A large, abstract graphic on the right side of the page. It features a large, dark blue triangle pointing upwards, with a lighter blue triangle pointing downwards inside it. The background of the right side is a gradient from light blue to dark blue.

6000A V2 Platform

Compact Network Test Platform for installation, commissioning, maintenance and troubleshooting of fiber networks

User Manual

6000A V2 Platform

**Compact Network Test Platform for
installation, commissioning,
maintenance and troubleshooting of
fiber networks**

User Manual



Viavi Solutions
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This product should not be disposed of as unsorted municipal waste and should be collected separately and disposed of according to your national regulations. In the European Union, all equipment purchased from Viavi after 2005-08-13 can be returned for disposal at the end of its useful life. Viavi will ensure that all waste equipment returned is reused, recycled, or disposed of in an environmentally friendly manner, and in compliance with all applicable national and international waste legislation.

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Instructions for returning waste equipment and batteries to Viavi can be found in the Environmental section of Viavi's web site at www.viavisolutions.com. If you have questions concerning disposal of your equipment or batteries, contact Viavi's WEEE Program Management team.

Table of Contents

About This Guide	xvii
Purpose and scope	xviii
Assumptions	xviii
Technical assistance	xviii
Conventions	xviii

Chapter 1	6000A V2 Platform Overview	1
	About the 6000A V2 Platform	2
	Main features	3
	Hard keys and indicators	5
	Front panel hard keys	5
	Front panel indicators	6

Chapter 2	Safety information	7
	Battery and AC/DC safety information	8
	Precautions relating to optical connections	8
	Laser Safety instructions	9
	Laser classes	9
	Warning labels for the laser classes	9

Chapter 3	Starting up	11
	Unpacking the instrument	12
	Installing and removing a plug-in unit in the 6000A V2 Platform	12
	Inserting a plug-in unit into the 6000A V2 Platform	12
	Removing a plug-in	13
	Choosing the position of the instrument on the work surface	13
	Charging the battery	14
	Connecting the mains adapter	14
	Charging the battery	14
	Battery charge level display	14
	Switching the 6000A V2 Platform on and off	15
	Switching on the 6000A V2 Platform	15
	Switching off the 6000A V2 Platform	16
	Resetting the 6000A V2 Platform	16

Chapter 4	Configuring the 6000A V2 Platform	17
	Displaying the System Settings screen	18
	Defining the regional settings of the system	19
	Defining the screen parameters of the 6000A V2 Platform	20
	Backlight	20
	Contrast	20
	Screen Saver	21
	Defining the Audio parameters of the 6000A V2 Platform	21
	Defining the Automatic shutdown of the 6000A V2 Platform	22

Chapter 5	Power meter, VFL (Visual Fault Locator) & Talkset	23
	Connection to the power meter, VFL and Talkset	24
	Using the Power meter	24
	Configuring the power meter	25
	Configuring measurement parameters	25
	Configuring the alarm parameters of the power meter	26

Display of results and commands	26
Result of the measurement in progress	26
Table of results	27
Commands of the power meter parameters	27
Performing a measurement	28
Power measurement	28
Optical link loss	28
VFL Function	29
VFL connector	29
Visual Fault Locator function (VFL)	29
Storing and reloading results	30
File Setup	30
Storing results	30
Loading results	30
Talkset/Datalink Function	31
Talkset configuration	31
Connections	31
Establishing communication	32
Adjusting volume level	32
Disconnection	33
Remote screen function via Talkset	33
<hr/>	
Chapter 6	
Scope	35
Scope feature	36
Overview	36
Installation of tips	36
Configuring the P5000i Scope	37
Scope connection	37
Configuring the Scope	37
Test	37
File parameters	38
Fiber	39
Link Description	39
Adding a new profile	40
About page	40
Starting up with the scope	41
Freeze mode	41
High Mag. / Low Mag.	42
Camera mode	42

Launching a test of the connector and fiber end-face . . . 42
 Launching a test of the connector and fiber end-face 42
 Overlay 43
 Mosaic Mode 44
 Loading a picture 45

File menu 46
 Saving the test result in a jpg file. 46
 Generating a report. 46

Chapter 7 Applications 49

PDF viewer 50
 Opening a PDF document 50
 Interacting with a PDF document 50

Text Editor 51
 Text Editor page 51
 Saving the text in a file. 52

Web browser 53
 Configuring the Web access. 53
 Starting the web browser 53
 Opening an internet page. 54
 Navigation into the Web Browser 55
 Using the bookmarks. 55
 Creating bookmarks 55
 Opening a PDF document 56
 Leaving the web browser 56

Calculator 57

File Explorer 57

Chapter 8 Stratasync 59

Principle and prerequisites of the Stratasync 60

Configuring and synchronizing the 6000A V2 Platform . . 61
 Connecting the 6000A V2 Platform to Stratasync 62

Chapter 9 Transferring the 6000A V2 Platform Interface . . 63

Establishing connection 64
 Connecting the 6000A V2 Platform and the PC. 64
 Configuring the 6000A V2 Platform 64

	Transferring the Interface	67
	Virtual control buttons bar	68
	Equivalence between the keyboard and 6000A V2 Platform	68
<hr/>		
Chapter 10	File management	71
	File Explorer Overview	72
	Directories and Files selections	72
	Directory selection	72
	Files selection	73
	Directories & Files editing functions	73
	Copy/Cut & Paste files/directories	73
	Renaming a directory / file	74
	Deleting a directory / file	74
	Working with directories and files from the explorer	74
	Creating a directory	74
	Opening files	75
	File Types	75
	Sorting files	76
	Transferring files to a PC with the USB cable	77
	Establishing connection 6000A V2 Platform <-> PC	77
	Transferring files onto the PC	78
	Cancelling the connection	78
	Transferring files to/from a PC with a FTP server	78
	Direct connection	78
	Connection via a local network	80
	Accessing the internal memory of the 6000A V2 Platform	80
	Sending files by mail	81
	Configuring the sending of files by e-mail	82
	Sending files from the Explorer	82
	Creating a screenshot	83
	Configuring the parameters of screenshots	83
	Taking a screenshot	84
	Name of the screenshots files	84
	Creating a report	85
	Configuring the report	85
	Creating the report	85
	Name of the report	86
	Merging pdf or txt files	87

Storage media	88
Storage media built into the 6000A V2 Platform	88
External USB storage media	89
USB memory stick connection	89
USB memory stick disconnection	89
Cloud Storage.	90
Principle and prerequisites of the Cloud Storage	90
Configuring and connecting to Cloud Storage on the 6000A V2 Platform	90
Transferring files using Cloud Storage	92
Abbreviations for storage media	93

Chapter 11	Smart Access Anywhere	95
	Connection modes	96
	Ethernet or WIFI connection	96
	USB/WIFI connection through 3G Smartphone.	97
	Pre-requisite for using the Smart Access Anywhere Application	98
	Downloading the application on PC	98
	Launching the SmartAccess Anywhere application	99
	On 6000A V2 Platform	99
	On the distant PC	100
	Using Remote screen and File Transfer applications	101
	Transferring the interface onto the PC	101
	Transferring files	103
	Transferring files from PC to 6000A V2 Platform	104
	Transferring files from 6000A V2 Platform to PC	104
	Working with files and directories on 6000A V2 Platform	105
	Connection information and settings	105
	Displaying session information	105
	Modifying connection settings.	106
	Testing connection	107

Chapter 12	WIFI Option	109
	Configuration of the WIFI option	110
	Configuring the WIFI access.	110
	Connection to SSID	111

	Configuring the WIFI mode to which the Platform is connected	112
	Transferring the 6000A V2 Platform interface via WIFI on a PC	114
	Transferring files to/from a PC via WIFI	115
<hr/>		
Chapter 13	Bluetooth option	117
	Setting up a Bluetooth connection	118
	Transferring files via Bluetooth	121
	Transferring the Platform interface on a laptop PC via Bluetooth	122
	Removing the Pairing	124
<hr/>		
Chapter 14	Technical specifications	125
	Display	126
	Screen	126
	Memory	126
	Input/Output	126
	Power supply	127
	Battery	127
	Mains adapters	127
	Dimensions - Weight	128
	Environment	128
	Temperature	128
	Humidity	128
	EMI/ESD	128
	Drop test	128
	Shocks	128
	Bumps	129
	Sinusoidal vibration	129
	Random vibration	129
	Flammability	129
	Characteristics of the options	129
	Power meter	129
	VFL	130
	Talkset	130
	Bluetooth and WIFI	130

