  to edit the bookmark, and modify if necessary the name of the bookmark. Click on **Ok** to confirm the modification or **Cancel** to cancel the modifications.

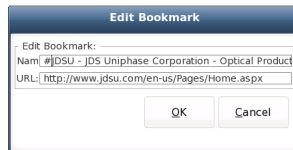





Figure 34 Bookmark edition

- Click on  to open the page of the bookmark selected in the list
- Click on  to delete the selected bookmark from the list
- Click on  to exit bookmark menu and go back to Web Browser.

Opening a PDF document

PDF documents may be opened and read within the Web browser.

- 1 When you click on a link toward a PDF file, a dialog box during loading is displayed.
- 2 Once loading is completed, click on **Ok** to open the pdf file.

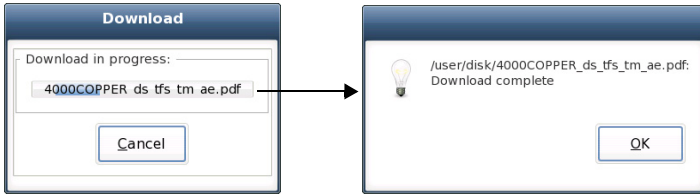


Figure 35 Downloading a pdf file

Click on the menu key  to go back to the web browser.



NOTE

The web browser will open a PDF document, not a URL including a PDF file.

The PDF is also automatically saved on the **disk** of the Platform.

Leaving the web browser

Depending on how long you want to leave the web browser and on your connection mode, you may:

- Leave the web browser running and switch to another task. To do this, click on the **HOME** button.

The web application is still running in the background. Nevertheless, you have now a complete access to all the 2000 Platform functionalities.

To go back, you must select again the **Web Browser** in the **Home** page. The application will reopen much faster, and all your environment will be the same (last current page, possibilities to go back...)

- Quit the application using the **Web browser** application menu: click on the key .

File management

The files management with the 2000 Platform can be performed, wether a module is set onto the 2000 Platform or not.

The topics discussed in this chapter are as follows:

- [“File Explorer Overview” on page 86](#)
- [“Directories and Files selections” on page 86](#)
- [“Directories & Files editing functions” on page 88](#)
- [“Working with directories and files from the explorer” on page 90](#)
- [“Creating a screenshot” on page 102](#)
- [“Creating a report” on page 103](#)
- [“Merging pdf or txt files” on page 105](#)
- [“Storage media” on page 107](#)

File Explorer Overview

To reach the File Explorer page

- On the **Home** page, select the **File Explorer** icon.
The File Explorer page appears.

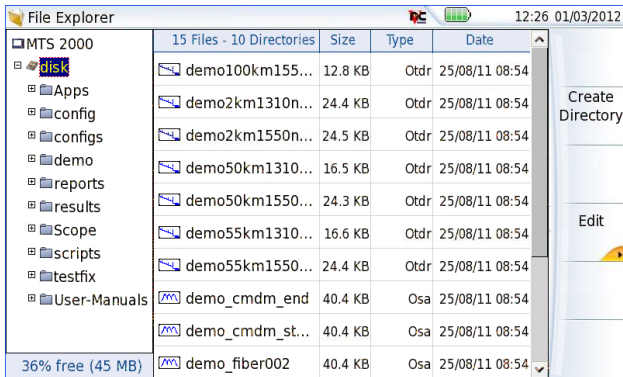


Figure 36 File Explorer page

Directories and Files selections

Directory selection

To select a directory from the explorer page:

- 1 Press on the directory that must be selected on the left of the screen.
The list of files the directory contains displays on the right side of the screen
The selected directory is underlined in blue

- 2 Click on the arrow at the left of the directory name, or press validation hard key **○** , to display the sub-directories if any.

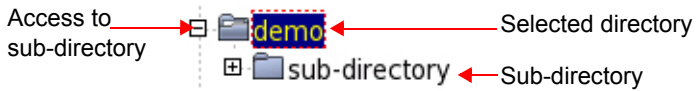


Figure 37 Directory selection

Files selection

To select one or several files from the explorer page:

- 1 Press on files that must be selected.
or
To select a list of files using the keys of the Platform:
 - a Select and validate the first file of the list (underlined in red)
 - b Set the cursor on the last file of the list (underlined in blue)
 - c Maintain the right direction key **▶** pushed until all the files are selected.
or
Click on **Select all** menu key to select all files into the directory.



NOTE

The last selected file is underlined in red and the previous one(s) selected is/are underlined in blue.

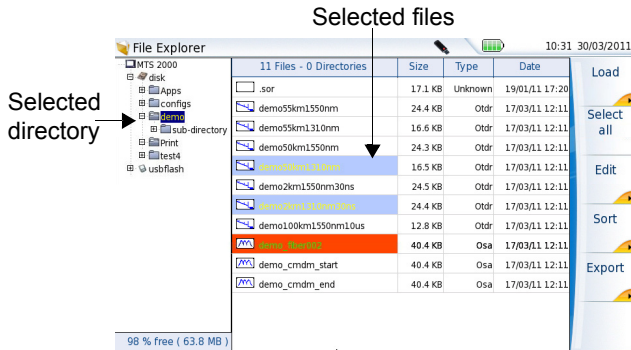


Figure 38 Example of files selection

Directories & Files editing functions

Copy/Cut & Paste files/directories

To copy (cut) one or several files, or one directory, and paste them in another place:

- 1 Select the directory / the file(s) (see “[Directories and Files selections](#)” on page 86).
- 2 Press **Edit** menu key
- 3 Press **Copy** to keep the directory / file(s) to their initial location.
or
Press **Cut** to delete the directory / file(s) from their initial location
- 4 On the left of the screen, select the directory; or select the new storage media.
- 5 Click on **Paste** menu key.

Renaming a directory / file

- 1 Select the directory / file to be renamed (see “[Directories and Files selections](#)” on page 86).
- 2 Press **Edit > Rename Directory** or **Rename File**.
The Edition keypad displays.

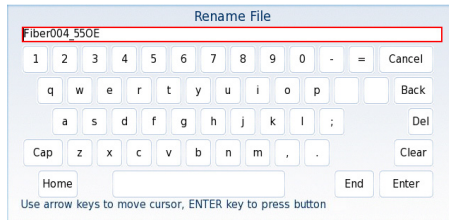


Figure 39 Edition keypad for renaming file

- 3 Press **Clear** if you wish to delete the entire name
- 4 Enter a new name for the directory / file.
- 5 Click on **Enter** to validate the new name.

Deleting a directory / file

- 1 Select the directory or file(s) to be deleted (see “[Directories and Files selections](#)” on page 86).
- 2 Press **Edit > Delete**.
A confirmation dialog box displays.
- 3 Press **Yes** to delete the selected directory or file(s).
Press **No** to cancel the deletion.

Working with directories and files from the explorer

Creating a directory

To create a new directory from the explorer page:

- 1 Check the cursor is set on the left of the screen
- 2 Select the storage media into which the directory must be created
- 3 If you want to create a sub-directory, select the directory into which it must be created.
- 4 Press the right menu key **Create Directory**.
The edition keypad displays
- 5 Enter a name for this directory
- 6 Press **Enter** key to validate the new directory

Opening files

Once a file is selected, press **Load** menu key.















Opening several files at the same time can be done exclusively with trace files (example: all OTDR trace files if a reference trace has been defined). Other type of files (PDF, TXT...) must be open one by one.

If different types of files have been selected in the Explorer, only the last one selected will open.

File Types

For files recognized by the 2000 Platform, the types are symbolized by icons. E.g.

Icon	Type of FO file
	OTDR file (.SOR extension)
	Multi OTDR file (.MSOR extension)
	OSA file (.OSA extension)
	Power Meter file (.LTS extension)

Icon	Type of file
	HTML file (.HTML extension)
	PDF File (.PDF extension)
	Text file (.TXT extension)
	License file (.LIC extension)
	CSV file (.CSV extension)
	JPEG / JPG file (.JPEG extension)
	PNG file (.PNG extension)
	XML file (.XML extension)



With the 2000 Platform, you can open and load any kind of FO files (OTDR, OSA, PON, LTS) even if the corresponding module is not set into the Platform.

Sorting files

Whether files are selected or not, the key **Sort** allows to access to a sub-menu allowing to sort the file according to pre-defined parameters:

- **Sort by name:** the files display in an ascending order (from A to Z). If you click once again on the key, the files display in a descending order (from Z to A).
- **Sort by size:** by clicking once on this key, the files display from the smallest to the heaviest one. Clicking a second time allows to sort the files in opposite order.
- **Sort by type:** clicking once on this key; the 2000 Platform displays files in an ascending order (the file type A to file type W). By clicking again, the 2000 Platform displays the files in opposite order.
- **Sort by date:** clicking once on this key; the 2000 Platform displays files from the more recent to the less one. By clicking again on key, the Platform displays files from the older to the more recent one.



NOTE

You can also sort files clicking on the column titles in the files list

Transferring files between two Platforms

If some Results traces or other kinds of file need to be transferred to another Platform, or if files from another Platform must be transferred to the 2000 Platform, this can be easily done using the USB cable delivered on standard with the equipment.

Establishing connection between two 2000 Platforms

- 1 Connect the 2000 Platform to another one, plugging the USB cable on the mini USB port of the Platform toward a USB port on the other Platform.

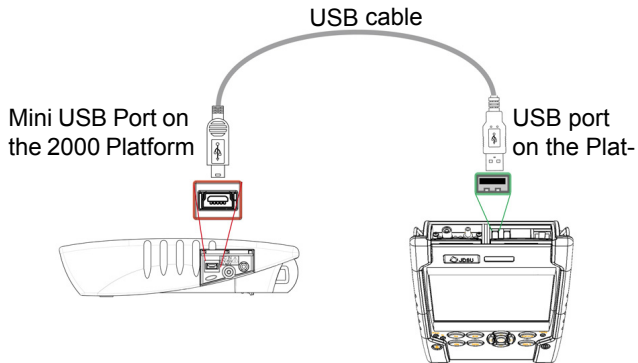


Figure 40 Direct connection 2000 Platform <-> 2000 Platform



NOTE

The connection can be done with a 4000 Platform on the other side.

- 1 Once connection is established, confirm that you wish to activate the USB link in the pop-up window on the 2000 Platform.

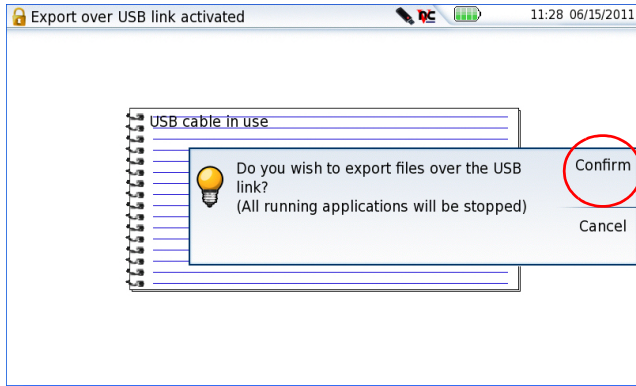



Figure 41 Confirmation of files export via USB cable

Transferring files

- 1 On the distant Platform, open the File Explorer page
The usbflash driver appears  `usbflash` on the left side of the screen.
- 2 Select the file(s) to be transferred from one Platform.
- 3 Press **Edit > Copy** or **Cut** softkeys.
- 4 Select on the left of the screen, the directory on the other Platform, into which file(s) must be transferred.
- 5 Press **Paste** softkey.
File(s) is/are transferred.

Cancelling the connection

Once all desired files have been transferred, connection between both 2000 Platforms can be removed:

- 1 On the distant platform, press **Eject USB** key before removing USB plug from connector.

- 2 On the 2000 Platform, remove the mini USB plug from its connector. The screen displays the results trace of the active function, or returns to the **Home** page if no function is active.

Transferring files to a PC with the USB cable

If some Results traces or other kinds of file need to be transferred to the PC, this can be easily done using the USB cable delivered on standard with the 2000 Platform.

Establishing connection 2000 Platform <-> PC

- 1 Connect the 2000 Platform to a PC, plugging the USB cable on the mini USB port of the Platform toward a USB port on the PC.

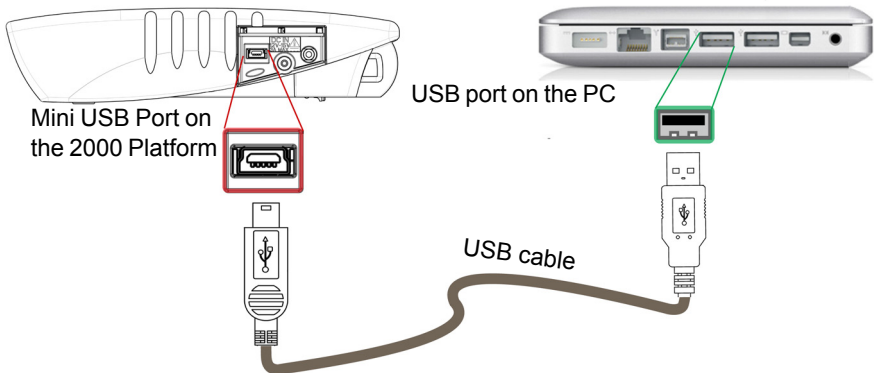


Figure 42 Direct connection 2000 Platform <-> PC

- 1 Once connection is established, confirm that you wish to activate the USB link in the pop-up window on the 2000 Platform.

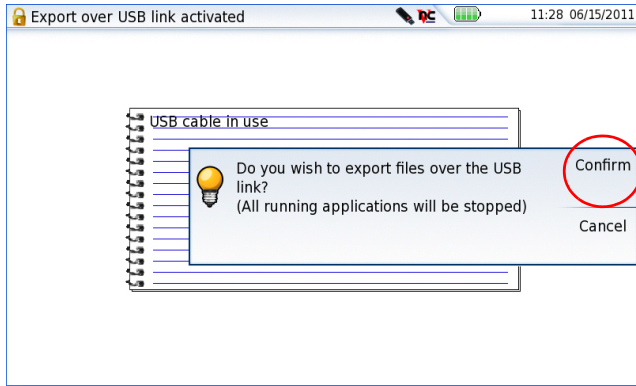


Figure 43 Confirmation of files export via USB cable

A message displays on the bottom right side of the PC informing a new hardware is detected.