Chapter 15	Options and accessories	131
	References of options for the 6000A V2 Platform mainframe 132	
	References of scopes and associated accessories	134
	References of accessories.	134
<hr/>		
Chapter 16	Maintenance and Troubleshooting	137
	Maintenance procedure	138
	Changing the module carrier	138
	Installing the options	139
	Installing a Hard disk	139
	Installing the WIFI or Bluetooth option	140
	Cleaning	141
	Cleaning plates and housings.	141
	Cleaning the screen	141
	Cleaning the optical cable connector	141
	Cleaning the optical connections of the 6000A V2 Platform	142
	Accessing to the 6000A V2 Platform information.	142
	General page	142
	Software options page	143
	Services Data page	143
	Accessing to the 6000A V2 Platform documentation	143
	Installing a new version of the software	144
	Downloading from Internet.	144
	Installation from Viavi Server	145
	Installation from another server.	146
	Installation from a USB memory stick.	147
	Launching the upgrade	148
	Checking new upgrade on Viavi Server	148
	Upgrading from the boot	149
	Installing licenses	150
	Enter Manually the Licence code	150
	Import the license from the USB memory stick.	151
	Locking the 6000A V2 Platform.	152
	Returning an instrument.	153
	Guarantee conditions	153
	Recycling Information	154
	Troubleshooting.	154

Interpreting alarms	154
Formatting the USB memory stick onto the 6000A V2 Platform 155	
Erase disk/harddisk	155
Touchscreen calibration	156
Changing the battery	156
Removing the damaged battery	156
Setting a new battery	157
General information on warranty	158
Hardware Warranty	158
Warranty disclaimer	159
<hr/>	
Appendix A	
Calibration Recommended	161
Recommended Calibration Period	162
<hr/>	
Index	163

Table of Contents

About This Guide

The 6000A V2 Platform of Viavi provides a handhled 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 6000A V2 Platform features and capabilities. This guide includes task-based instructions that describe how to install, configure, use, and troubleshoot the 6000A V2 Platform.

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 6000A V2 Platform 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> .	<code>All results okay</code>

Table 1 Typographical conventions (Continued)

Description	Example
Text you must type exactly as shown appears in this type-face .	Type: <code>a:\set.exe</code> in the dialog box
Variables appear in this type-face .	Type the new hostname
Book references appear in this typeface .	Refer to Newton's Telecom Dictionary
A vertical bar means "or": only one option can appear in a single command.	<code>platform [a b e]</code>
Square brackets [] indicate an optional argument.	<code>login [platform name]</code>
Slanted brackets < > group required arguments.	<code><password></code>

Table 2 Keyboard and menu conventions

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

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.

6000A V2 Platform Overview

1

This chapter provides a general description of the 6000A V2 Platform.

Topics discussed in this chapter include the following:

- [“About the 6000A V2 Platform” on page 2](#)
- [“Main features” on page 3](#)
- [“Hard keys and indicators” on page 5](#)

About the 6000A V2 Platform

The MTS/T-BERD 6000A V2 is a multiple layer test platform. It allows to manage Fiber Optics Modules, but also Multiple Services Application Modules (SDH/SONET, Ethernet and Triple Play).

The MTS/T-BERD 6000A is equipped with:

- a base pack
- a Single Fiber Optic module carrier (E6100)
 or a FiberOptic and Transport module carrier (E6200)
- a touchscreen
- a memory extension on option

Moreover, the MTS/T-BERD 6000A V2 is equipped with additional fans if a battery/MSAM pack is installed.

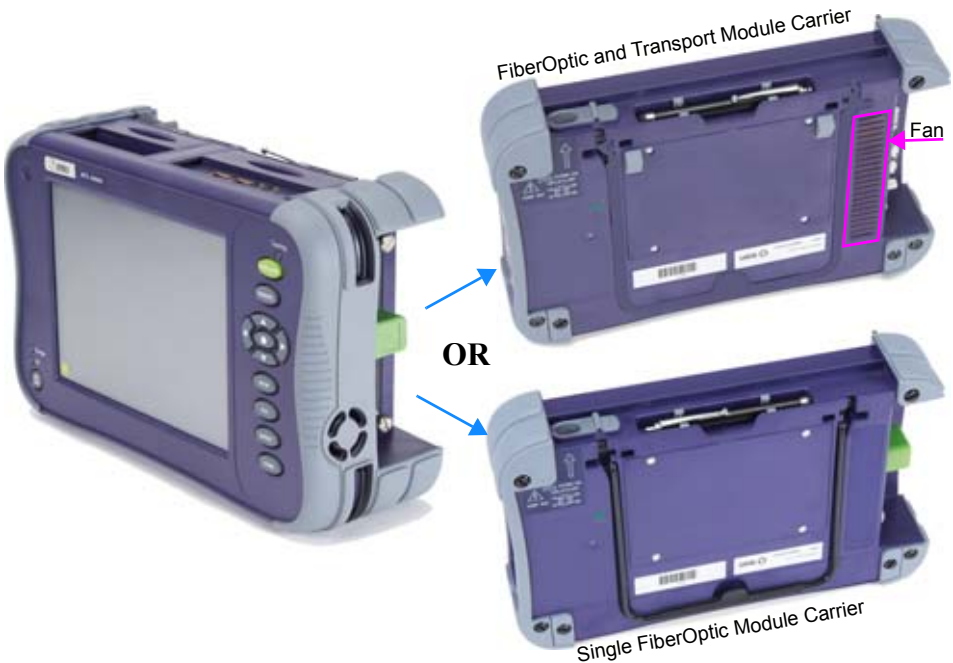


Fig. 1 MTS/T-BERD 6000A V2 with Module carrier

Main features

The 6000A V2 Platform is equipped with the following elements:

- One protection cover
- 8 inch TFT color touchscreen, high visibility (optimized for outdoor use),
- RJ45 plug for Ethernet interface
- Two USB 2.0 host connectors for Microscope, USB memory stick, mouse, keyboard...
- An audio jack to connect a headset
- A connection socket for the mains adapter providing the 19 V power supply and used to charge the battery.
- LED indicators for Charge, On status and Testing
- One Li-Ion battery (option)
- One high power Li-Ion battery in option (mandatory with Transport applications)
- a module, interchangeable in the field: OTDR, OLP, OSA...
- Built-in Power Meter, VFL and/or Talkset (options)
- A hard disk (option)



Fig. 2 MTS/T-BERD 6000A V2 with(out) protection cover

With the 6000A V2 Platform, the user can:

- Open and/or transfer files to a PC via a USB memory stick, Blue-tooth (option) or WIFI (option)

- Generate pdf reports
- Open all user documentations included into the 6000A V2 Platform
- Update the 6000A V2 Platform firmware
- Remote the screen of the 6000A V2 Platform onto a PC and issue commands from the keyboard of the PC
- ...



Fig. 3 6000A V2 Platform - Front Panel description

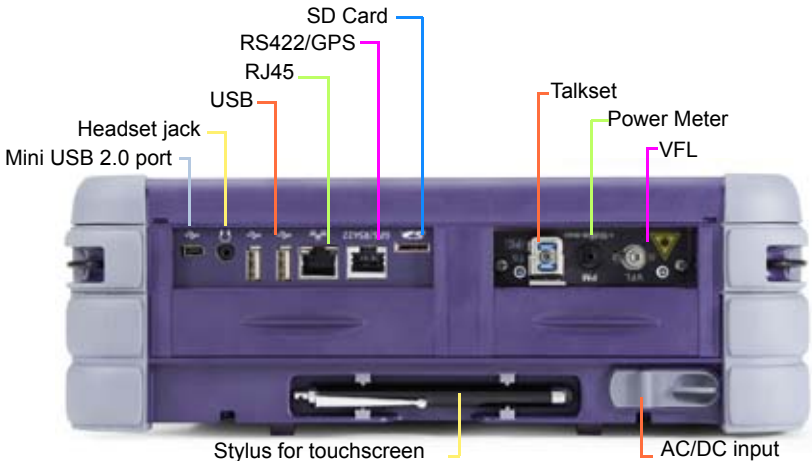









Fig. 4 6000A V2 Platform Connectors - Upper view

Hard keys and indicators

Front panel hard keys

Table 5 Hard keys description

Hardkeys	Function
	Main on/off switch
	Starts and stops the measurement
	This button calls up the results page (e.g. with OTDR module: reflectometry trace and table of results).
	This button calls up the measurement configuration menu. This menu depends on the function in use.
	This button calls up the file explorer. It allows to: <ul style="list-style-type: none"> – choose the storage medium: internal memory, USB memory key... – manage files; with facilities for classifying them in directories and sub-directories.
	This button is used to print a measurement report or a screenshot from a results page in jpg, png or pdf format
	Gives access to: <ul style="list-style-type: none"> – selection of the different measurement or functions – the settings of the instrument – the help page

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 6000A V2 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 6000A V2 Platform is equipped with three indicators, lit into a different color according to the status of the equipment.

Table 6 Indicators Status

On indicator	
 <i>Solid green</i>	The instrument is operating, either on battery or on an external power supply.
 <i>Blinking green</i>	The instrument is switched off but connected to an external power source.
Charge indicator	
 <i>Solid red</i>	The unit is connected to an external power source and the battery charge is in progress.
Testing indicator	
 <i>Solid red</i>	At least one function is in measurement phase (for example, the laser emission pilot for an OTDR measurement)

Safety information

2

This chapter gives the main information on the safety conditions when using the 6000A V2 Platform:

- [“Battery and AC/DC safety information” on page 8](#)
- [“Precautions relating to optical connections” on page 8](#)
- [“Laser Safety instructions” on page 9](#)

Battery and AC/DC safety information

The Li-Ion 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, power cord or battery other than those supplied with the instrument, or supplied by Viavi as an option for this instrument.

If another adapter, cord or battery is used, it may damage the 6000A V2 Platform itself.

Using the 6000A V2 Platform with a battery other than the one supplied by the manufacturer of the 6000A V2 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 shock 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 personal 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 6000A V2 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:

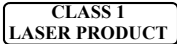


- EN 60825-1: 2001 - Safety of laser products – Part 1: Classification of products, requirements and user guidelines.
- FDA 21 CFR § 1040.10 - Performance standards for light-emitting products - Laser products.

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:

- Talkset option: Class 1
- 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:

Ref. 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

3

This chapter describes the first steps to perform when using the 6000A V2 Platform.

The topics discussed in this chapter are as follows:

- [“Unpacking the instrument” on page 12](#)
- [“Installing and removing a plug-in unit in the 6000A V2 Platform” on page 12](#)
- [“Choosing the position of the instrument on the work surface” on page 13](#)
- [“Charging the battery” on page 14](#)
- [“Switching the 6000A V2 Platform on and off” on page 15](#)

Unpacking the instrument

- 1 Remove the 6000A V2 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.

At the equipment delivery, the following elements are available:

- the 6000A V2 Platform is assembled: module/battery pack is mounted onto the base pack
- the options ordered (hard disk, optical options, wifi...) are mounted into the equipment
- a mains adapter used for mains operation of the instrument and battery charging is delivered on standard.

NOTE

See “[Installing the options](#)” on page 139 if some options are ordered after the delivery of the Platform and must be mounted by customer.

Installing and removing a plug-in unit in the 6000A V2 Platform



The 6000A V2 Platform must be switched off and, if it is operating on the mains, its supply cable must be unplugged.

Inserting a plug-in unit into the 6000A V2 Platform

- 1 Slide the plug-in into its slot.
- 2 When the plug-in is fully home, press firmly on the screen-printed face of the plug-in while tightening the clamping screws.

Make sure that the two large captive screws of the plug-in are screwed fully home.

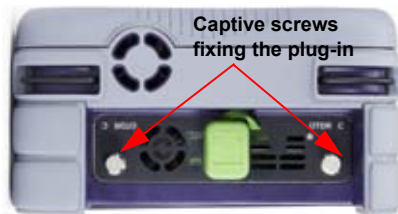


Fig. 5 OTDR Module installed into the 6000A V2 Platform

- Removing a plug-in**
- 1 Unscrew the two captive fixing screws of the plug-in completely (up to the stop).
 - 2 Carefully slide the plug-in out of its slot.

Choosing the position of the instrument on the work surface

Depending on the conditions of use of the 6000A V2 Platform, the instrument may be placed on a flat surface or held in the hand.

When used on a work surface, the 6000A V2 Platform should be supported on its stay, which can be set in either of two positions, depending on whether the user is standing or sitting.



The stay is available exclusively on the Single FO Module carrier (reference E6100).

To change the stay from “seated user” position to “standing user” position, press both sides to slide the stay towards the upper end of its groove, as shown in the drawings below.



Fig. 6 Stay in positions for seated user and standing user



The most stable position for using the 6000A V2 Platform is the «standing» user position.

Charging the battery

Connecting the mains adapter

- 1 At the top of the 6000A V2 Platform (upper left-hand corner), lift up the power supply socket protector and plug in the mains adapter.
- 2 Connect the adapter to the mains.
The **On/Off** indicator starts to blink in green.



Use only the mains adapter supplied with the 6000A V2 Platform. The adapter for some other electronic device may appear to be identical, but entails a risk of damage to the 6000A V2 Platform.

Charging the battery

On connection to the mains:

- if the user does not press **ON**, the battery will start the charge.
- when the user presses the **ON** key, the instrument starts up and the battery will charge during use.

The **Charge** indicator is lit in solid red during charge.


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


When the **Charge** indicator on the front panel 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 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 100% 

Icon	Battery charge level
100% 	From 100% to 70%

Icon	Battery charge level
73% 	From 70% to 40%
34% 	From 40% to 10%
25% 	From 10% to 0%

- When the level becomes too low, the instrument emits a beep to inform the user until it switches off automatically after saving the current configuration and measurement.
- The icon  is displayed on the upper banner to indicate the Platform is connected to mains and battery is fully charged (100%).
- If the icon is displayed , this mean the Platform is connected to mains but battery charge is inferior to 100%.

Switching the 6000A V2 Platform on and off

Switching on the 6000A V2 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 autotest 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 6000A V2
Platform**

While the 6000A V2 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
6000A V2
Platform**

If the 6000A V2 Platform freezes, prolonged pressure (about 4 s.) on the **ON/OFF** key will reset the instrument

Configuring the 6000A V2 Platform

4

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 18](#)
- [“Defining the regional settings of the system” on page 19](#)
- [“Defining the screen parameters of the 6000A V2 Platform” on page 20](#)
- [“Defining the Automatic shutdown of the 6000A V2 Platform” on page 22](#)

Displaying the System Settings screen

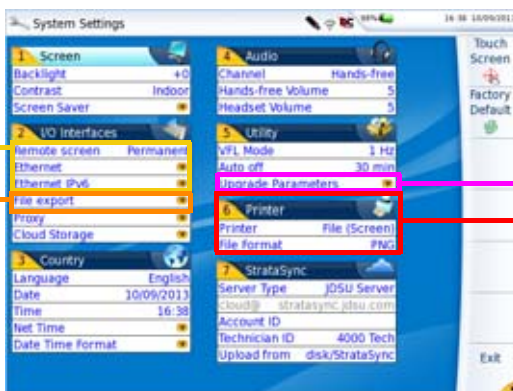
To display the **System Settings** screen, you must:

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



Fig. 7 Home page

- 2 Press the menu key **System Settings** to open the **System Settings** screen.



see "Transferring the 6000A V2 Platform Interface" on page 63

see "Sending files by mail" page 81 and "Transferring files via Bluetooth" page 121

see "Installing a new version of the software" page 144

see "Creating a screenshot" page 83 and "Creating a report" page 85

Fig. 8 System Settings page

Defining the regional settings of the system

When the 6000A V2 Platform is delivered, it is automatically configured with the System Settings set by default in factory, especially the language and date/time (Language: English / Date format: dd/mm/yy / Time format: 24 hours clock).

To modify the regional parameters in the **System Settings** page:

- 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 with the menu key **Edit Number**.
- 3 Click on **Time** and enter the current time, using the numeric keypad displayed with the menu key **Edit Number**.

The date and time are displayed on the upper right side of the screen.

or

Select Net Time parameter and configure date and time according to a network (see "Net Time Synchronization" on page 19).

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

Net Time Synchronization

This parameter allows to configure the date and time of the Platform 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 synchronisation 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.

If **Dynamic** or **Static** mode is defined, the current **Date** and **Time** cannot be modified (parameters are greyed) and the icon  displays on the upper banner, between the hour and the date 14:55  12/09/2013.



If the network configuration is modified, synchronization may be lost.

- **None:** the time is not synchronized according to a server. In this case, the user can reset date and time himself, using the fields **Date** and **Time**.

Defining the screen parameters of the 6000A V2 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 6000A V2 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 8 on page 18](#))
 - **Outdoor:** to be selected in order to optimize the readability of the screen for an outside use.



Fig. 9 Example of outdoor contrast

Screen Saver Click on **Screen Saver** if you wish to activate a screen saver to the equipment, to extend the life of the battery, in case the 6000A V2 Platform is not used for some time.

Instead of the normal screen, a small animated picture of the 6000A V2 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 6000A V2 Platform

In the **Audio** box of the **System Settings** screen, you can configure the audio parameters according you are using a headset with the 6000A V2 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 6000A V2 Platform

The automatic shutdown function switches off the 6000A V2 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 6000A V2 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 6000A V2 Platform will be switched off automatically, if no action has been done for that period: **5**, **10** or **30 minutes**.

Select **No** if the 6000A V2 Platform must not be switched off, even if there is inactivity on the equipment.

Power meter, VFL (Visual Fault Locator) & Talkset

5

A variety of built-in optical options are available when ordering. See references in [Chapter 15 “Options and accessories” page 131](#), for details.