- 2 Click on the message and select «**Open folder to view files**» in the dialog box **ViaviDISK (F:)** («F:» is an example, it can be different according to your PC and to the USB port used).

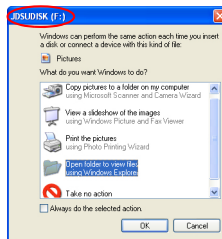


Figure 44 Open 2000 disk content

The 2000 platform disk content opens onto the PC.

Transferring files onto the PC

- 1 Select the file(s) from the 2000 Platform to be transferred onto the PC

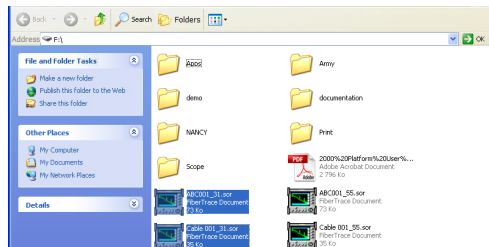


Figure 45 Files selection from the 2000 Platform

- 2 Press **Ctrl + C**, or right click and select **Copy**.
- 3 On the PC, select the directory in which file(s) will be transferred.
- 4 Press **Ctrl + V**, or right click and select **Paste**.

Cancelling the connection

Once all desired files have been transfer onto the PC, connection between 2000 Platform and PC can be removed:

- 1 On the PC, use the appropriate method to safely remove the USB cable from the USB port.
The screen displays the results trace of the active function, or returns to the **Home** page if no function is active.
- 2 Remove the mini USB plug from the 2000 Platform USB port.

Transferring files to/from a PC with a FTP server

It is possible, from a PC, to access the internal memory of the 2000 Platform or to the USB memory stick connected to the Platform by means of the FTP server of the 2000 Platform.

Direct connection

- 1 Connect directly the 2000 Platform to the PC with an Ethernet cable, using the RJ45 connectors on each equipment.

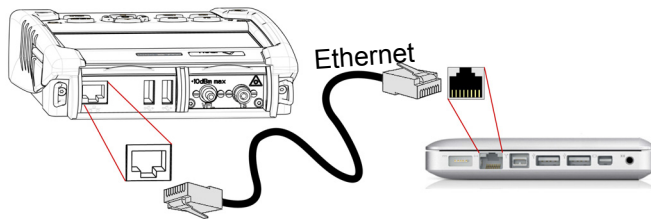


Figure 46 Ethernet Connection 2000 Platform <-> PC

- 1 Make sure the network configuration onto the PC is set to the **Dynamic** mode:
 - a Click on **Start > Control Panel**.
 - b Double click on **Network Connection**.
 - c Double click on **Local Area Connection**.
 - d In the dialog box, click on **Properties**.
 - e Check the parameter **Internet Protocol (TCP/IP)** is selected () and click once on it (underlined in blue)
 - f Click on **Properties** button.
 - g On the tab **General**, check the parameter **Obtain an IP address automatically** is selected () ; if not, click to select it.

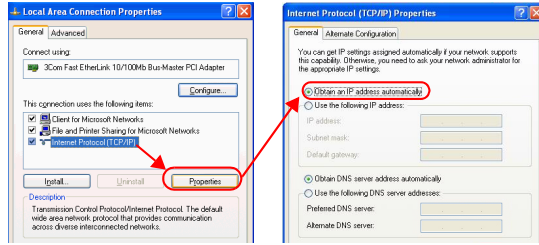


Figure 47 Internet Protocol

- h Click on **Ok** and close all the dialog boxes opened onto the PC.
- 2 On the 2000 Platform, in the **System Setup** page, under **I/O interface > Ethernet**, select **Dynamic**.

IP Address of the Platform

Ethernet		Config 1	Config 2	Config 3
Mode	Dynamic			
IP Address	10.33.18.235	Config 4	Dynamic	
IP Mask	255.255.252.0			
IP Gateway	10.33.16.1			
DNS	10.49.2.132			
Domain Name	ds.jdsu.net.			

Figure 48 System Setup > Ethernet: Dynamic mode

- 1 Note the IP Address and wait for about ten seconds while the connection is established.

Connection via a local network

- 1 **On the PC:** find the IP address and the mask of the PC's sub-network:
 - With Windows 98 or Millenium: Select **Start > Execute**, then enter **windowsipcfg** and click on **OK**.
 - With Windows NT, 2000, XP or Vista: select **Start > Programs > Accessories > Dos Prompt**, type **ipconfig**, then **Enter**.

Note the IP address and the mask of the PC's sub-network.

- 2 Plug the RJ 45 connector of the 2000 Platform into a hub or Ethernet switch with a straight-through Ethernet cable (see [Figure 42 on page 95](#)).
- 3 **On the 2000 Platform:**
In the system set-up menu, under **I/O interfaces > Ethernet**, select **Config 1** (or **2 / 3 / 4**) on the line **Mode**, then enter the **IP address**, the **IP mask** of the PC and the **IP gateway** previously noted ([step 1](#)).
or
use **Dynamic** attribution mode (DHCP). In this case, the address of the 2000 Platform (10 . 33 . 18 . 235 in the example) is displayed but cannot be altered.
- 4 Wait for about ten seconds while the connection is established.
- 5 On the PC, make sure that the connection is operational by selecting **Start > Execute...** and typing `ping` followed by the address of the 2000 Platform.

Accessing the internal memory of the 2000 Platform

FTP access is obtained through the user account «mts2000» (password: Viavi).

- 1 Make the 2000 Platform / PC connection as described [Figure 46 on page 98](#).
- 2 On the PC, use an FTP client, and access to internal memory via an internet explorer (I.E, Mozilla Firefox...) or Windows Explorer.
- 3 In the address bar, type the following address (10 . 33 . 18 . 235, being the IP address of the 2000 Platform defined when the connection was configured; see [Figure 48 on page 99](#)):
`ftp://mts2000:Viavi@10.33.18.235/disk/`
This allows to access to internal memory.

ftp://mts2000:Viavi@10.33.18.235/usbflash/

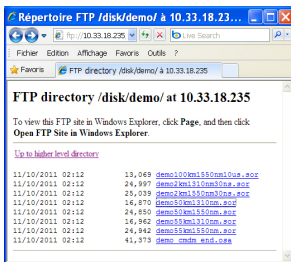
This allows to access to the contents of the USB memory stick connected to the 2000 Platform.



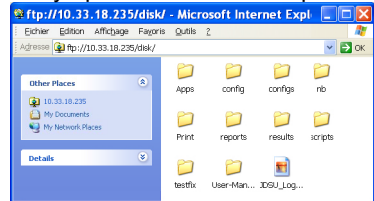
If you use Internet Explorer 7, the following address must be entered:

ftp://mts2000:Viavi@10.33.18.235/acterna/user/disk Or **ftp://mts2000:Viavi@10.33.18.235/acterna/user/usbflash**

The PC then displays the contents of the internal memory or of the USB memory stick from the 2000 Platform.



Internal memory open via Windows Explorer



Internal memory open via Internet Explorer

Figure 49 Internal memory of the 2000 Platform

- 1 If internal memory of the Platform is accessible via Internet Explorer (or any other explorer), right click on one file and click on **Save target as...** to transfer file onto the PC.

If internal memory of the Platform is accessible via Windows Explorer, select one / several files and click on **Copy**, then click on **Paste** on PC to transfer file.

Creating a screenshot

You can create captures of what is displayed on the screen, directly from the 2000 Platform.

Configuring the parameters of screenshots


To configure the screenshot and choose the format of the generated file:

- 1 Press **HOME** hard key
- 2 Select the **Settings** icon to reach the **System Settings** page.
- 3 In the **Report** box, on the line **Mode**, select **Screenshot**
Choosing this option, you can save the displayed screen in JPG, PNG or PDF format, exactly as it is displayed on the screen.
Therefore, if you make a zoom on the trace for example, the file will only show the zoom section.
- 4 On the line **File format**, select if the printed file will be a **JPG**, **PNG** or **PDF** file.

Taking a screenshot

Once the screenshot parameters are configured:

- 1 Reach the display which will be saved as a screenshot in a file.
- 2 If necessary, make modifications on this display (example: zoom on trace...)
- 3 Press simultaneously the left and right arrow keys ◀ ▶ for about 5 seconds
or
Click on the upper banner of the screen and, in the virtual control buttons bar, press **Export** key

The icon  displays until the end of process.

- 4 Press the **FILE** key to find the JPG, PNG or PDF file in the Explorer

Name of the screenshots files

The screenshot is saved in a file, which is automatically named as follow:

- *Print_date (year/month/day)_time (hour/minute/second).jpg/png/pdf*

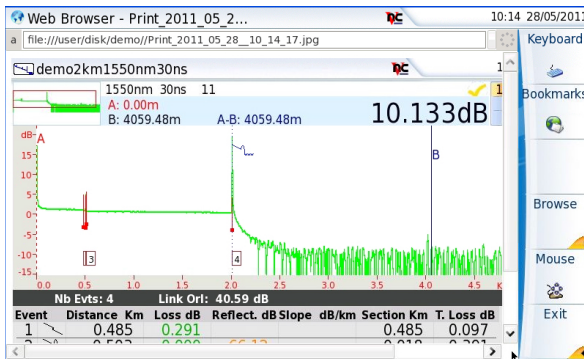


Figure 50 Example of screenshot, open in the Web Browser of the 2000 Platform


The file is saved in the directory **Stratasync**, on the storage media **disk**.

Creating a report

Once the results page of a function is opened (example: OTDR trace, Power Meter results...), it can be exported in a report, using the 2000 Platform.

Creating the report

- 1 Open the file to be saved in a report in JPG, PNG or PDF format
- 2 If necessary, make the modifications on the file/trace (see user manual of the 2100 OTDR Modules for OTDR trace files).
- 3 Set the trace view as wished.
For OTDR traces
 - if the function is set to the **Trace** mode (**Trace** is selected on the menu key **Trace/Table/Summary**), the JPG/PNG/PDF file will contain the header and the trace (in one page).
 - If the function is set to **Table** mode (**Table** is selected on the menu key **Trace/Table/Summary**), the JPG/PNG/PDF file will contain the header, the trace and the entire results table (several pages may be required)
 - If the function is set to **Summary** mode (**Summary** is selected on the menu key **Trace/Table/Summary**), the JPG/PNG/PDF file will contain the header and the summary page, with either the Bend table or the Alarm Table according to the selected item with the menu key.

This view is only available with OTDR traces.
- 4 Press simultaneously the left and right arrow keys ◀ ▶ for about 5 seconds
or
Click on the upper banner of the screen and, in the virtual control buttons bar, press **Export** key
The icon  displays until the end of process.
- 5 Press the **FILE** key to find the JPG, PNG or PDF file in the Explorer
The files are saved in the directory **Print**, on the **disk** media storage.

Name of the report

If a trace has been saved in a report file, the name of the JPG/PNG/PDF file is as follow:

- *name of the stored trace_date (year/month/day)_time (hour/minute/second).jpg/png/pdf*



NOTE

If several traces are displayed in overlay, a different report file is generated for each trace open.



Figure 51 Example of report (in pdf)

Merging pdf or txt files

In the Explorer page, two pdf/txt files or more, generated via the results traces can be merged in one pdf file.

- The pdf files that can be merged are those generated via the **Fast Report** key on trace results page or via the **Export** key on the upper banner (or left and right arrow keys) (see “Creating a report” on page 103)
 - The txt files that can be merged are those saved with the results trace (see OTDR Modules User Manual: E2100M02).
- 1 In the Explorer, select the two or more pdf/txt files generated
 - 2 Press **Export** menu key
 - 3 Press **Merge** key

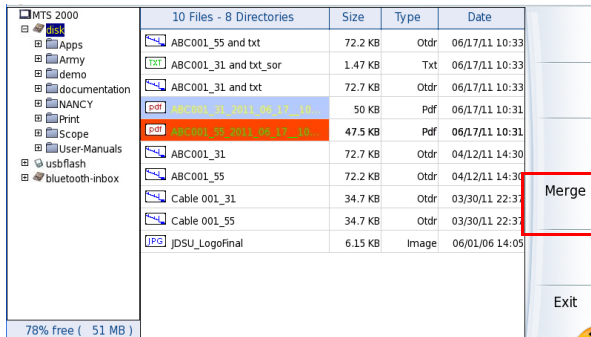



Figure 52 Files selection and Merge key

The icon  is displayed during merging process.

After a few seconds, the files are merged in one pdf/txt file, which name by default is: *merged_year_month_date__hour_min_sec.pdf*

The file is automatically saved in the same directory as the one where files have been selected.

It gathers all results from pdf/txt files selected (and traces for pdf file), in one single pdf file of several pages (1 results screen per page, if the results table does not exceed one page).



NOTE

Once merged file is saved, it can be renamed in the Explorer (see [“Renaming a directory / file” on page 89](#)).

Storage media

For saving or recalling data, the 2000 Platform offers a wide choice of media, both built-in and external.

Free space on selected media is clearly displayed at the bottom of the left panel.

Storage media built into the 2000 Platform

The 2000 Platform is delivered with an internal memory, which maximum capacity is of 1GB (with a minimum of about 128 Mb are available for data storage).

External USB storage media


The 2000 Platform is equipped with 2 USB ports as standard. One of these can be used to connect an external storage medium, in particular a USB memory stick.



NOTE

Although two USB ports are present, it is not possible to use simultaneously more than one external USB storage medium.


USB memory stick connection

- 1 Insert the USB memory stick in one of the 2000 Platform's USB port. A sound is emitted to confirm the successful insertion and recognition of a USB memory stick.
Then, the icon  is displayed in the upper banner to inform the user the USB stick is ready to be used.



When a file is moved in the explorer of the Platform, the end of the move on the screen does not mean that writing of data into the memory is complete. Some data may still be in a writing process if the storage unit is removed prematurely.

USB memory stick disconnection

- 1 Before disconnecting the USB memory stick, always select a storage device different from usbflash (select disk for example) in the explorer.
- 2 Make sure you no longer have any running applications using the usbflash storage media.
- 3 The user must push the **EJECT USB** key, available in **File Explorer**. The icon becomes  to indicate it can be removed safely. In this state, the USB stick cannot be used anymore

The USB memory stick can then be disconnected from the Platform USB port.