The topics discussed in this chapter are as follows:

- [“Connection to the power meter, VFL and Talkset” on page 24](#)
- [“Using the Power meter” on page 24](#)
- [“VFL Function” on page 29](#)
- [“Storing and reloading results” on page 30](#)
- [“Talkset/Datalink Function” on page 31](#)
- [“Remote screen function via Talkset” on page 33](#)

Connection to the power meter, VFL and Talkset

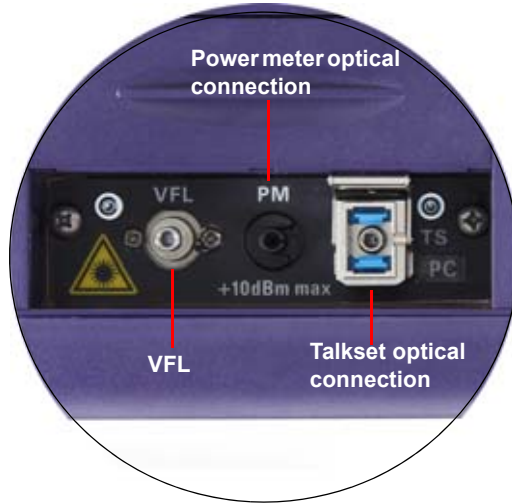


Fig. 10 Optical connectors

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 6000A V2 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		Auto	850 nm	980 nm	1300 nm	1310 nm
Wavelength	1300 nm	1420 nm	1450 nm	1480 nm	1490 nm	1510 nm
User	801 nm	1550 nm	1625 nm	User		
Beep on modulation	Yes					
Unit	dB					
Reference Level	-56.3 dBm					
Attenuator compensation	0.0 dB					

2 Alarms	
Alarms	Active
Min Threshold	-60 dBm
Max Threshold	+40 dBm

Fig. 11 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, 1625 or 1650 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:

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

Reference level

Select 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.

NOTE

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..**

NOTE

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.



Fig. 12 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 (on an OTDR module, either on this Platform or on another one), 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 OTDR Source function onto another unit (see 8100 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 24).
- 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 27).
- 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 (**Pow Reference** >) **Standard Ref** soft keys 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 27](#)).

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 10 on page 24](#) 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 (1Hz or CW) 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 «8100 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 6000A V2 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 6000A V2 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 «8100 modules series»), click on **Load**. The LTS tab is displayed with the loaded results in the table

Talkset/Datalink Function

The 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 6000A V2 Platform equipped with the Talkset option.

NOTE

It is possible to use the talkset of the 6000A V2 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 6000A V2 Platform. Nevertheless, the data transfer speed will be slightly decreased.

Talkset configuration

The talkset configuration is set in the **System Settings** screen, in the **Audio** box (see ["Adjusting volume level" page 32](#))

Connections

At each end of the fiber:

- 1 Connect the fiber to the Talkset port of the 6000A V2 Platform, either directly or through jumpers.
The Talkset connector is set with a FC adapter by default.

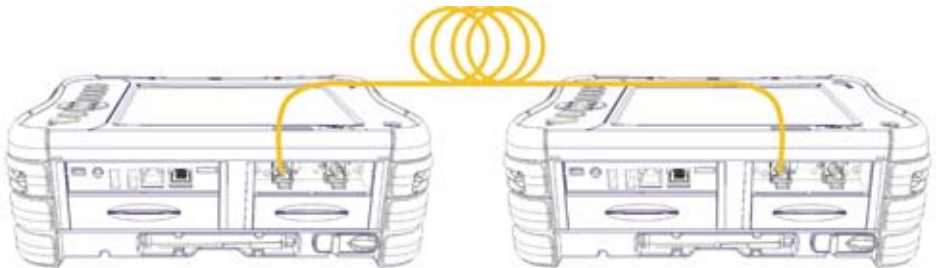


Fig. 13 Installation for Talkset use



- 2 A headset (with earphones and a microphone) supplied with the option may also be plugged into the 6000A V2 Audio jack.

NOTE



Data transfer uses the same fiber as the optical telephone

Establishing communication

On the caller 6000A V2 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 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 Talkset 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 6000A V2 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 6000A V2 Platform base. To activate the base loudspeaker and adjust the volume:

- 1 Press the **HOME** key.
- 2 Press **System Settings** key to reach the **System Settings** page.
- 3 In the **Audio** box, select **Channele** and define the communication settings: **Hands-free / Headset / Auto**.

- 4 According to previous configuration, adjust **Hands-free Volume** and/or **Headset Volume** (from 0 to 100).

Disconnection When communication is over, deactivate the **Talkset/Datalink** function on one of the 6000A V2 Platform. This deactivation can be done by either 6000A V2 Platform.
Then, the fiber used for Talkset can be disconnected safely.

Remote screen function via Talkset

This enables an operator at one end of an optical link to take control over another 6000A V2 Platform connected at the other end, using the fiber.

NOTE

Each end of the optical link must be provided with a 6000A V2 Platform equipped with the Talkset option.

VNC configuration

Before it can be remote-controlled, the 6000A V2 Platform must be configured as explained in [“Remote Screen” on page 64](#).


Connections

At each end of the fiber (see [Figure 13 on page 31](#)): connect the fiber to the Talkset port of the 6000A V2 Platform, either directly or through jumpers.


Remote screen via VNC is done via the data transfer feature, and on the same fiber as the optical telephone.

Establishing communication

On the caller 6000A V2 Platform, press the **HOME** button, then select and confirm the **Talkset** option:

- 1 If the remote instrument is ready to receive (on standby), the Data icon turns orange, beeps are emitted, and 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 Data icon does not change color and a message is emitted.
- 2 Click next on **Expert tools**, **Remote Display**, and on **Switch to remote screen**.

Your screen is now fully replaced by the distant screen, and everything you do on your 6000A V2 Platform is in fact done on the distant 6000A V2 Platform.

An icon  appears in the top banner of the 6000A V2 Platform.



A slight normal color degradation may be seen on the 6000A V2 Platform controlling a distant instrument.

End of a VNC session

In order to end a VNC session, you can:

- 1** Return to the menu **Expert tools > Remote Display** and click on **Return to local screen**. (Recommended solution)
or
Deactivate the data function on either 6000A V2 Platform connected.
or
Set **Remote screen** to **off** (see [“Remote Screen” on page 64](#))
- 2** Disconnect the fiber

NOTE

The VNC icon in the top banner of the screen lets you know at all times whether you are in a VNC session or not.

Scope

6

The scope function is a hot-plug feature enabled directly when inserting a Viavi scope supplied as an accessory (see "[References of accessories](#)" page 134).

The topics discussed in this chapter are as follows:

- "[Scope feature](#)" page 36
- "[Installation of tips](#)" page 36
- "[Configuring the P5000i Scope](#)" page 37
- "[Starting up with the scope](#)" page 41
- "[Launching a test of the connector and fiber end-face](#)" page 42
- "[File menu](#)" page 46

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 6000A V2 Platform with a USB 2.0 connector.



Fig. 14 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 6000A V2. 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 6000A V2 Platform can only be used with certain inspection tips mounted on the P5000i.

Seven tips, patchcords and bulkheads types, are delivered with the Videoscope 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 6000A V2 Platform.
 - 2 Push the button **SYSTEM**
 - 3 Validate the **Scope** function
 - 4 Connect probe with the fiber being inspected.



You may select this option while others are selected (e.g. OTDR).

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



Fig. 15 P5000i Scope Setup

Test Profile

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" page 40).

Tip

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

Capture button (only with P5000i)

This parameter allows to select the action of the Quick Capture button onto the Scope (see Figure 14 on page 36):

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)

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

File parameters The **File** menu allows to enter a file name for saving scope test results.

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...).

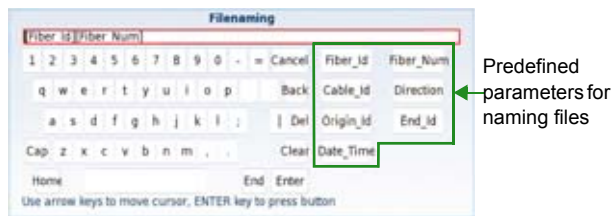


Fig. 16 Edition keypad for naming scope file

To add a logo to a report generated from test results, select **Logo** parameter and press right direction key to display the file explorer page and select the image which will be used as logo on the report page (see "Generating a report" on page 46).

Click on menu key **Load** to validate the selection. The screen returns to configuration page and displays the file path in the **Logo** parameter.

Fiber The **Fiber** box allows to configure the fiber plugged to the scope.

On the line **Fiber Id**, enter a name for the fiber using the edition menu displayed via the right direction key.

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 concern 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 here.
- **Location B:** The name of the Location B of the link may be entered here
- **Company:** Allows to enter the name of the company carrying out the test.
- **Operator:** Use the right arrow key to enter the name of the operator carrying out the test.