NOTE

The USB memory stick can also be removed using the **Expert Tools > Media Utilities** menu, accessible via the **System Settings** page.

See [Chapter 16 “Maintenance and Troubleshooting”](#) if any problem occurs with the USB memory stick

Cloud Storage

Principle and prerequisites of the Cloud Storage

The Cloud storage defined the outsourcing of data on distant servers, which avoid the data storage on a local workstation.

The cloud storage onto a 2000 Platform allows to transfer the files from the Platform toward a distant server and vice-versa.

Before configuring the Cloud Storage on Platform, you must first create an account on a Cloud Platform on internet.

The Cloud storage function onto the 2000 Platform works exclusively with sites using the WebDav technology such as CloudSafe (<https://secure.cloudsafe.com/pages/index.html>) or Box (<https://www.box.com/pricing/>).

Once account is created, with WevDav configuration, you get the following information for connection:

- URL
- Login Name
- Login Password

Configuring and connecting to Cloud Storage on the 2000 Platform

Configuring the 2000 Platform

Once an account has been created on the Cloud site, configure the 2000 Platform before establishing the connection:



Before configuring the Cloud Storage, make sure the configuration for Ethernet parameters and Proxy parameters are correctly configured. See “Ethernet > Mode” on page 67 and “Proxy > Use proxy” on page 68.

- 1 On the **Home** page, press **Settings** to reach the **System Settings** page
- 2 In the **I/O Interfaces** windows, press **Cloud Storage** parameter
A new menu opens
- 3 In the **Url** parameter, enter the URL define for the Cloud server created on internet
- 4 In the **User** parameter, enter your Login created on your account
- 5 In the **Key / Password**, enter the password attributed by the Cloud server.

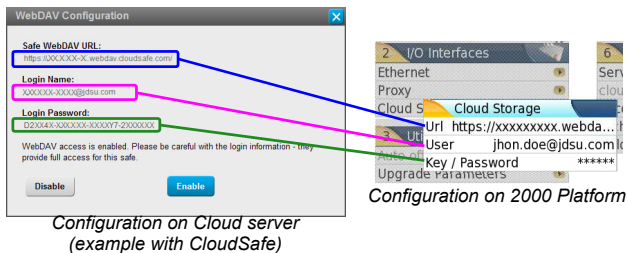


Figure 53 Example of configuration

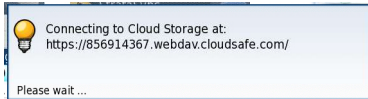
Connecting Cloud Storage

Once configuration has been established on the 2000 Platform, it is ready to be connected with Cloud server:

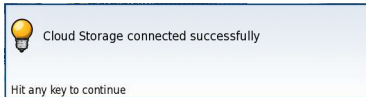
Select one parameter of the Cloud Storage window on 2000 Platform

- 1 Press **Connect Cloud Storage** menu key
The connection launches


Connect
Cloud
Storage



- 2 Once connection is established, a message displays in the window



- 3 Press any key to continue, and start files transfer.

The icon  is displayed on the upper banner as long as the connection is active.

Disconnecting from Cloud storage

To disconnect the 2000 Platform from Cloud storage:

- 1 Press **HOME** hard key.
- 2 Select a parameter of the **Cloud Storage** window.
- 3 Press **Disconnect Cloud Storage** menu key.

Transferring files using Cloud Storage

Once connection between 2000 Platform and cloud storage server is successfully established, the files can be transferred from one Platform to the other.

- 1 Press **HOME** hard key.
- 2 Press **FILE Explorer** on the **Home** page
In the **Explorer** page, a new storage media is available: **cloud-storage**.



The cloud-storage media is not available when File Explorer is opened from a FO application.

- 3 Transfer the files from the disk or USB memory stick of the 2000 Platform toward the cloud storage or vice-versa:
 - a Select the file(s) to be transferred
 - b Press the **Edit > Copy** or **Cut** menu keys
 - c Select the storage media (and the directory) into which files must be copied.
 - d Press **Paste** menu key

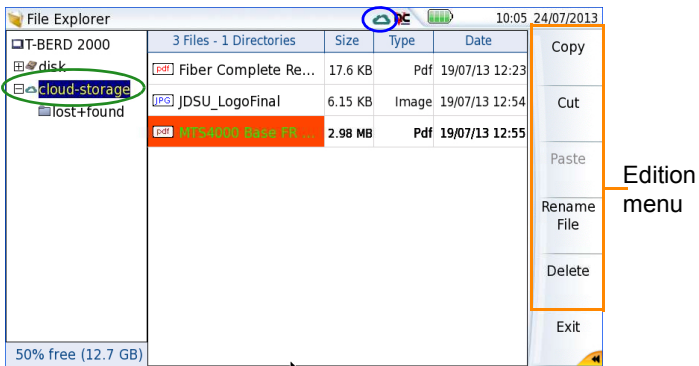


Figure 54 File Explorer with cloud storage



The cloud storage is automatically disconnected once the Platform is switched off. Reconnect from the System Settings page of the 2000 Platform after the Platform restart.

Abbreviations for storage media

The abbreviations used in the explorer for the different storage media are:

Abbreviation	Storage medium
disk	Internal flash memory
usbflash	USB memory stick
bluetooth-inbox	Bluetooth storage media (option) ^a
cloud-storage	Cloud storage media available on PC

a. The files stored in bluetooth-inbox are lost when the Platform is switched off.

Smart Access Anywhere

The 2000 Platform can be accessible to any network test locations, using a specific function: **Smart Access Anywhere**.

This function allows one distant user, on a PC, to transfer the Platform Interface and work on TBERD/MTS-2000 or to access the internal memory / USB memory stick contents on the PC and perform files transfer from TBERD/MTS to PC and vice-versa.

This feature does not need any licence code if the user wants assistance from a Viavi person located within the Viavi network.

This feature requires a licence code into the unit if the user wants any other assistance/support ("company A" willing to be remotely controlled by "company A or B").

The **Licence 2** (reference **SAA-2K-L2**) is used for SmartAccessAnywhere using Ethernet, wifi hotspot connection, or USB / Wifi connection through 3G smartphone

- ["Connection modes" page 116](#)
- ["Pre-requisite for using the Smart Access Anywhere Application" page 118](#)
- ["Downloading the Viavi application on PC" page 119](#)
- ["Launching the SmartAccess Anywhere application" page 121](#)
- ["Using Remote screen and File Transfer applications" page 123](#)
- ["Connection information and settings" page 129](#)

Connection modes

Different kinds of connection are available to access to a distant T-BERD/ MTS-2000.

According to the connection type used, specific requirements are mandatory.

Ethernet or WIFI connection

- 1 Using the Ethernet connection, no specific requirement is needed. The T-BERD/MTS-2000 is directly connected to Internet via an Ethernet Cable.



Figure 55 Ethernet connection

- 2 The WIFI connection can be used to access to MTS/T-BERD from any location. This connection is available exclusively if the **WIFI option is installed onto the T-BERD/MTS-2000** which will be seen remotely.



Figure 56 WIFI connection

USB/WIFI connection through 3G Smartphone

To access to a T-BERD/MTS remotely, the connection between the unit and the Viavi application can be established via a USB cable or WIFI, and through a 3G Smartphone, having Internet Sharing capability via USB or WIFI.

- 1 To establish connection between T-BERD/MTS 2000 and Smartphone using USB, connect the USB cable on T-BERD/MTS-2000 and on 3G Smartphone connector.



Figure 57 USB connection through 3G Smartphone

- 2 To establish connection between T-BERD/MTS 2000 and 3G Smartphone using WIFI, the **WIFI option must be installed onto the T-BERD/MTS-2000.**



Figure 58 WiFi connection through 3G Smartphone



The smartphone which have been fully qualified are HTC Desire and Samsung Galaxy Ace models.

Pre-requisite for using the Smart Access Anywhere Application

To access to a T-BERD/MTS-2000 from any locations, specific requirements are mandatory:

- a licence installed on T-BERD/MTS-2000 which will be accessible from any locations.
- an Ethernet connection (the Platform must have an IP address - see [“Ethernet > Mode” on page 67](#)) and, if the network uses a proxy, this proxy must be configured (see [“Proxy > Use proxy” on page 68](#)).
- the Viavi application, delivered on a USB memory stick or downloaded for free at the address «xxxxx».
- port 22 (SSH) or 443 (HTTPS) output opened

- according to connection mode selected:
 - the WIFI option installed on T-BERD/MTS-2000
 - a USB cable to connect T-BERD/MTS-2000 with 3G Smartphone
 - a 3G Smartphone from given list and having appropriate basic subscription for internet connection sharing

Downloading the Viavi application on PC

The Viavi application **Smart Access Anywhere** must be downloaded on the PC which will be connected to the T-BERD/MTS-2000 remotely.



NOTE

It is not necessary to have administrator privileges to install the Viavi application on PC. This application is just saved on PC.

- 1 On PC, open an internet explorer and type the following address:
<http://smartaccess.updatemyunit.net>
- 2 Click on the link **SmartAccessAnywhere_Vxx.xx.xx.zip**
- 3 Select **Save** in the dialog box.
- 4 Open the directory into which has been save the zip file and unzip files into a directory
- 5 Open the directory and double click on **SmartAccessAnywhere.exe**
The Smart Access Anywhere application opens:

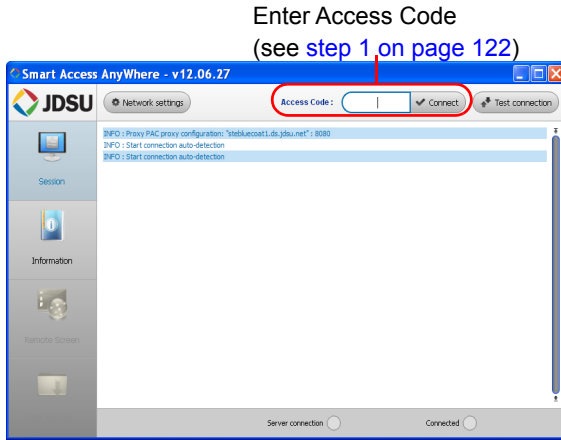


Figure 59 Smart Access Anywhere: Connection page

If the software version is not the last one available, a message displays, on the upper part of the screen to indicate the latest version available can be downloaded at the address: <http://smartaccess.updatemyunit.net>.

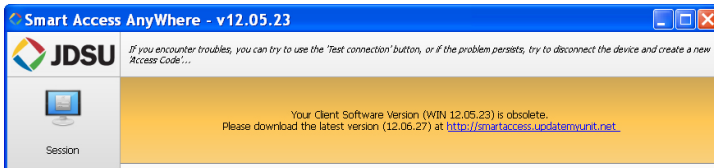



Figure 60 Warning message of a new version available

Launching the SmartAccess Anywhere application

Once connection is configured, the SmartAccess Anywhere application can be launched

On T-BERD/MTS-2000

- 1 On the **Home** page, select the **SmartAccess** icon . As soon as the icon is selected, the T-BERD/MTS-2000 begin to connect to SmartAccessAnywhere Server.

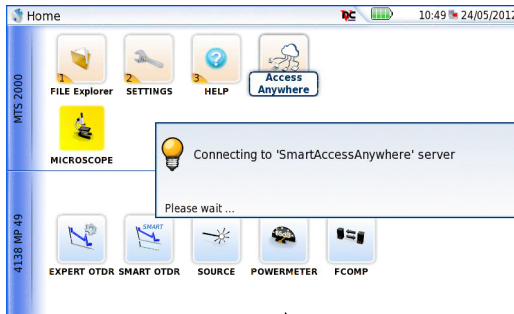


Figure 61 Connection to SmartAccessAnywhere Server in progress

- 2 Once connection is established with the server, the T-BERD/MTS-2000 displays a message with the code to be used to access to the equipment remotely.

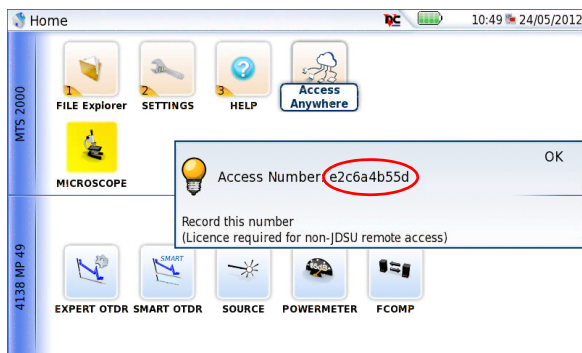


Figure 62 Access code displayed

- 3 Note this access code and transfer it to the distant user, who will access the unit remotely.
- 4 Press **OK** to hide the message.

On the distant PC

- 1 On the PC of the distant user, once the application is launched, enter the Access Number on the upper part of the screen.
- 2 Click on **Connect** to validate Connect
The following screen displays:



Figure 63 Smart Access Anywhere: Home page



After remote upgrade or reboot, please wait for more than 2 minutes before re-starting the link between the PC and the unit with SmartAccessAnywhere.

Using Remote screen and File Transfer applications

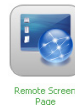
Once the Introduction page is displayed, the user can work on distant T-BERD/MTS-2000:


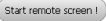
- transfer the interface to work on the unit (perform acquisition, configure the equipment...)
- transfer files from the equipment toward the PC, and vice-versa.

Transferring the interface onto the PC

To display the remote T-BERD/MTS-2000 onto the PC:

- 1 On the Introduction page, click on
or



- On the left menu, click on 
- 2 Click on **Start Remote Screen!** button 
- The current screen of the T-BERD/MTS-2000 displays:

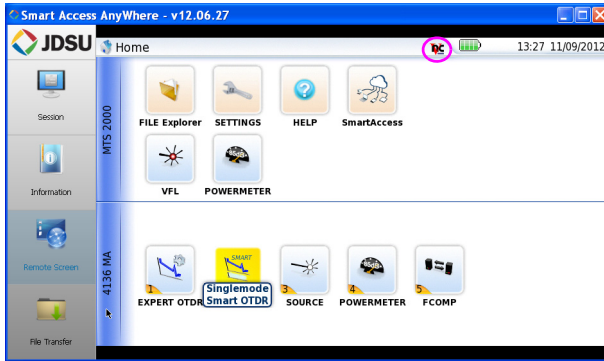

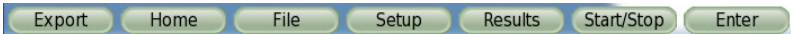


Figure 64 Smart Access Anywhere: Remote screen

The VNC icon  on the upper banner of the unit indicates the remote screen is active.

- 3 Click on the upper banner of the T-BERD/MTS-2000 screen to access to the virtual control buttons bar, which allows to emulate hard keys.



You may click on any of these buttons to obtain exactly the same results than using the hard keys on the front panel of the 2000 Platform.

- 4 You can use keyboard mouse of the PC to control the 2000 Platform.

Equivalence between the keyboard and 2000 Platform

The PC keyboard can replaced all the buttons and keys of the 2000 Platform except the **ON/OFF** button:


- The menu keys to the right of the screen are replaced by the function keys **F1** to **F6**.
- The buttons below the screen are equivalent to **Ctrl + a letter** (see table below).
- The direction keys have the same function on the external keyboard and on the 2000 Platform.

Function on the 2000 Platform	External keyboard
HOME	Ctrl + H
SYSTEM SETTINGS	F12
SET-UP	Ctrl + U
FILE	Ctrl + F
RESULTS	Ctrl + R
START/STOP	Ctrl + S
EXPORT	Ctrl + P ^a
◀ ▶ ▲ ▼	← ↑ → ↓
Menu keys 1 to 6 (from top to bottom)	F1 → F6
ABOUT	F11
Save and quit (Exit)	Enter
Quit without saving (Abort)	Escape

- a. The Export function is available directly on the 2000 Platform pushing simultaneously the left and right arrow keys.

Transferring files

To work on files (onto PC and onto unit):

- 1 On the Introduction page, click on  or

On the left menu, click on .

- 2 Click on **Start Transfer Tool!** button



File Transfer Page

Start transfer tool !

The file Explorer on PC and the one of the 2000 Platform displays:

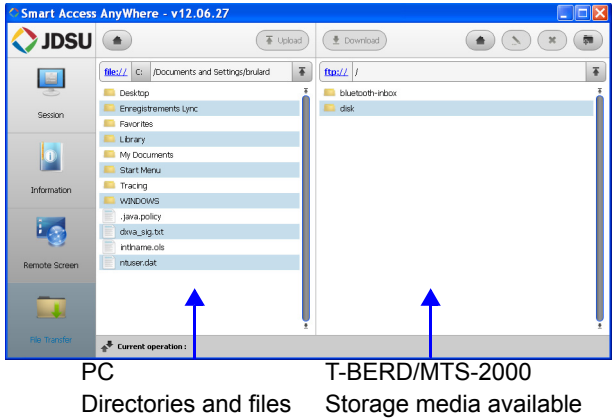






Figure 65 File Transfer page

- 3 Double-click on one directory/storage media to display the contents (directories / sub-directories / files)

Navigation buttons

	Return to the Home directory
	Select the PC drive in the list
	Access to parent directory

Transferring files from PC to T-BERD/MTS

- 1 On the T-BERD/MTS explorer, select the storage media, and if wished the (sub-)directory into which file will be transferred.
- 2 On the PC file explorer, select the file to be transferred
- 3 Click on the button **Upload**  .
At the bottom of the screen, a new banner displays with information on file transfer:

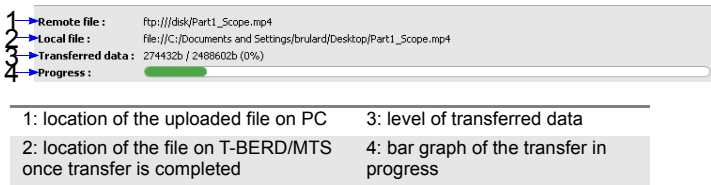



Figure 66 Information on file transfer



Only one file can be uploaded from PC to Platform at the same time.

Once transfer is completed, the banner disappears and the transferred file is underlined in blue on T-BERD/MTS explorer.

Transferring files from T-BERD/MTS-2000 to PC

- 1 On the PC explorer, select the storage media, and if wished the (sub-)directory into which file will be transferred.
- 2 On the file explorer of the T-BERD/MTS, select the file to be transferred.
- 3 Click on the button **Download**  .
A dialog box open, allowing to modify the location on PC of the file.
- 4 Select the directory into which file will be saved.


5 Press **Save** to start the transfer

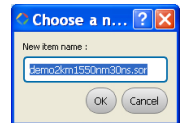
Under both file explorers, a new banner displays with information on file transfer (see [Figure 66 on page 127](#)).

Once transfer is completed, the banner disappears and the transferred file is underlined in blue on PC explorer.


Working with files and directories on T-BERD/MTS-2000

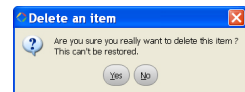
Renaming file or directory

- 1 Select a file/directory stored on the T-BERD/MTS-2000 hard disk or USB key.
- 2 Click on .
- 3 In the new dialog box opened, enter a new name for the file/directory, **keeping the file extension**.
- 4 Press **OK** to validate.




Deleting file

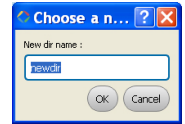
- 1 Select a file stored on the T-BERD/MTS-2000 hard disk or USB key.
- 2 Click on .
- 3 In the new dialog box opened, press **Yes** to confirm the deletion (or **No** to keep the file).



Creating a new directory

- 1 Select the storage and, if wished, the directory into which the new directory will be stored.


- 2 Click on .
- 3 In the new dialog box opened, enter a name for the new directory (*newdir* is given by default).
- 4 Press **OK** to validate.
The new directory is automatically created at the location selected.



Connection information and settings

Displaying session information

At any time during application use, the information about the session in progress can be displayed.

- 1 Press **Session** menu key on left of the screen .
A screen as the following one displays:

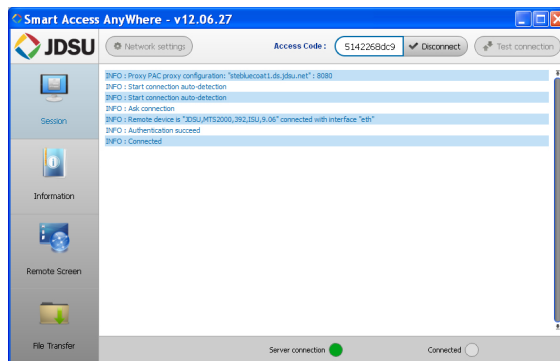



Figure 67 Session page

This page gives information on connection «in real time».

Modifying connection settings

To modify the settings for connection to internet:

- 1 Press Session menu key on left of the screen
- 2 Disconnect from application pressing 
- 3 On the session screen (see [Figure 67 on page 129](#)), press button



The following screen displays:

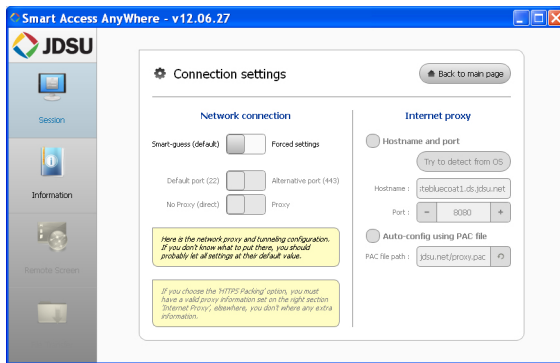


Figure 68 Connection settings

By default, the connection is defined to **Smart-guess (default)**.

Smart-guess (default) Forced settings

- 4 To modify the current parameters, select **Forced settings**.

Smart-guess (default) Forced settings

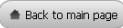
The parameters for Port configurations turn automatically active.

- 5 Modify, if necessary, the port used: **Default port (22)** is selected by default
- 6 Select **Alternative port (443)** if necessary
- 7 If the parameter **Alternative port (443)** is selected, you can defined if the proxy is used or not in the following parameter.

The **Internet proxy** configuration is available exclusively if the port selected is **Alternative port (443)** and if the **Proxy** is selected..





It is recommended to configure parameters of connection with your local network administrator, if the default parameters need to be modified.

- 8 Once configuration is completed, press  .
The **Home** page displays (see [Figure 63 on page 123](#)).

Testing connection

Before entering the Access code to activate the application, the connection to internet can be tested from displayed screen.

- 1 Open the Smart Access Anywhere application on PC
- 2 Press  button
The test is automatically launched
- 3 Press  to display logs in real time
Once completed, the results for connection display:

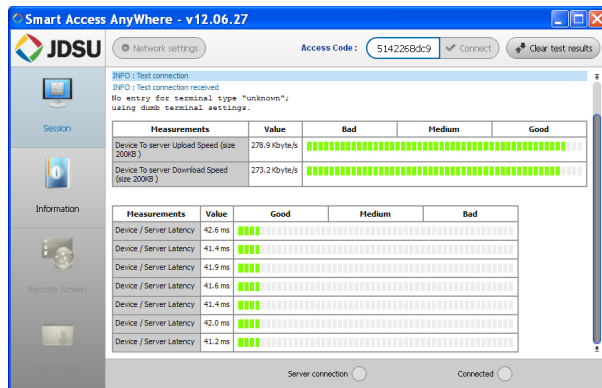
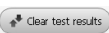


Figure 69 Test results

The screen displays, in two different tables:

- the Upload and Download speed (in Kbyte/s) from Device to server.
 - the Latency between Device and server (in ms).
- 1 Press  to delete the current table, and retest connection if wished.
 - 2 If connection is valid, enter the access code and establish connection (see [“Launching the SmartAccess Anywhere application”](#) - [“On the distant PC”](#) on page 122).

WIFI Option

The WIFI application is available on option with the 2000 Platform, ref E20WIFI.

The topics discussed in this chapter are as follows:

- ["Installation of the WIFI option in the Platform" page 134](#)
- ["Connection to SSID" page 137](#)
- ["Configuring the WIFI mode to which the Platform is connected" page 137](#)
- ["Transferring the 2000 Platform interface via WIFI on a PC" page 139](#)
- ["Transferring files to/from a PC via WIFI" page 140](#)

Installation of the WIFI option in the Platform

The WIFI option is delivered on a USB key to be connected to the WIFI board which will be inserted into the 2000 Platform.

To install the WIFI option onto the Platform:

- 1 Switch off the 2000 Platform and, if necessary, unplug it from mains.
- 2 Remove the cover on the underside of the Platform, unscrewing the two screws.
If the board is already set into the Platform, follow instructions on [step 4](#).
- 3 Insert the board, pressing it gently but firmly, taking care to the connectors.




Figure 70 View board and connectors

- 4 Insert the WIFI USB key into the connector of the board.



Figure 71 WIFI USB set into the Platform

- 5 Screw back the cover onto the Platform
- 6 Restart the 2000 Platform, pressing **ON** button.
On the **Home** page, a new icon is displayed 
- 7 Press the key to display the WIFI **Setup** screen.

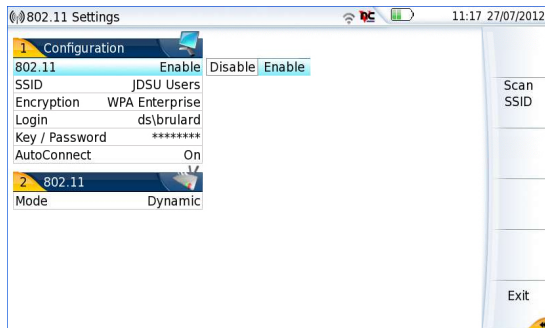



Figure 72 WIFI Setup screen

Configuring the WIFI access

Once the Setup screen is displayed, configure the WIFI connection:

- 1 In the Configuration box, check the parameter **802.11** is set to **Enable**.

If the parameter is defined to **Disable**, the WIFI application is deactivated, and the icon  is no more displayed on the upper banner.

- 2 Press **Scan SSID** menu key to scan for Service Set Identifiers (SSIDs) in the area.
- 3 Wait for the list of SSIDs to be displayed.

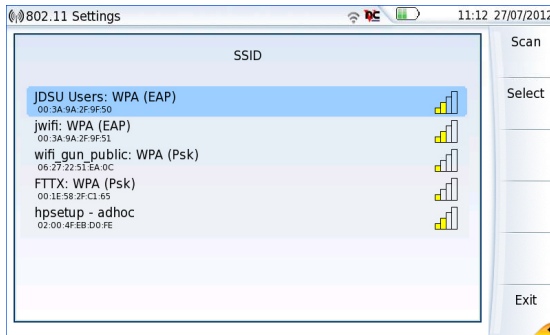


Figure 73 List of SSIDs found

- 4 Select the desired network to connect to.
- 5 Press **Select** menu key to validated the connection.
The display goes back to Setup screen.
The **SSID** parameter is automatically configured with the one selected.
- 6 In **Encryption** parameter, select the type of encryption wished: **None**, **WEP Static**, **WPA Personal**, **WPA Enterprise**.
- 7 According to encryption type selected, enter **Login** (if any needed) and **Key/Password**.



NOTE

Login and Password are kept in memory, even if the WIFI is deactivated or the 2000 Platform switch off and restarted.e



- 8 In the **AutoConnect** parameter, select if the connection to SSID selected must be done automatically (**On**) or not (**Off**).

Connection to SSID

Once configuration is valid, connect the 2000 Platform to the Wireless network:

- 1 In the Setup screen, press **Connect SSID** menu key.
or

If **AutoConnect** is defined to **On**, the connection is launched automatically.

Once association of Platform with SSID is established, the icon  becomes  to indicate the connection is active.

Configuring the WIFI mode to which the Platform is connected

To work on WIFI with the Platform, configure the **802.11** or **802.11 IPV6** parameters on the Setup screen.

- 1 If **802.11** box is chosen, select the mode of connection:

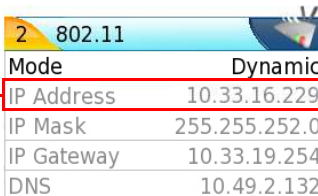
Config 1 to 4 static mode enabling input of the configuration of 4 sites. If this parameter is selected, the following parameters must be entered:

- Site Name the user can enter the name of the site in the Edit menu.