NOTE


All parameters of the **Link Description** box will appear in the pdf report generated from a test results page. See ["Generating a report" page 46](#).

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 6000A V2 (disk, hard 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 44).

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

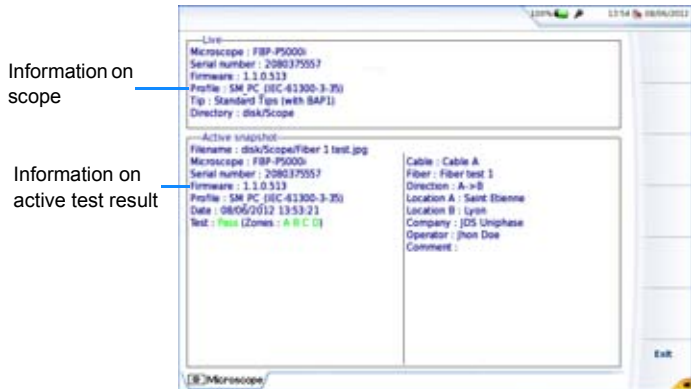


Fig. 17 About page

Starting up with the scope

Once the FiberScope icon is validated:

- 1 Press **RESULTS** hard key

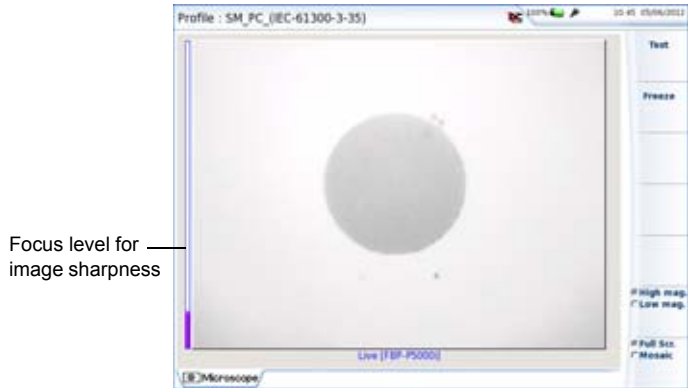


Fig. 18 Example of the result using the P5000i scope

Use the **Focus Control** button onto the P5000i scope (see [Figure 14 on page 36](#)) 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" page 46](#)). The result will be lost if the instrument is shut off, or if more than 3 pictures are frozen (see ["Mosaic Mode" page 44](#)).

NOTE

The button set on the lead, or the QuickCapture™ on the P5000 allows to freeze the picture, and to launch a test (according to configuration in Setup page - see ["Configuring the Scope" on page 37](#)).

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 14 on page 36](#)).


Camera mode If you are in **Freeze** mode, or in **Mosaic** mode, with a picture selected (see ["Mosaic Mode" on page 44](#)), 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 the Pass/Fail criteria, refer to ["Configuring the Scope" on page 37](#).

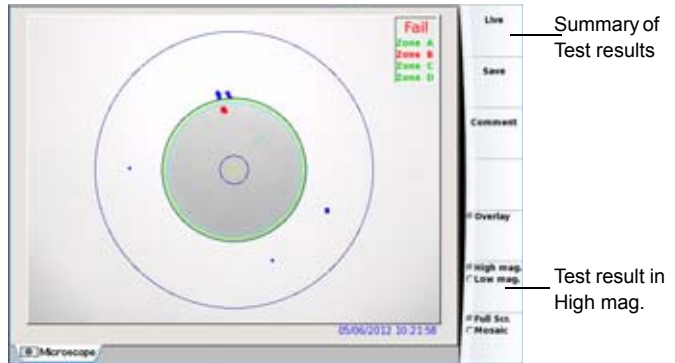
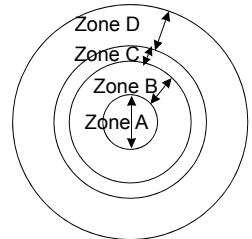


Fig. 19 Test results

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

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



NOTE

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

In **Mosaic** mode (see "[Mosaic Mode](#)" page 44), 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 unselected, the zones and defaults are not graphically identified.

This function is also available in Mosaic Mode (see "[Mosaic Mode](#)" on page 44).

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.

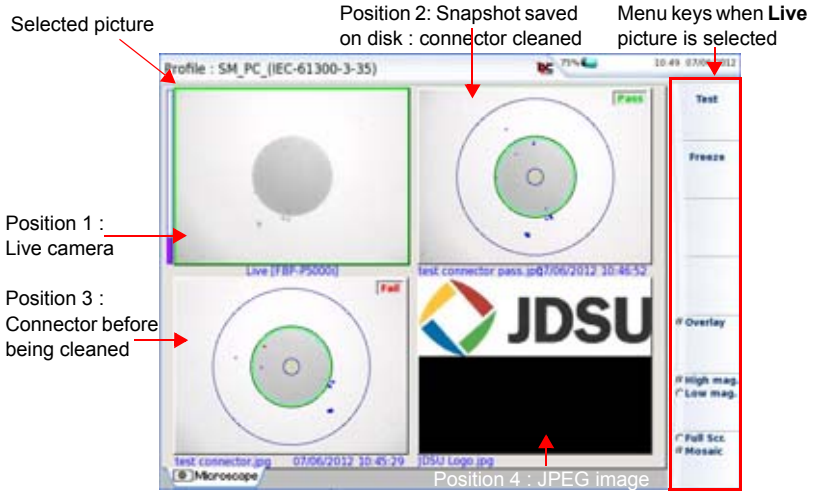


Fig. 20 Mosaic mode

– You may select one of the pictures by clicking on it.

The selected picture is framed in green.

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

Picture selected: Live

- Test** Allows to launch a (new) test of the connector (see [“Launching a test of the connector and fiber end-face” on page 42](#))
- Freeze** Allows to freeze the live image and to save it later on the disk. Once this key is pressed, the freeze image is automatically set on Position 2.
- Overlay** Allows to display/hide the limits of each zone and the detected defaults on image from a scope test result (see [“Overlay” on page 43](#)).



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

High mag./Low mag. Allows to switch all the images from high to low magnification and vice-versa. This key is not available with jpg files other than those resulting from scope application.

Picture selected: Image

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.

Comment Allows to add a comment to the selected picture (see “High Mag. / Low Mag.” on page 42)

Overlay Allows to display or hide the limits of each zone and the defaults on image from a test result (see “Overlay” on page 43). This key does not work on jpg image which do not result from scope application.



High mag./Low mag. Allows to switch all the images from high to low magnification and vice-versa. This key is not available with jpg files other than those resulting from scope application.

Adding a comment

A 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 Select **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 6000A V2 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 44).

File menu

Saving the test result in a jpg file


Once the test has been performed, and the result is displayed on the 6000A V2 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 6000A V2 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 **Load** 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 "[Link Description](#)" on page 39)

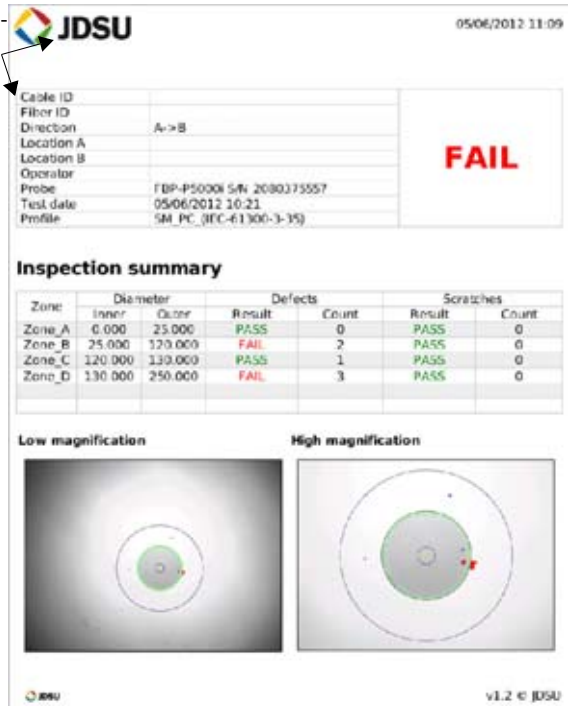


Fig. 21 PDF report

Applications

7

Several desktop applications are provided to you, thanks to the integration of free software released under the free licences (GPL, LGPL, BSB or other). Their purpose is to bring more functionality to the 6000A V2 Platform. Viavi **doesn't provide any warranty or support regarding these free software.**

To access desktop applications, press the button **SYSTEM**, and the soft key **App's**.

The topics discussed in this chapter are as follows:


- "PDF viewer" page 50
- "Text Editor" page 51
- "Web browser" page 53
- "Calculator" page 57
- "File Explorer" page 57

PDF viewer

Opening a PDF document

The simplest way to open a pdf file is to press **FILE**. Select **Explorer**, look for your file and then select **Load >Confirm Load** to load the corresponding file. The file opens automatically in the PDF viewer.

Another way used to open a pdf document is to press **SYSTEM > App's** and select the PDF Reader icon.

The PDF Reader opens but without document. To open a PDF document, click on the icon  , or press **FILE** hard key, and select a document in the file explorer dialog box.

Interacting with a PDF document

Once your document is open, you may browse through different pages very quickly, zoom to a particular level, rotate the page... All these features are available via buttons on the screen.

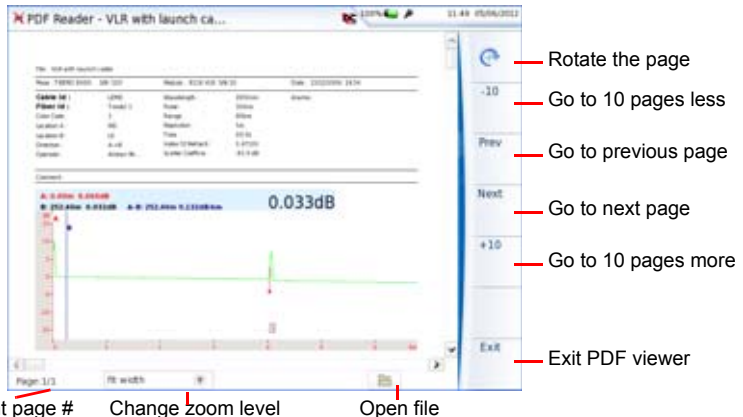


Fig. 22 PDF Viewer Graphical User Interface

NOTE

You may scroll in all directions using the direction keys of the 6000A V2 Platform or of an external keyboard, or by dragging the scroll bars with touchscreen or mouse.

Text Editor

The Text Editor application allows to enter text on the 6000A V2 Platform and save it into a txt file

Text Editor page

To open the Text editor:

- 1 In the **Home** page, press the **App's** key
- 2 In the **Application** screen, select the icon **Text Editor**.

The Text Editor page opens



Fig. 23 Text Editor application

Once the text editor is open, enter text using the method you wish:

- Enter text using an external keyboard which is connected to the 6000A V2 Platform via the USB port or using an external keyboard of a PC connected to the Platform.

or


- Enter text using the keyboard of the Application

- a Select **Keyboard** on the key

A keyboard is displayed on the lower part of the screen



Fig. 24 Keyboard of the Text Editor

- b Use the arrow keys or the touchscreen to enter the text.
or
- Enter manually the text using touch screen.
 - a Select **Writing** on the key 
 - b Write the letter manually, using the stylus for touch screen
You can click on **Train**, in order to draw each character on its cell.
This allow to store the characters with your writing characteristics, in order to get the good letters when writing with the stylus.=

Saving the text in a file Once the text is entered, you can save it in a file onto the 6000A V2 Platform.

- 1 Click on **File > Save** or **Save as...**
- 2 In the dialog box, select the folder in which the file must be saved
- 3 Enter a name for the file with the file extension (.txt or .csv if it must be opened with the 6000A V2 Platform).

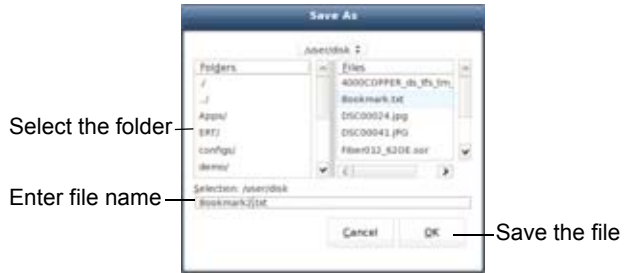



Fig. 25 Save file

4 Click on **Ok** to validate

The file is saved and still opened

- You can modify it and click on **Save** at any time
- If you modify the file and click on **Save as....**you can choose another folder and/or another name

Press  to exit the text editor and go back to the **Applications** page.

Press **HOME** to go back to the **Home** page, and keep the application active.

Web browser


Configuring the Web access

Before using the Web Browser onto the 6000A V2 Platform, check/ modify the proxy configuration in the System Settings page:

- 1** On the **Home** page, press **System Settings** menu key
- 2** Select **Use proxy** parameter in the **I/O Interfaces** box
 - If **Manual** is selected, enter the **Proxy Address** using the edition keypad
 - If **Auto** is selected, enter the **Pac Address** using the edition keypad.

Starting the web browser

To access this application, on the **Home** page click on the soft key **App's**.

In the **Application** screen, activate **Web Browser** icon 




The web browser is launched.



Fig. 26 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 6000A V2 Platform or the mouse of the PC if the screen is deported via VNC application on the PC.
 - b Click on the softkey **Mouse**  so that it becomes  .
This allows to move the cursor toward the address bar, and to turn to cursor.
- 2 Once the cursor set onto the address bar, enter the address:
 - a Using a keyboard connected to the 6000A V2 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 **Keyboard**  to display the virtual keyboard and enter the address using touchscreen.
- 3 Push **Enter** to validate.

The page opens

If an error message is displayed in place of the internet page, verify the address you typed, or check the Web configuration (see "[Configuring the Web access](#)" page 53).

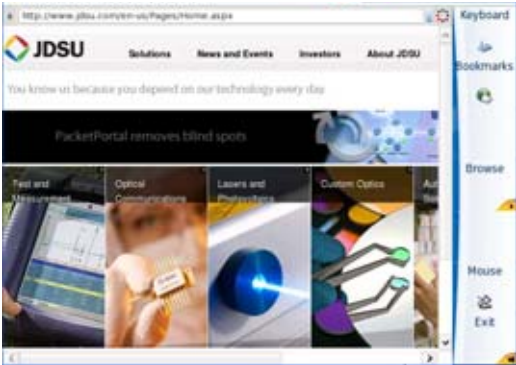






Fig. 27 Internet page opened with the Web Browser

Navigation into the Web Browser

Once the Web Browser is open, push 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

Using the bookmarks

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

Creating bookmarks

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







- 1 Click on  to open the dialog box for bookmarks creation.
 New toolbar is available on the right of the screen.
- 2 Click on the menu key **Add**  to add a bookmark for the page displayed
- 3 Click on the menu key **Edit**  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.



Fig. 28 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 the bookmark menu and go back to the Web Browser page.

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.



Fig. 29 Downloading a pdf file

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 6000A V2 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.

To go back, you must select again the **Web Browser** in the **App's** menu:

- The icon is valid 
- 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 

Calculator

A calculator can be displayed and used onto the 6000A V2 Platform.

- 1 In the **Home** page, press the **App's** key
- 2 In the **Application** screen, select the icon **Calculator**.

The Calculator opens

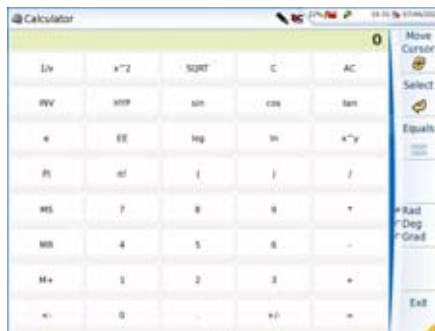



Fig. 30 Calculator

Press  to exit the Calculator and go back to the Application page.

Press **HOME** button to go back to the **Home** page, and keep the **Calculator** application active.

File Explorer

This key allows to directly open the 6000A V2 Platform explorer, where all the files are stored (traces, pdf files ...).

The explanation about the explorer are available in "[File management](#)" on page 71.

Stratasync

8

This chapter describes how to synchronize your 6000A V2 Platform to the Stratasync application.

The topics discussed in this chapter are as follows:

- ["Principle and prerequisites of the Stratasync" page 60](#)
- ["Configuring and synchronizing the 6000A V2 Platform" page 61](#)

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

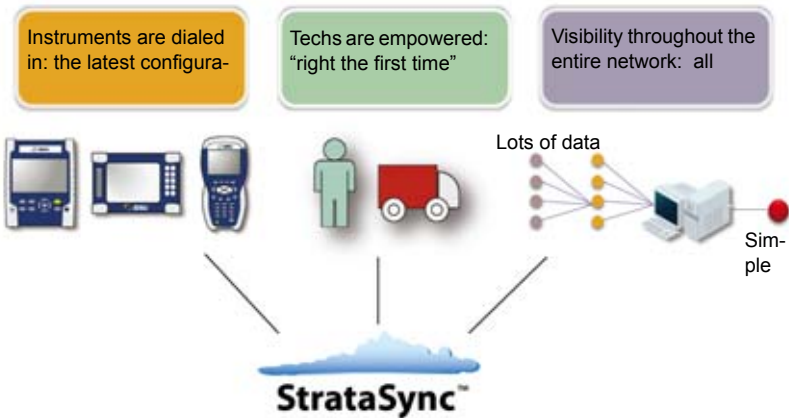


Fig. 31 Principle of the Stratasync application

Pre-requisites for using the Stratasync with the 6000A V2 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 6000A V2 Platform (see ["Ethernet > Mode" on page 65](#) and ["Proxy > Use proxy" on page 66](#)).