- IP Address IP address of the 2000 Platform
- IP Mask address of the mask of the sub-network
- IP Gateway IP address of the machine enabling access outside the sub-network.
- DNS (Domain Name Server) IP address of the machine providing the IP address on the basis of the name
- Domain name name of the local network to which the 2000 Platform is connected.

Dynamic in this mode, which requires a DHCP server, the 2000 Platform requests an IP address from this server which will be allocated dynamically if dynamic host configuration is activated on the local network. After selecting this mode or after power-on, the 2000 Platform tries to establish a connection to obtain an address from a DHCP server. If for any reason, this process fails, the 2000 Platform reverses to static IP address mode with User1 IP address.

Note the IP address of the Platform, to be able to remote screen on PC or to transfer files.



2	802.11
Mode	Dynamic
IP Address	10.33.16.229
IP Mask	255.255.252.0
IP Gateway	10.33.19.254
DNS	10.49.2.132

Figure 74 WIFI connection in Dynamic mode

Transferring the 2000 Platform interface via WIFI on a PC

Once the IP address is displayed in the configuration screen.

- 1 On the PC connected to WIFI with the Platform, open Internet Explorer.
- 2 Considering 10.33.16.229 is the IP Address of the 2000 Platform (as shown Figure 74 on page 138), enter the following address in the Internet Explorer window:

`http://10.33.16.229:5800`

- 3 Press **Enter** to validate.

The screen of the 2000 Platform appears offset on your PC.

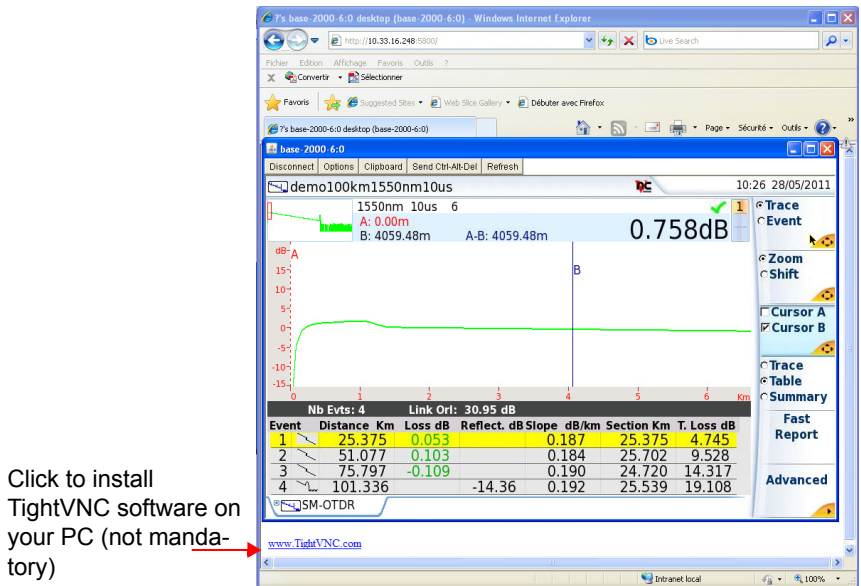


Figure 75 VNC window

See “Virtual control buttons bar” on page 70 and “Equivalence between the keyboard and 2000 Platform” on page 71 to get information on the deported screen use.

Transferring files to/from a PC via WIFI

Once connection is established between the Platform and the PC:

- 1 On the PC, use an FTP client, and access to internal memory via an internet explorer (I.E, Mozilla Firefox...) or Windows Explorer.
- 2 In the address bar, type the following address (10.33.16.229 being the IP address of the 2000 Platform defined when the connection was configured):

`ftp://mts2000:Viavi@10.33.16.229/disk/`

This allows to access to internal memory.

`ftp://mts2000:Viavi@10.33.16.229/usbflash/`

This allows to access to the contents of the USB memory stick connected to the 2000 Platform.



If you use Internet Explorer 7, the following address must be entered:

```
ftp://mts2000:Viavi@10.33.16.229/acterna/  
user/disk or ftp://mts2000:Viavi@10.33.16.229/  
acterna/user/usbflash
```

- 3 If an identification is required, enter:
 - User name: mts2000
 - Password: Viavi

The PC then displays the contents of the internal memory or of the USB memory stick from the 2000 Platform.

Bluetooth option

The Bluetooth interface allows interface and file transfers.

It is an option that must be installed at the factory.

The topics discussed in this chapter are as follows:

- ["Setting up a Bluetooth connection" on page 144](#)
- ["Transferring files via Bluetooth" on page 148](#)
- ["Transferring the Platform interface on a laptop PC via Bluetooth" on page 150](#)
- ["Removing the Pairing" on page 152](#)



The product is approved in accordance to R&TTE directive concerning transmitter module marked by CE0678. It is manufactured by MITSUMI and it is an OEM product.

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. This device contains FCC-ID: POOWML-C40.

Setting up a Bluetooth connection

Installing the Bluetooth option onto the 2000 Platform

The Bluetooth option is delivered on a USB dongle to be connected to the board which will be inserted into the 2000 Platform.

To install the Bluetooth option onto the Platform:

- 1 Switch off the 2000 Platform and, if necessary, unplug it from mains.
- 2 Remove the cover on the underside of the Platform, unscrewing the two screws.

If the board is already set into the Platform, follow instructions on [step 4](#).

- 3 Insert the board, pressing it gently but firmly, taking care to the connectors.



Figure 77 View board and connectors

- 4 Insert the Bluetooth into the connector of the board.

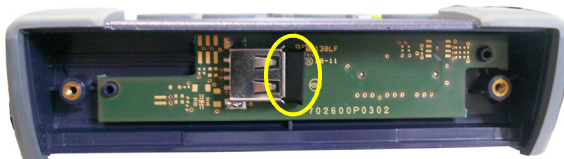




Figure 78 Bluetooth set into the Platform

- 5 Screw back the cover onto the Platform
- 6 Restart the 2000 Platform, pressing **ON** button.
The Bluetooth option can be launched.

Pairing the Platform with a device

- 1 On the **Home** page, press **System Settings** key
- 2 Under **I/O interfaces**, select **Bluetooth > Enable**
The icon  is displayed on the upper banner of the screen
- 3 Push the **Bluetooth Pairing** key 
The Paired Bluetooth screen appears
- 4 Press the **Become Pairable** soft key to wait for another device to initiate the connection to the 2000 Platform.
A screen as the following one displays:

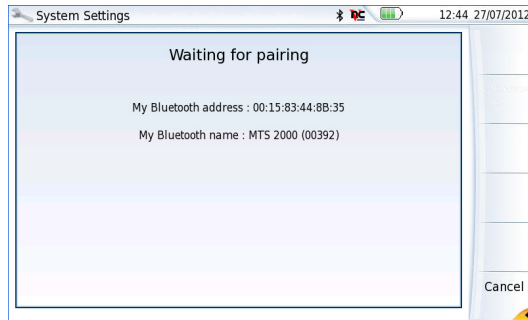


Figure 79 Waiting for pairing

- 5 Activate Bluetooth on the equipment which need to be paired with the Platform
- 6 If you are asked to, enter a pairing code on the equipment.
- 7 In this case, once the pairing code is validated on the equipment, enter the same pairing code on the Platform to validate the connection:

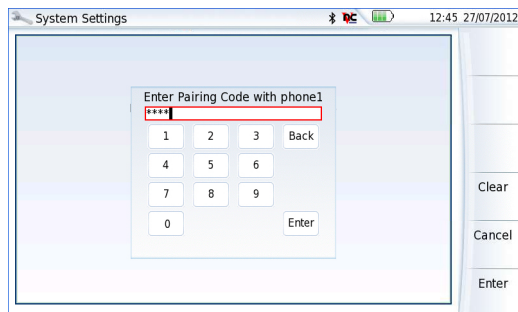


Figure 80 Enter Pairing code

- 8 Press **Enter** to validate.

Both equipment are now paired:

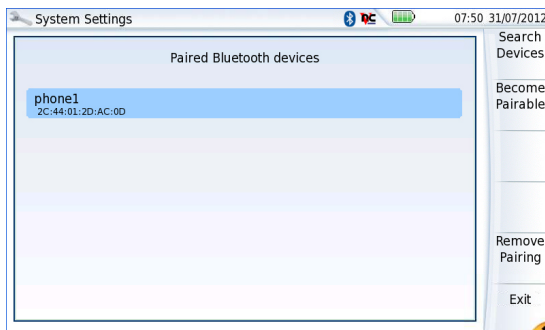




Figure 81 Platform paired with one equipment

The icon has a blue background when paired with a device , versus no background when not paired .

Searching new devices to be paired with the Platform

- 1 If the desired device is not displayed on the screen, or if no devices are detected, press the **Search Devices** soft key.
The 2000 Platform is searching for the devices which could be used via Bluetooth with the equipment.



REMINDER

You may need to activate bluetooth on the other device to allow pairing.

A baragraph is displayed during research 

Once the research is completed, a list of the available devices is displayed, with the level of detection of the 2000 Platform

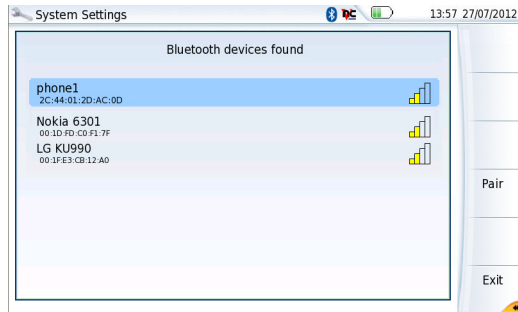





Figure 82 List of devices found

- a** Select the device to be paired with the Platform
It will be underlined in blue
 - b** Push the **Pair** key to connect the device to the Platform
- 2** If prompted, enter a pairing code. The code must be identical on the 2000 and the device.
- 3** Once the bluetooth device and the Platform are paired, a screen is displayed with the description of the device (see [Figure 81 on page 147](#)).
The icon has a blue background when paired with a device , versus no background when not paired .

You can now go to the file explorer and transfer files from the 2000 Platform toward the bluetooth device and vice versa (see [“Transferring files via Bluetooth” on page 148](#)) or transfer the Platform interface on VNC via Bluetooth (see [“Transferring the Platform interface on a laptop PC via Bluetooth” on page 150](#)).

Transferring files via Bluetooth

Once the connection has been established with a bluetooth device:

- 1 On the **Home** page, press **File Explorer** key to go in the File Explorer.
- 2 Select the file(s) to be transferred from the Platform toward the PC.
- 3 Push **Export > Send by Bluetooth** menu keys . A confirmation message displays once the transfer is completed.

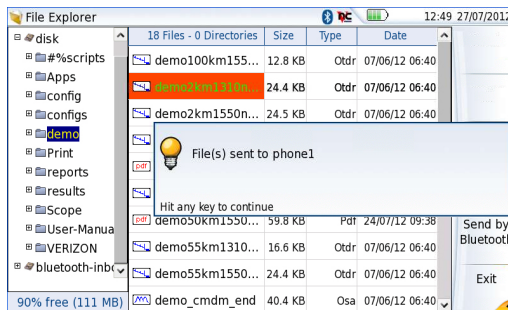


Figure 83 Confirmation of files sending

You can also transfer file(s) from the bluetooth device toward the Platform.

In this case, the files received will be stored in a storage media created automatically on the Platform: *bluetooth-inbox*.



Figure 84 Confirmation of file receiving



WARNING

The files stored in bluetooth-inbox will be lost once the 2000 Platform is switched off. Copy/Paste the files to keep toward another storage media (disk, usb key...).

Transferring the Platform interface on a laptop PC via Bluetooth

If the 2000 Platform is paired with a laptop equipped with Bluetooth, the interface can be transferred on this PC in order to work on the unit from the laptop PC.

To remote the screen

- 1 Install the Viavi Remote Operation application on the laptop PC:
 - a Download the application
 - b Double click to launch it and follow the instruction for installation

The application is available on PC, in **Start > All Programs > Viavi > Remote Operation**.

- 2 Pair the 2000 Platform with laptop PC via Bluetooth (see [“Setting up a Bluetooth connection”](#) on page 144).
- 3 Once pairing is active, open the Remote Operation application on laptop PC.
A new window opens, and scanning is automatically launched to find the equipment paired with laptop PC.
- 4 Once scanning is completed, the 2000 Platform displays the list of detected equipment.

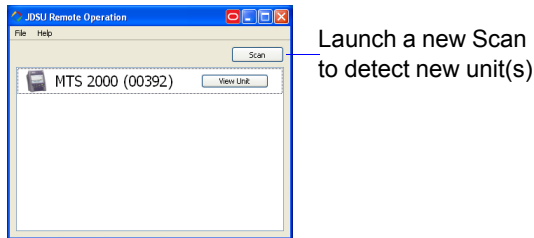


Figure 85 2000 Platform detected via Bluetooth on PC

- 5 Click on **View Unit** button to remote the screen on PC.
The current screen of the 2000 Platform displays on a new window on the PC.
In the small window next to VNC window (see [Figure 85 on page 151](#)), the button **View Unit** becomes **Stop Viewing**.

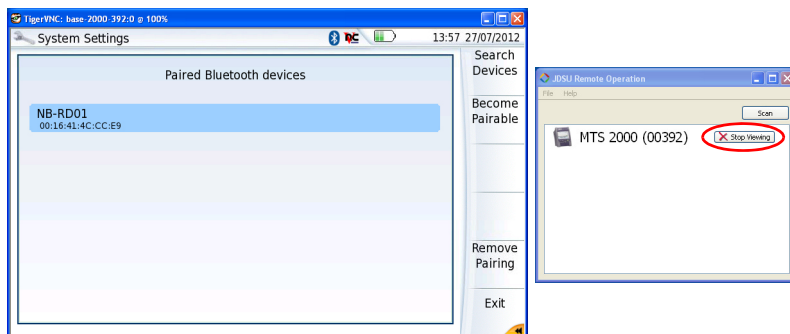


Figure 86 Remote screen on PC

See “Virtual control buttons bar” on page 70 and “Equivalence between the keyboard and 2000 Platform” on page 71 to get information on use of PC to work on 2000 Platform.

Closing the remote screen and the application


To stop using the remote screen on PC:

- 1 In the small window available with the VNC window (see [Figure 86 on page 152](#)) click on **Stop Viewing** button.
The VNC window closes.
At any time, the remote screen can be displayed back clicking on View Unit button.
- 2 To close the application, click on **File > Exit** in the window.

Removing the Pairing

- 1 To remove the pairing between the two equipments, in the **System Settings** page, push the **Bluetooth Pairing** key

2 In the screen displayed, push the **Remove pairing** key

The icon on the upper banner of the screen becomes  showing the Platform is no more connected to a bluetooth device, but the Bluetooth option is still active.

To deactivate the bluetooth onto the Platform, go in the **System Settings** page, and under **I/O Interfaces**, select **Disable** on the **Bluetooth** parameter.

Technical specifications

This chapter contains the technical specifications of the 2000 Platform mainframe.

The topics discussed in this chapter are as follows:

- [“Display specifications” on page 156](#)
- [“Memory” on page 156](#)
- [“Input/Output” on page 156](#)
- [“Power supply” on page 156](#)
- [“Dimensions - Weight” on page 158](#)
- [“Environment” on page 158](#)
- [“Characteristics of the options” on page 160](#)

Display specifications

Screen

- Backlight high visibility color touchscreen
- Size: 5 inches
- Resolution: 800 x 480 pixels

Memory

- Standard memory: internal memory, with a capacity of 1GB (with a minimum of about 125 Mb available for data storage).

Input/Output

- two USB 2.0 host ports.
- one Mini USB 2.0 device
- one RJ 45 connector for Ethernet interface 10/100/1G
- built-in loudspeaker + headset jack

Power supply

Battery

The instrument can be supplied with one Li-Polymer battery.

Endurance of the 2000 Platform with battery

Measurement conditions:

- at +25 °C,
- at full battery capacity (4.5 Ah),
- 2000 Platform equipped with one OTDR LM module

Endurance

	Endurance
Conditions of use	Li-Polymer battery
According to Telcordia GR-196-CORE recommendation: Normal conditions, with normal backlight, 3 acquisition of 30 seconds per quarter of hour, auto off	up to 8 hours
Under continuous acquisition, with high screen backlight: - with an OTDR QUAD Module - with an OTDR LM Module	Up to 3h Up to 3h45

Mains adapters

	Standard Mains Adapter
Input	100-240 V, 50-60 Hz
Output	12V DC 2.5 A max
Compliance	EN 60950

Supply or Power assigned in AC and in DC: 25 W

Dimensions - Weight

	Weight	
2000 Platform without options, battery nor module	692 g	1.52 lbs
2000 Platform with a Li-Polymer battery and one OTDR LM Module	1.21 kg	2.67 lbs
Li-Polymer battery	172 g	0.37 lbs
VFL/PWM option	30 g	0.066 lbs

	Dimensions (mm) (H X W X D) Bumpers included	Dimensions (mm) (H X W X D) W/o bumpers
Without module	175 x 138 x 41	169 x 134 x 39
With 1 module	175 x 138 x 80	169 x 134 x 72

Environment

Temperature

• Operating temperature range	-20°C to +50°C (-4°F to +122°F)
• Operation including all options (guaranteed specifications)	0° to +40°C (+32°F to +104°F)
• Storage	-20°C to +60°C (-4°F to +140°F)

Humidity

- 5 to 95% without condensation

EMI/ESD

- CE class B Compliant (EN61326-1)
- FCC 47-1 Part 15 Compliant

Drop test

In accordance with the Telcordia GR-196-CORE recommendations, the 2000 Platform resists the following test:

- 6 impacts dropped from a height of 1m on a pinwood floor of 5 cm thickness (1 impact on each of its 6 sides, with power off).

Shocks

The 2000 Platform resists the following test:

- 3 shocks per axis along each of the 3 axes, with power off.
- Impacts of 15g, 1/2 sine, duration 11 ms, at 10 second intervals.

Bumps

The 2000 Platform resists the following test:

- 1,000 bumps per axis along each of the 3 axes, with power off.
- Jolts of 15g, 1/2 sine, duration 6 ms, at 1 second intervals.

Vibration

The 2000 Platform resists the following vibration tests:

- Complete test comprising 6 cycles along each of the x, y and z axes.
- One cycle of 5 to 200 Hz and back to 5 Hz with a sweep duration of one minute/octave.
- 3 mm amplitude displacement test, for the range 5 Hz to 15 Hz.
- 3g acceleration test for the range 16 Hz to 200 Hz.

Flammability

The 2000 Platform housing (in ABS, type V0) does not propagate fire.

Characteristics of the options

Power meter

Specifications given for 25°C, after 20 minutes stabilization time and after zero setting.

- Wavelength range: 800 to 1650 nm in steps of 1 nm
- Calibrated wavelengths: 850 / 1310 / 1490 / 1550 / 1625 / 1650 nm¹
- Accuracy at calibrated wavelengths: ± 0.2 dB (at -30 dBm)
- Input power range: -60 dBm to +10 dBm
- Maximum resolution: 0.01 dB / 0.01nW
- Measurement range: +5 to -50 dBm (+5 to -45 dBm from 800 to 1250 nm)
- Linearity within the measurement range: ± 0.2 dB

1.Specifications guaranteed to the calibrated wavelengths, except for 1650 nm

High power Power meter

Specifications given for 25°C, after 20 minutes stabilization time and after zero setting.

- Wavelength range: 800 to 1650 nm in steps of 1 nm
- Calibrated wavelengths: 850 / 1310 / 1550 nm
- Accuracy at calibrated wavelengths: ± 0.25 dB (at -15 dBm)
- Input power range : +30 dBm to -40 dBm
- Measurement range:+27 to -30 dBm
- Linearity within the measurement range: ± 0.25 dB

Talkset

- Dynamic range: typically 32 dB at 25°C with a FC adapter (use a FC/ PC connection exclusively).
- Laser, typical wavelength 1625 nm, class 1 (EN60825 and FDA21 CFR Part 1040.10 standards)

VFL

- Wavelength: 650 nm
- Length of fiber: up to 5 km
- Class 2 laser (standards EN60825-1 and FDA21 CFR Part 1040.10).

Bluetooth and WIFI

- WIFI: standard IEEE802.11n
- Bluetooth Option
 - Class 2
 - Range: up to 20 meters
 - Bluetooth V2.1 + EDR

Options and accessories

This chapter shows the references of the options and accessories of the 2000 Platform.

The topics discussed in this chapter are as follows:

- [“References of options for the 2000 Platform” on page 164](#)
- [“References of accessories” on page 165](#)
- [“References of manuals” on page 166](#)
- [“References of result processing software” on page 166](#)

References of options for the 2000 Platform²

Base Unit references	Reference
MTS-2000 Handheld Platform with touchscreen	EM2000T
T-BERD 2000 Handheld Platform with touchscreen	ETB2000T

Power Meter / VFL / Talkset options	Reference
Optical Power Meter option for 2000 Platform	E20PM
High Power Power meter for 2000 Platform	E20HPPM
Power Meter and VFL option for 2000 Platform	E20PMVFL
Power Meter and Talkset option for 2000 Platform	E20TSPM
VFL option with UPP 2.5mm connector for 2000 Platform	E20VFL

WIFI / Bluetooth options	Reference
WIFI option for 2000 Platform	E20WIFI
Bluetooth option for 2000 Platform	E20BLUE

Mains options	Reference
Cigarette lighter adapter for 2000/4000 Platform	E40LIGHTER
Additional AC Adapter/Charger for 2000 Platform. Includes adaptable plugs (Europe, US, UK, Australia, Japan)	E20PWMC

2.These options must be ordered together with the instrument.

Smart Access Anywhere	References
Smart Access Anywhere for 2000 Platform -L1: Remote coaching and file transfer for T-BERD/MTS 2000 using Ethernet or WIFI HotSpot connection	SAA-2K-L1
Smart Access Anywhere for 2000 Platform -L2: Remote coaching and file transfer for T-BERD/MTS 2000 using Ethernet, WIFI and selected 3G Smartphone (via USB or WIFI)	SAA-2K-L2

References of accessories

Battery	Reference
Replaceable Li-Polymer battery (see “Changing the battery” on page 190)	E20LIPO

Scope	Reference
Digital Videoscope kit including FBP-P5000 probe (USB2.0) in a small soft case, and 7 tips in a box (FC, SC, SC-APC, LC, U25M, U25MA & U12M)	EDF-SCOPE5K
Digital Videoscope kit including FBP-P5000i probe (USB2.0) in a small soft case, and 7 tips in a box (FC, SC, SC-APC, LC, U25M, U25MA & U12M)	EDF-SCOPE5Ki

Carrying Cases	References
Hard carrying case for the MTS/T-BERD 2000 and various accessories	E20HCASE1
Large Soft Case for MTS/T-BERD 2000/4000 Platform	E40SCASE1

References of manuals

User manual for 2000 Platform	Reference
Printed User manual for 2000 Platform (French)	E2000M01
Printed User manual for 2000 Platform (English)	E2000M02
Printed User manual for 2000 Platform (German)	E2000M03



NOTE

The User Manuals for MTS/T-BERD 2000 (Platform & Modules) are available in pdf format, into the unit.

The printed versions of the manuals are available on option, in French, English and German.

References of result processing software³

	References
Optical Fiber Trace software	EOFS100
Optical Fiber Trace software (5 licences)	EOFS1005L
Optical Fiber Trace software (site licence)	EOFS100SL
FiberTrace software - update	EOFS100UP
Optical Fiber Cable software	EOFS200
Optical Fiber Cable software (5 licences)	EOFS2005L
Optical Fiber Cable software (site licence)	EOFS200SL

3.Free software updates on the Web (but without user manual)

Maintenance and Troubleshooting

This chapter describes how to maintain your unit and identify and correct problems related to the 2000 Platform.

The topics discussed in this chapter are as follows:

- [“Maintenance procedure” on page 168](#)
- [“Recycling Information” on page 185](#)
- [“Troubleshooting” on page 186](#)
- [“General information on warranty” on page 193](#)

Maintenance procedure

Maintenance work on this instrument must only be undertaken by qualified personnel using suitable equipment.

In most cases, it is advisable to contact the nearest Viavi Service Centre, which will undertake the appropriate troubleshooting and repair work. The performance and technical complexity of the 2000 Platform class this instrument in a new generation of equipment, for which Viavi has laid down a maintenance policy based on the principle of standard module replacement.

In implementation of this policy, we have set up powerful card troubleshooting test resources in our factories and a rapid dispatch system operating between our factories and branches.

Only by this procedure can the high quality of the instrument continue to be ensured after repair work. This procedure also has the advantage of reducing repair costs and time.

In the interests of quality and efficiency, we strongly recommend adoption of the following procedure in the event of a fault, before any other steps are taken:

- Verify that the instrument is plugged in.
- Check the connections of any peripheral equipment to the Platform.
- If a fault is detected, or in case of doubt, it is advisable to contact the nearest Viavi Service Centre, which will undertake the appropriate repair work.

Cleaning

Cleaning plates and housings

The front and rear plates and the housings may become tarnished with handling. To clean them, use only a rag moistened with soapy water.

Never use any product containing acetone, trichlorethylene, benzine or alcohol, as these will attack the printed markings.

Cleaning the screen

To clean the screen, use an antistatic product.

Cleaning the optical cable connector

- Use a non-fluffy type of paper, such as Joseph paper, soaked in isopropyl alcohol.
- Pay particular attention to the polished face of the fiber, rubbing it in a direction perpendicular to the axis of the fiber.

Cleaning the optical connections of the 2000 Platform

- Squirt a highly volatile solvent (such as isopropyl alcohol) into the connector.
- Blow out the connector using a clean dry air supply from an aerosol can fitted with an extension.



NOTE

If your module has a universal connector, unscrew its adaptor to access the ferrule.

Accessing to the 2000 Platform information

On the 2000 Platform, some screens allow to display information on different elements of the equipment.

To display the information on the 2000 Platform

- 1 On the **Home** page, validate **Settings** icon to reach the **System Settings** page.
- 2 On the right menu keys, press **About** to display the presentation screen of the 2000 Platform.

General page

The **General** page is displayed by default, and allows to display the presentation screen, with all the information concerning the software versions, the hardware options and the module installed.

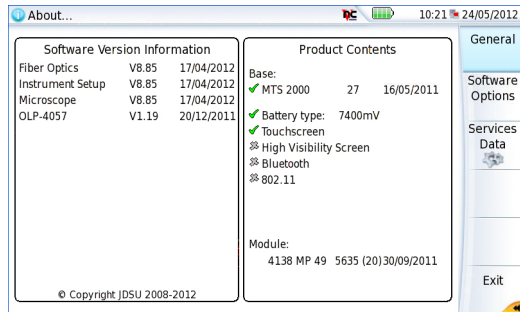


Figure 87 General page

This page shows:

- The software version information
- The product contents: base, optical options, battery type, touchscreen used, module installed and date of calibration for options .
The options set into the 2000 Platform are marked with a green tick.

Software options page

This page allows to visualize the software options available on the 2000 Platform.

- 1 Once on the **About** screen, press **Software Options** menu key to display the list of software options available on your 2000 Platform.

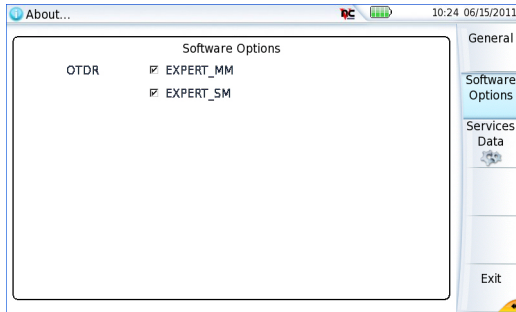


Figure 88 Software Options page

Services Data page

This page allows to display information about the elements inside the 2000 Platform (CPU, Memory, hardware revision, screen reference...).

- 1 Once on the **About** screen, press **Services Data** menu key to display the list of elements contained on your 2000 Platform.