Configuring and synchronizing the 6000A V2 Platform

The 6000A V2 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 6000A V2 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.

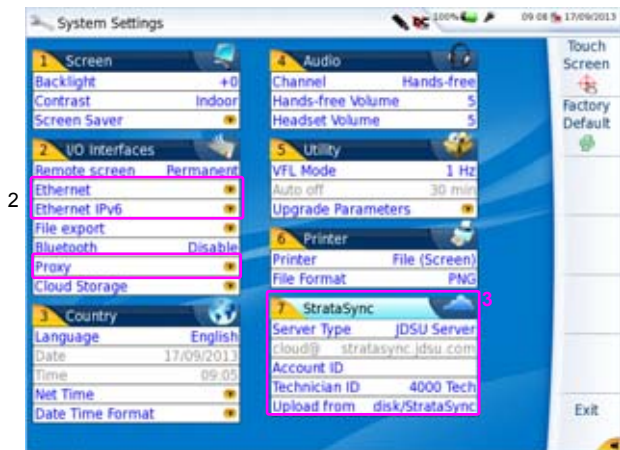




Fig. 32 System Settings - Stratasync

Connecting the 6000A V2 Platform to Stratasync

Once 6000A V2 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 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 Platform to indicate the addition of the equipment in Stratasync.



Fig. 33 First synchronization - Message on 6000A V2 Platform

The 6000A V2 Platform is now available in Stratasync.

Transferring the 6000A V2 Platform Interface

9

The 6000A V2 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 64
- “Transferring the Interface” on page 67
- “Virtual control buttons bar” on page 68
- “Equivalence between the keyboard and 6000A V2 Platform” on page 68



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).

Establishing connection

The connection between 6000A V2 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.

Connecting the 6000A V2 Platform and the PC

- 1 Connect the 6000A V2 Platform to the PC via an Ethernet cable, using the RJ45 connectors set on both equipments.



Fig. 34 Connection 6000A V2 Platform and PC

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

NOTE

The transfer of interface can be done via WIFI, using the IP address once WIFI connection is established (see [Chapter 12 "WIFI Option" page 109](#)).

It can also be transferred via Bluetooth, on a laptop PC equipped with Bluetooth (see [Chapter 13 "Bluetooth option" page 117](#)).

Configuring the 6000A V2 Platform

- 1 In the **Home** page, press **System Settings** menu key.
- 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 6000A V2 Platform.

Session Mode the Remote screen function is inactive once the 6000A V2 Platform is switched off.

Permanent Mode the Remote screen function is still active when the 6000A V2 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 6000A V2 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 6000A V2 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 6000A V2 Platform is connected.

Dynamic in this mode, which requires a DHCP server, the 6000A V2 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 6000A V2 Platform tries to establish a connection to obtain an address from a DHCP server. If for any reason, this process fails, the 6000A V2 Platform reverses to static IP address mode with User1 IP address.

1.Domain Name Server

NOTE

Once the 6000A V2 Platform is connected to the network, the icon  displays for few seconds and indicates the connection is working.

Ethernet IPv6 > Mode

The Ethernet IPV6 parameters must be configured to get Ethernet access in accordance with the IPV6 standards.

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.
- Link: automatically displays the address of the link (cannot be modified)
- IP IP address of the 6000A V2 Platform
- GW IP address of the machine enabling access outside the sub-network.
- DNS IP address of the machine providing the IP address on the basis of the name

Auto in this mode, the 6000A V2 Platform requests an IP address from the server which will be allocated automatically.

If **Auto** is selected, the parameters **Link**, **IP**, **GW** and **DNS** are automatically defined and cannot be modified.

Off The Ethernet IPV6 connection is not activated.

Proxy > Use proxy

1 Select **No** if no proxy is used.

If **Manual** has been selected, enter the **Proxy Address**.

If **Auto** has been selected, enter the **Pac Address**.



Fig. 35 Example of proxy configuration

2 Note the IP Address displayed in the System Settings page.

Note the 6000A V2 Platform IP Address

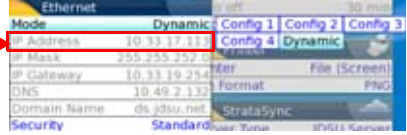


Fig. 36 Example of configuration for Ethernet

3 Wait about 10 seconds the connection is established.

The 6000A V2 Platform Interface can now be transferred onto the PC, or the internal memory/USB key contents can be transferred on PC.

Transferring the Interface

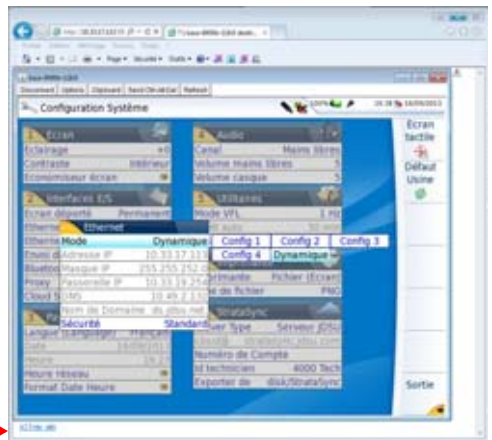
Once the connection is established between the 6000A V2 Platform and the PC, proceed as follow:

- 1 Open Internet Explorer on the PC.
- 2 Considering 10.33.17.113 is the IP Address of the 6000A V2 Platform (as shown Figure 36 on page 67), enter the following address in the Internet Explorer window:

`http://10.33.17.113:5800`

- 3 Press **Enter** to validate.

The screen of the 6000A V2 Platform appears offset on your PC.





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

Fig. 37 VNC window

You can use keyboard mouse of the PC to control the 6000A V2 Platform (see [“Equivalence between the keyboard and 6000A V2 Platform” on page 68](#)).

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 6000A V2 Platform is switched off.

When two or more users are using remote screen function onto the same Platform, the icon is .

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 6000A V2 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.



Fig. 38 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 6000A V2 Platform.

Equivalence between the keyboard and 6000A V2 Platform

The PC keyboard can replaced all the buttons and keys of the 6000A V2 Platform except the **ON/OFF** button:

- The menu keys to the right of the screen are replaced by the function keys **F1** to **F7**.
- 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 6000A V2 Platform.

Function on the 6000A V2 Platform	External keyboard
HOME	Ctrl + H
SYSTEM SETTINGS	F12
SET-UP	Ctrl + U
FILE	Ctrl + F
RESULTS	Ctrl + R
START/STOP	Ctrl + S
EXPORT ^a	Ctrl + P
◀ ▶ ▲ ▼	⌣ - ® -
Menu keys 1 to 7 (from top to bottom)	F1 → F7
ABOUT	F11
Save and quit (Exit)	Entrée/Enter
Quit without saving (Abort)	Escape/Echap.

- a. The Export function is available onto the Platform pressing simultaneously the left and right arrow keys.

NOTE

Those equivalences are also valid with a keyboard directly connected to the 6000A V2 Platform via one USB port.

Chapter 9 Transferring the 6000A V2 Platform Interface
Equivalence between the keyboard and 6000A V2 Platform

File management

10

The files management with the 6000A V2 Platform can be performed, whether a module is set onto the equipment or not.

The topics discussed in this chapter are as follows:

- [“File Explorer Overview” on page 72](#)
- [“Directories and Files selections” on page 72](#)
- [“Directories & Files editing functions” on page 73](#)
- [“Working with directories and files from the explorer” on page 74](#)
- [“Creating a screenshot” on page 83](#)
- [“Creating a report” on page 85](#)
- [“Merging pdf or txt files” on page 87](#)
- [“Storage media” on page 88](#)

File Explorer Overview

To reach the File Explorer page

- 1 On the **Home** page, press **App's** softkey.
- 2 Validate the **File Explorer** icon.

The File Explorer page appears.

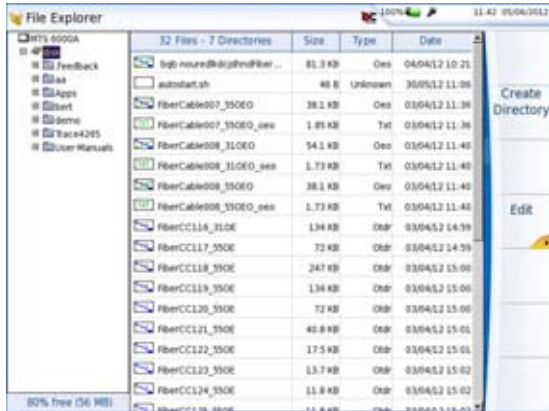


Fig. 39 File Explorer page

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
The selected directory is underlined in blue
- 2 Press validation hard key , to display the sub-directories if any.