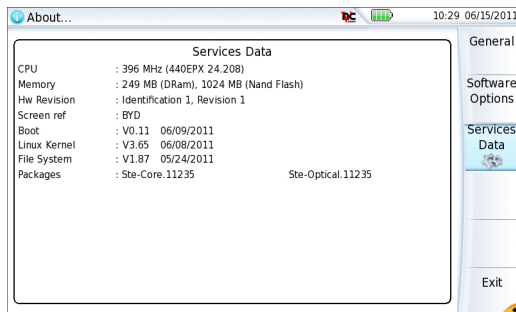


Figure 89 Services Data page

Accessing to the 2000 Platform documentation

All documents necessary for the 2000 Platform use are directly available onto the equipment.

To display the list of documents available for 2000 Platform use:

- 1 Validate the **Help** icon on the **Home** page.
- 2 In the page, click one link to display the corresponding document: User manual, Getting Started Manual, Quick Card...

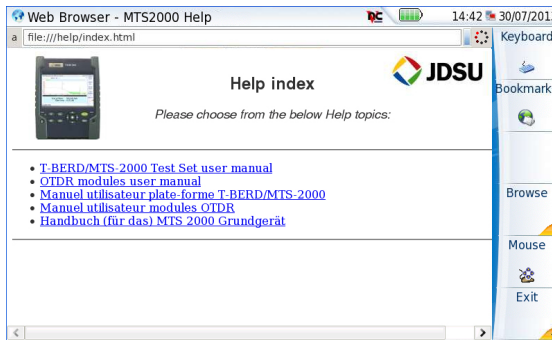


Figure 90 Help page

Installing a new version of the software



When a new software version is loaded, there is a risk of re-initialization of the internal memory. Before installing the new software, it is therefore advisable to save the results in the memory, using the **Save** function called up by the **FILE** button.



Do not interrupt the installation process, as this could damage the instrument.

To avoid any interruption of the installation procedure, the 2000 Platform must be operating on the mains: if the procedure is started while operating on battery, a message indicates that the instrument must be connected to the mains.

Downloading from Internet

When the software is obtained from the Internet, it must be saved on a storage medium before the software upgrade of the product can be carried out. To do this:



- 1 Open Internet Explorer
- 2 On the Viavi web site (<http://www.viavisolutions.com>), open the page of the product concerned
 - MTS 2000 Multiple Services Test Platform
 - or
 - T-BERD 2000 Multiple Services Test Platform
- 3 Click on the tab **Downloads**.
- 4 Click on the link *2000 Firmware Update*
A new page opens, displaying the current version available and several links.



NOTE

You can directly enter the internet address `http://www.updatemyunit.net`, which will give access to the installation portals for all T-BERD/MTS from Viavi, and click on the link **T-BERD®/MTS-2000 Platform**.

- 5 According to your region, click on the one of the following icon to download the archive.

-  Download from European server
-  Download from North American server
-  Download from Singapore server

- 6 In the new dialog box displayed, click on **Save** to save the exe file on the PC.
- 7 Once completed, connect the USB memory stick to the PC and follow the instructions chapter “[Installation from a USB memory stick](#)” on page 176, from [step 2](#).

Installation from Viavi Server

The update can be performed directly onto the equipment, using the Viavi server.

- 1 Connect the 2000 Platform to a PC via an Ethernet link.
- 2 On the **Home** page, press **Settings** key to open the **System Settings** page.
- 3 In **I/O Interfaces**, on the line **Ethernet**, select **Mode: Dynamic**.
- 4 In the **Upgrade Server** box:
 - On the line **Address Type**, select **Viavi Server**
The address **2k.updatemyunit.net** is automatically displayed.
- 5 Select if the new release for 2000 Platform must be automatically detected (**Enable**) or not (**Disable**). See “[Checking new upgrade on Viavi Server](#)” on page 179.

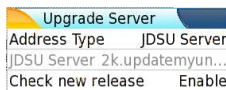


Figure 91 Configuration of the Viavi Server

- 6 In the **I/O Interfaces** box:
 - On the line **Use proxy**, select **No**, **Manual** or **Auto** whether a proxy is used or not.
- 7 Press, in succession the menu keys: **Expert Tools > Upgrades > Software Upgrade > Upgrade via Ethernet**.
The message `Verify IP address of PC server` appears.
- 8 Click on **Continue**.
The list of the software versions available on the PC is displayed next to the versions installed on the 2000 Platform.

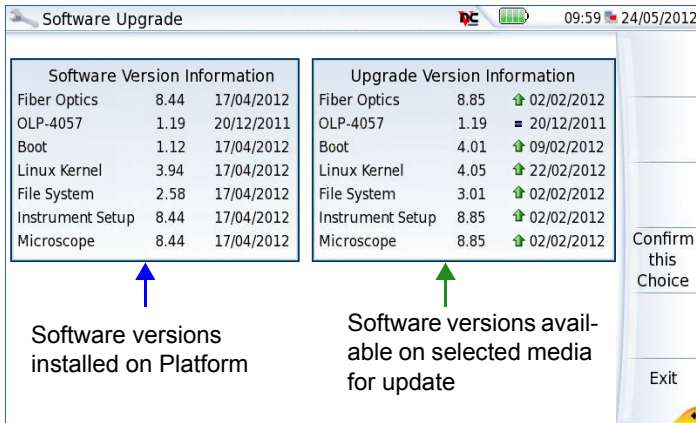


Figure 92 List of software versions (current and new)

Installation from another server

Before starting the software upgrade via Ethernet, make sure the IP address of the PC server.

The update can be performed directly onto the equipment, using an http address.

- 1 Connect the 2000 Platform to a PC via an Ethernet link.

- 2 On the **Home** page, press **Settings** key to open the **System Settings** page.
- 3 In **I/O Interfaces**, on the line **Ethernet**, select **Mode: Dynamic**.
- 4 In the **Upgrade Server** box:
 - On the line **Address Type**, select **Server Name** or **IP Address**.
 - Enter the Server Name (if **Server Name** has been previously selected) or the Server Address (if **IP Address** has been previously selected)
- 5 In the **I/O Interfaces** box:
 - On the line **Use proxy**, select **No**, **Manual** or **Auto** whether a proxy is used or not.
- 6 Press, in succession, **Expert Tools > Upgrades > Software Upgrade > Upgrade via Ethernet**.
The message `Verify IP address of PC server` appears.
- 7 Click on **Continue**.
The list of the software versions available on the PC is displayed next to the versions installed on the 2000 Platform (see [Figure 92 on page 175](#)).

Installation from a USB memory stick


You must be equipped with a USB memory stick with a minimum capacity of 128 Mo.

Before installing the upgrade, you must format the USB memory stick (see [“Formatting the USB memory stick onto the 2000 Platform” on page 188](#)).

- 1 Once formatted, disconnect the USB memory stick from the 2000 Platform using the key **Eject USB** in the Media Utilities page.



As for any media formatting, please note that all data present on the USB memory stick will be irremediably lost.

- 2 Connect the USB memory stick to the PC
- 3 Unzip the upgrade files on the PC and transfer it to the USB memory stick:
 - a Download and save on your PC the .exe upgrade file that you can get from the web (<http://www.viavisolutions.com>, see “[Downloading from Internet](#)” on page 173).
 - b Once the transfer is completed, double click on the .exe file: A window will appear. Check that the folder is correct i.e. the USB memory stick driver is appearing in the line at the bottom of the dialog box then press OK. If not, click on the icon  in order to select the right USB drive.

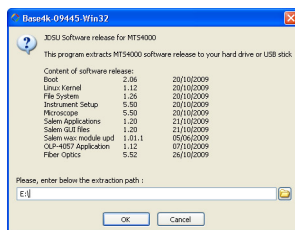


Figure 93 List of software update

- c Press **OK** and wait for the end of loading.
- 4 Then remove the USB memory stick, using the appropriate procedure, from your PC
- 5 Insert the memory stick into one of the USB ports on the Platform.



NOTE

A bip is emitted each time the USB memory stick is inserted or removed from the USB port.

- 6 Press successively **Expert Tools > Upgrades > Software Upgrade > Upgrade from USB**.

The message *Are you sure?* is displayed

- 7 Click on **Confirm**.

The list of the software versions available on the USB stick is displayed next to the versions installed on the 2000 Platform (see [Figure 92 on page 175](#)).

Launching the upgrade

Whatever is the method selected for upgrade (Server, USB key...) and once the list of the software versions available is displayed next to the versions installed on the 2000 Platform (see [Figure 92 on page 175](#)), follow these instructions to launch the upgrade:

- 1 Click on **Show Prev choice** or **Show Next Choice** to display the previous and next versions available.
- 2 Click on **Confirm this Choice** to start the upgrade of the selected software(s).

or

Click on **Confirm All Choices** to upgrade all versions.



NOTE

The software versions list does not always appear (cf previous versions) as well as the **Previous / Next Choice** buttons and the **Confirm/Continue** key. In this case, the upgrading starts automatically.

Upgrading begins. The 2000 Platform is automatically rebooted. Upgrading takes several minutes. Finally, the 2000 Platform is automatically restarted.



During the upgrade, the Testing indicator is lit in red. Do not push any button or remove the USB memory stick while the indicator is lit. The USB stick can be removed if necessary once the Testing indicator is off.

Checking new upgrade on Viavi Server

If the Viavi Server is selected for upgrade (see [Figure 91 on page 174](#)), the parameter **Check new release** can be defined to automatically inform user of a new upgrade available for Platform.

- 1 In the **System Settings** screen, select Upgrade parameters
- 2 Check the **Address Type** is set to **Viavi Server**.
- 3 Define the parameter **Check new release** to **Enable**.

If the parameter is set to **Enable**, a message displays, at any time, when one update is available on server.



Figure 94 Checking new release


- 4 Press **Ok** to display the list of software versions available (see [Figure 92 on page 175](#)) and follow instructions “[Launching the upgrade](#)” on page 178.

Upgrading from the boot

This method is used to make a complete reinstallation of the software versions.

- 1 Turn off the 2000 Platform using the **ON/OFF** button, keeping the equipment connected to the mains.
- 2 Insert the USB stick onto which the software versions are stored into one of the USB port of the Platform
- 3 Press simultaneously **SETUP + START/STOP** buttons
- 4 Maintaining the two buttons pressed, press **ON** button to start the 2000 Platform.
- 5 A menu displays, then the screen allows to select **Upgrade from USB**

After a few seconds, a new page displays indicating that to continue the reboot, the validation key must be pressed.

Press the hard key .

The reboot starts automatically.



The Testing indicator will be lit in red during upgrade. Do not push any key or remove the USB memory stick until the lit turns off.

Once the upgrade is completed, the 2000 Platform will automatically turns on and display the **Home** page.

Install Option

This page allows to import the licence to get a software option.

```
# This license file contains your licenses.
#
# Lines starting with #, blank lines, email header lines, and any
# other lines not starting with a JDSU keyword are comments that
# licences reader ignores.
#
# Except as noted, please do not modify lines starting with keywords.
#
#-----
# This file should be loaded onto your FTX product in order
# to activate your software options.
#-----
#
# To do so,
# First copy this file onto a USB stick.
# Then, starting from the Home screen (press 'Home' to go to this screen):
#
# Press the following keys:
# 'Expert Tools'
#         -> 'Upgrades'
#         -> 'Install Option'
#         -> 'Import License'
#
# You should then select this file from the File Explorer window and press
'Load',
# followed by 'Confirm'.
#
# The challenge codes contained in this file will then be loaded automatically
and your
# software options will be installed.
#
# At the end of this sequence you will be asked to reboot the unit.
#
# You may also enter these challenge codes manually, if you wish.
#
#-----
# Validation date : 2008-10-13 16:09:14
# Generation date : October 22, 2008, 14:14:03
# Challenges Codes
# Lic Id=32 (AAAAA)   cts=Clear Dongle USB Bluetooth_base_sno0_CTP=0200
FTXJDSULI(AAAAT1-AANV9KMyEEKEUOM7IjtfjXPfPh56d)5AeaiwE4ymw2XMe8ab
```

License Code

Figure 95 Example of a License file (.lic)

To import the license, you can either enter manually the licence code, given in the license file, (.lic file) or import this file with a USB memory stick connected to the 2000 Platform.



It is strongly recommended to perform the installation using the importation of Licence via a USB memory stick.

Enter Manually the Licence

- 1 In the **Home** page, click on **Expert Tools > Upgrades > Install Option > Enter License**
The edition keypad is displayed
- 2 Enter the challenge code of the option, set at the bottom of the file (see [Figure 95 on page 181](#)),

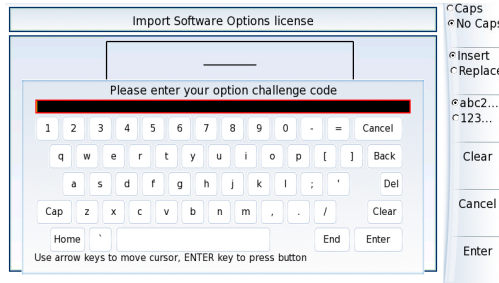


Figure 96 Enter the Licence code




The license file can be opened via a word processing software such as Word...

The challenge code must be entered exactly as it is in the .lic file, paying attention to the lower-case and upper-case letters etc.

- 3 Press the **Enter** key to validate the code

Your software options will be installed

At the end of this sequence you will be asked to reboot the unit to apply the modifications, pushing the key . Confirm the reboot to restart the Platform.

Import the license from the USB memory stick

- 1 In the **Home** page, select the Settings icon
- 2 In the **System Settings** page, press **Expert Tools > Upgrades > Install Option > Import License**

If the USB memory stick is not already connected to the Platform, a message asking the memory stick insertion is displayed. Confirm it once the stick is connected.

- 3 In the File Explorer, select the USB stick, then the license file (.lic) to be imported,
- 4 Click on **Load > Confirm**
- 5 The challenge codes contained in this file will then be loaded automatically and your software options will be installed.

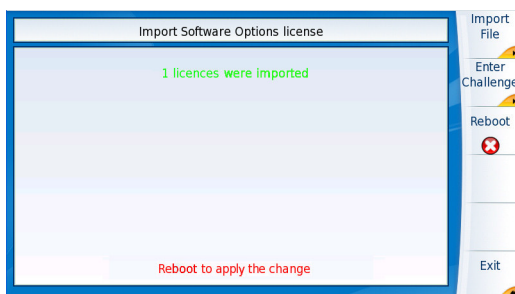



Figure 97 License imported

- 6 At the end of this sequence you will be asked to reboot the unit to apply the modifications, pushing the key .
- 7 Confirm the reboot

Locking the 2000 Platform

The 2000 Platform can be locked at any time:

- 1 In the **HOME** page, click on **Expert Tools**
- 2 Click on **Instrument Lock Out**
- 3 Confirm the 2000 Platform locking by clicking on **Confirm** (or use the **Cancel** key to cancel the process).
The numeric keypad is displayed
- 4 Enter the password to lock the instrument: 42000 with the numeric keypad displayed.

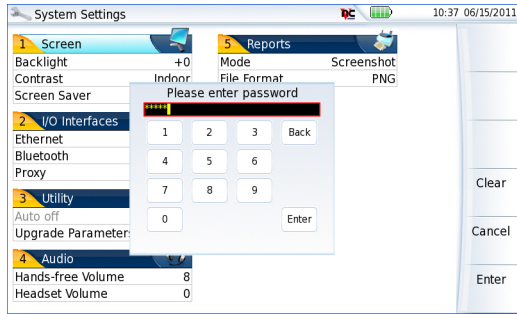


Figure 98 Password

5 Click on **Enter**

The 2000 Platform locking screen is displayed.

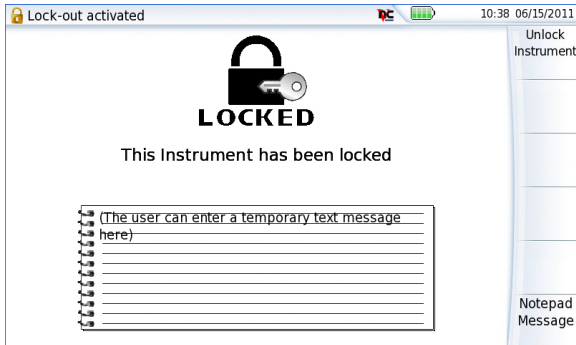


Figure 99 Locking screen

Click on the **Notepad Message** key to add a message using the text edition.

Unlocking the 2000 Platform

- 1 Once the locking screen is displayed, click on the key **Unlock Instrument**.
- 2 Press confirm to confirm the Platform must be unlocked.
- 3 Enter the password **42000** using the numeric keypad displayed and validate.

The screen automatically displays the **HOME** page.

Returning an instrument

When returning an instrument, it is essential to indicate the following minimum information:

- the type and serial number of the instrument (on the identification label) and the configuration code (under the bar code)
- a description of the fault found on the instrument.

The returned instrument will then be repaired and calibrated.

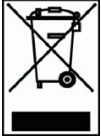
Guarantee conditions

Any repair operation supervening within the guarantee period of the instrument will be carried out at the expense of Viavi. However, for any sub-assembly upon which work has been carried out otherwise than by Viavi Service Centers, the cost of a replacement sub-assembly will be invoiced.

Recycling Information

Viavi recommends that customers dispose of their instruments and peripherals in an environmentally sound manner. Potential methods include reuse of parts or whole products and recycling of products components, and/or materials.

Waste Electrical and electronic Equipment (WEEE) Directive



In the European Union, this label indicates that this product should not be disposed of with household waste. It should be deposited at an appropriate facility to enable recovery and recycling.


Troubleshooting

Interpreting alarms

Troubleshooting	Solution
Nothing happens when the ON/OFF key is pressed.	- Make sure that the battery is present or charged; or the mains adapter is properly connected (see “Connecting the mains adapter” on page 17).
Nothing happens on screen, whatever is the action done (menu key or hard key pressed...)	- The Platform must be rebooted. See “Resetting the 2000 Platform” on page 21 .
Nothing happens on touch-screen, whatever is key pressed (icon, menu key...)	- Perform an Autotune. See “Launching the «Autotune» process (for capacitive touch-screen)” on page 192 .
You are using the 2000 Platform in the ordinary way when it suddenly switches off.	- Check the instrument is not configured to Auto off. See “Defining the Automatic shut-down of the 2000 Platform” on page 29 . - Check the battery charge level. See “Charging the battery” on page 17 .

Troubleshooting	Solution
The battery refuses to charge (the Charge indicator does not go on when the instrument is connected to the mains and is not operating).	<ul style="list-style-type: none">- There is no battery in the instrument.- The temperature level of the equipment does not allow the battery charging for safety reasons. Wait the equipment cools down.- The battery needs to be changed. See “Changing the battery” on page 190.
When using the touchscreen, nothing happens	<ul style="list-style-type: none">- The touchscreen needs to be calibrate. See “Touchscreen calibration” on page 189
Error message when USB has been disconnected	<ul style="list-style-type: none">- The USB disconnection has not been done properly (see “USB memory stick disconnection” on page 108)- The data transfer was not completed when USB key was disconnected.
No beep is emitted when the USB memory stick is connected	<ul style="list-style-type: none">- A previous USB memory stick has not been properly disconnected (see “USB memory stick disconnection” on page 108).- The USB memory stick is not detected by the 2000 Platform: use another memory stick, or another storage media; or transfer data via USB cable (see “Transferring files to a PC with the USB cable” on page 95).
Error message when upgrade via Ethernet is confirmed	<ul style="list-style-type: none">- Check the Server Name is correctly entered (see “Installation from another server” on page 175)
Error message when upgrade via USB key is confirmed	Check the USB key is correctly connected (see “USB memory stick connection” on page 108)
Error message when unlocking the instrument	<ul style="list-style-type: none">- The password is not the correct one (see “Locking the 2000 Platform” on page 183).

Formatting the USB memory stick onto the 2000 Platform

If the USB icon  is displayed on the upper banner of the screen, when a USB memory stick is connected to the 2000 Platform, this may mean the memory stick must be formatted.

If the stick needs to be formatted, proceed as follows:

- 1 Insert the memory stick into one of the USB ports on the top of the 2000 Platform.
- 2 Press the **HOME** button
- 3 Validate the **Settings** icon to open the **System Settings** page.
- 4 On the right menu keys, successively select **Expert tools > Media utilities > Usbflash Format**.
- 5 Confirm your choice to actually format the USB memory stick.



As for any media formatting, please note that all data present on the USB memory stick will be irremediably lost.

Erase disk

To delete all the disk contents of the 2000 Platform:

- 1 On the Home page, Press twice the **Settings** icon to open the **System Settings** page
- 2 Press **Expert Tools > Media Utilities**,
- 3 Select **Erase Disk** to delete all the disk contents into the 2000 Platform.

A confirmation must be validated before the deletion.

Touchscreen calibration

If you meet problems when using the touchscreen (example: pressing on an icon does not work correctly...) a calibration can be performed on the 2000 Platform touchscreen.

To calibrate the touchscreen, proceed as follows:

- 1 Push the **HOME** button
- 2 Press twice the **Settings** icon to open the **System Settings** page.
- 3 Press **Expert Tools** menu key
- 4 Press **Touchscreen Calibration** key
A blue slightly smaller screen appears, displaying a little target on the left hand corner.
- 5 Click on this target (preferably with the touchscreen pen).
- 6 A new target appears then and again, for a total of 4 times, in order to click on all corners of the screen.

If all the targets are not correctly touched, the touchscreen cannot be used. Otherwise, the touchscreen may be used directly.

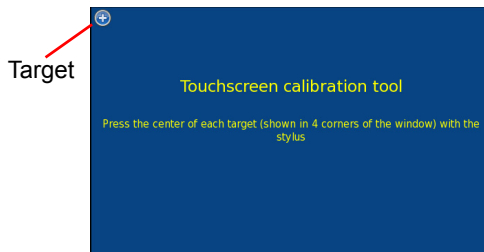


Figure 100 Touchscreen calibration

Changing the battery

If you meet problems during the Platform functioning, or if the battery does not charge anymore when plugged, this may require the battery to be replaced.



CAUTION

Battery is not interchangeable in the field. It must be replaced exclusively for maintenance purpose.

Accessing to the damaged battery

To access the battery of the 2000 Platform, proceed as follows:

- 1 Switch off the instrument and disconnect the mains supply.
- 2 Turn the instrument face down on the work surface.
- 3 If any, remove the module installed (see [“Removing a module” on page 15](#)).
- 4 Remove the battery door
- 5 Pull the battery connector from its housing, to disconnect it from the base, taking care not to damage the connector into which it is plugged.

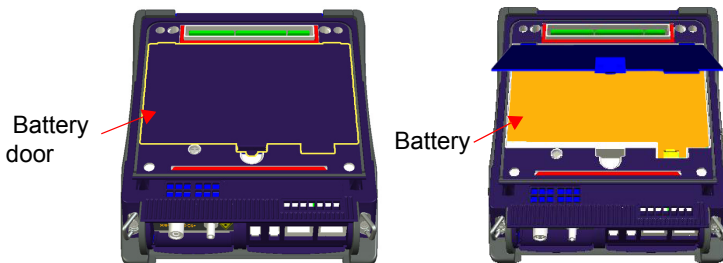


Figure 101 Battery installation



Date and Time parameters will be lost when battery is disconnected.

Installing a new battery

- 1 Set the battery into the Platform
- 2 Connect the new battery in the connector of the 2000 Platform, in the right way using the location notch.

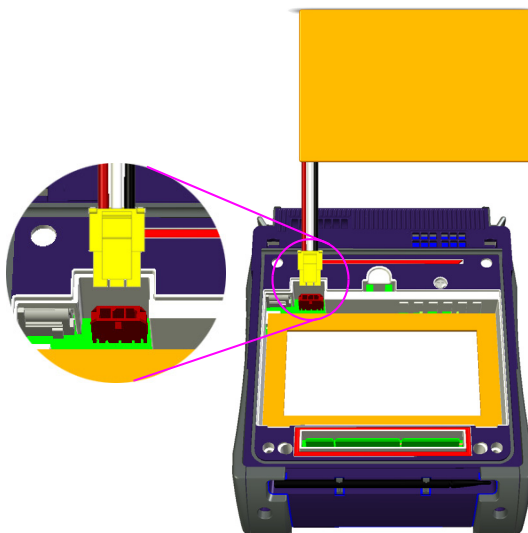


Figure 102 Setting a new battery



When putting a battery back into its seating, make sure that its connector engages correctly with the one of the base and that the door is correctly closed.

Contact Viavi local Sales Service to get a new battery.



NOTEDo not use any battery other than the one supplied with the instrument, or supplied by Viavi.

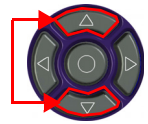
Launching the «Autotune» process (for capacitive touchscreen)

In case of problem with the capacitive touchscreen of your SmartOTDR, an «Autotune» can be performed:

- 1 From the **Home** page, press **Settings** icon top open the **System Settings** key

or

If the use of the touchscreen is not possible, press simultaneously the up and down arrow keys on the Platform to open the **System Settings** screen.



- 2 Press again the up and down arrow keys simultaneously.

A dialog box displays, asking if you wish to perform an Autotune.

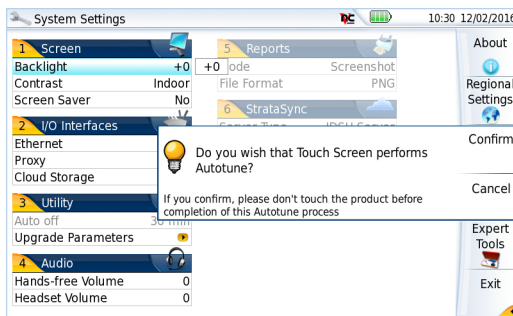



Figure 103 Autotune process

- 3 Press **Confirm** to start Autotune process.

A dialog box displays during the process.



Autotune in progress. Please don't touch the product



CAUTION

Do not touch the product during the Autotune process!

Once the dialog box is closed, the Autotune process is completed, and the screen is calibrated.

General information on warranty

The warranties described herein shall apply to all commercially available Viavi products. Any additional or different warranties shall apply only if agreed to by Viavi in writing. These warranties are not transferable without the express written consent of Viavi.

Hardware Warranty

Viavi warrants that Hardware Product sold to customer shall, under normal use and service, be free from defects in materials and workmanship. Information regarding the specific warranty period for this product can be obtained by contacting your local Viavi Customer Service Representative, or at our web site **www.viavisolutions.com**. If installation services have been ordered, the warranty period shall begin on the earlier of (1) completion of installation, or (2) thirty (30) days after shipment to customer. If Installation Services have not been ordered, the warranty period shall begin upon shipment to Customer. Hereafter these periods of time shall be collectively referred to as the Initial Warranty Period.

Viavi's obligation and customer's sole remedy under this Hardware Warranty is limited to the repair or replacement, at Acterna's option, of the defective product. Viavi shall have no obligation to remedy any such defect if it can be shown: (a) that the Product was altered, repaired, or reworked by any party other than Viavi without Viavi's written consent; (b) that such

defects were the result of customer's improper storage, mishandling, abuse, or misuse of Product; (c) that such defects were the result of customer's use of Product in conjunction with equipment electronically or mechanically incompatible or of an inferior quality; or (d) that the defect was the result of damage by fire, explosion, power failure, or any act of nature.

Viavi performed repairs shall be warranted from defective material and workmanship for a period of ninety (90) days, or until the end of the Initial Warranty Period, whichever is longer. Risk of loss or damage to Product returned to Viavi for repair or replacement shall be borne by customer until delivery to Viavi.

Upon delivery of such product, Viavi shall assume the risk of loss or damage until that time that the product being repaired or replaced is returned and delivered to customer. Customer shall pay all transportation costs for equipment or software shipped to Viavi for repair or replacement. Viavi shall pay all transportation costs associated with returning repaired or replaced product to customer.

Warranty disclaimer

For hardware and/or services furnished by Viavi, the foregoing warranties are in lieu of all other warranties and conditions, express or implied. Viavi specifically disclaims all other warranties, either express or implied, on any hardware, documentation or services including but not limited to warranties relating to quality, performance, noninfringement, merchantability or fitness for a particular purpose, as well as those arising from any course of dealing, usage or trade practice. under no circumstances will Viavi be liable for any indirect or consequential damages related to breach of this warranty.



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