Fig. 40 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.

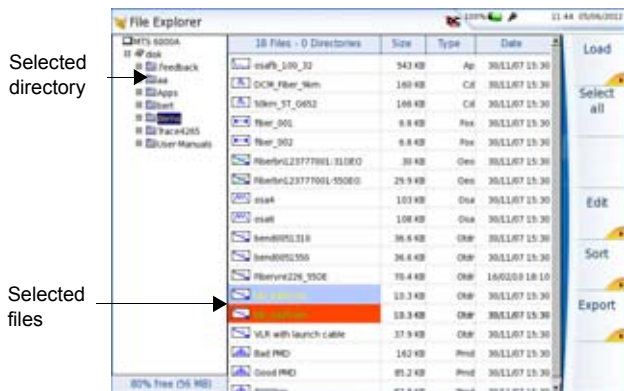


Fig. 41 Example of files selection

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 72).
- 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 72](#)).
- 2 Press **Edit > Rename Directory** or **Rename File**.
The Edition keypad displays.



Fig. 42 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 72](#)).
- 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**, then **Confirm Load** menu keys.











Several FO files of the same type (example: all otdr) cannot be opened at the same time using the Explorer function of the Application page; only the last one selected will open. It can be opened exclusively if the corresponding module is set and activated and if File explorer is opened using the FILE button of the Platform).
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 6000A V2 Platform, the types are symbolized by icons. E.g.

Icon	Type of FO file
	OTDR file (.SOR extension)
	Multi OTDR file (.MSOR extension)
	OEO file (.OEO extension)
	OSA file (.OSA extension)
	PMD file (.PMD extension)
	CD OTDR file (.CD extension)
	AP file (.AP extension)
	ODM file (.OCD extension)
	Power Meter file (.LTS extension)

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



With the 6000A V2 Platform, you can open and load any kind of Fiber Optic files (OTDR, OSA, PON...) even if the corresponding module is not installed.

Sorting files

If at least one file is selected, the key **Sort** allows to access to a sub-menu allowing to sort the files 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 6000A V2 Platform displays files in an ascending order (the file type A to file type W). By clicking again, the 6000A V2 Platform displays the files in opposite order.
- **Sort by date:** clicking once on this key; the 6000A V2 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 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 6000A V2 Platform.

Establishing connection 6000A V2 Platform <-> PC

- 1 Connect the 6000A V2 Platform to a PC, plugging the USB cable on the mini USB port of the Platform toward a USB port on the PC.

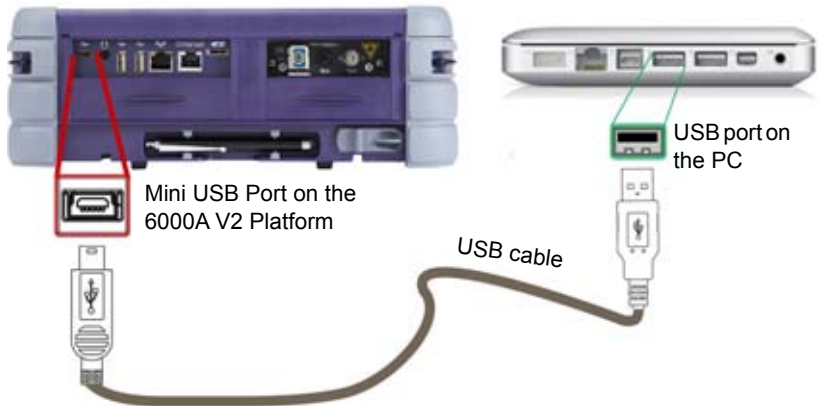
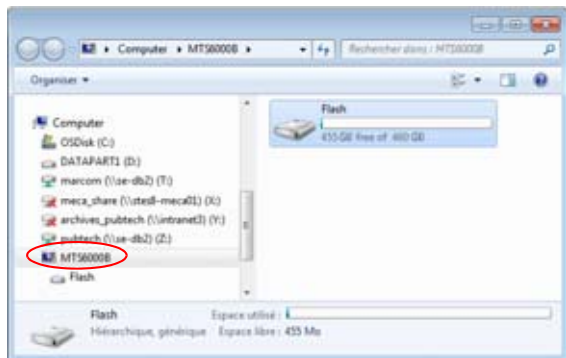


Fig. 43 Direct connection 6000A V2 Platform <-> PC

- 2 Once connection is established, a window opens automatically with the **Flash** driver:



- 3 Double click on the **Flash** driver.
The disk content of the Platform opens onto the PC.

- Transferring files onto the PC**
- 1 Select the file(s) from the 6000A V2 Platform to be transferred onto the PC

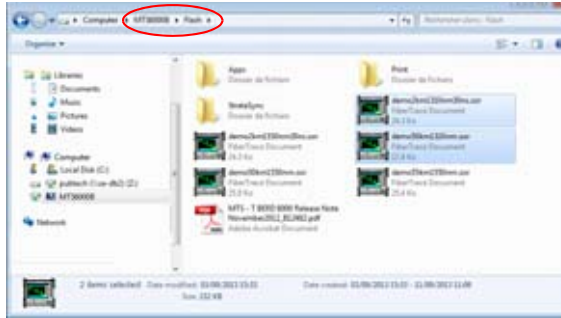


Fig. 44 Files selection from the 6000A V2 Platform

- 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**.

Cancelled the connection Once all desired files have been transfer onto the PC, connection between 6000A V2 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 6000A V2 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 6000A V2 Platform or to the USB memory stick connected to the Platform by means of the FTP server of the 6000A V2 Platform.

- Direct connection**
- 1 Connect directly the 6000A V2 Platform to the PC with an Ethernet cable, using the RJ45 connectors on each equipment.

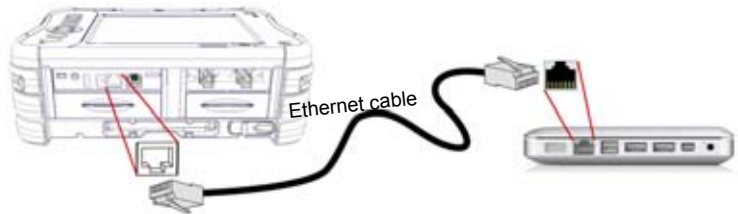


Fig. 45 Ethernet Connection 6000A V2 Platform <-> PC

- 2 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.

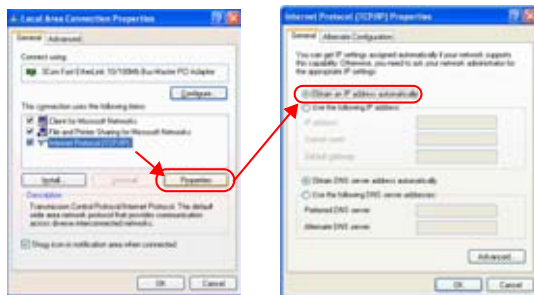


Fig. 46 Internet Protocol

- h Click on **Ok** and close all the dialog boxes opened onto the PC.
- 3 On the 6000A V2 Platform, in the **System Setup** page, under **I/O interface > Ethernet**, select **Dynamic**.

IP Address of
the Platform



Fig. 47 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 6000A V2 Platform into a hub or Ethernet switch with an Ethernet cable (see [Figure 45 on page 79](#)).
- 3 **On the 6000A V2 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 6000A V2 Platform (10 . 33 . 17 . 113 in the example) is displayed but cannot be modified.
- 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 6000A V2 Platform.

Accessing the internal memory of the 6000A V2 Platform

FTP access is obtained through the user account «mts6000» (password: acterna).

- 1 Make the 6000A V2 Platform / PC connection as described [Figure 45 on page 79](#) or connect Platform to WIFI (see [Chapter 12 "WIFI Option" page 109](#)).
- 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 . 17 . 113, being the IP address of the 6000A V2 Platform defined when the connection was configured;

`ftp://mts6000:acterna@10.33.17.113/disk/`
This allows to access to internal memory.

`ftp://mts6000:acterna@10.33.17.113/usbflash/`
This allows to access to the contents of the USB memory stick connected to the 6000A V2 Platform.



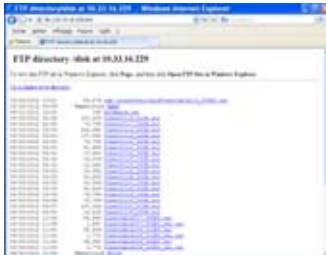
If you use Internet Explorer 7, the following address must be entered:

`ftp://mts6000:acterna@10.33.17.113/acterna/user/disk` or
`ftp://mts6000:acterna@10.33.17.113/acterna/user/usb-flash`

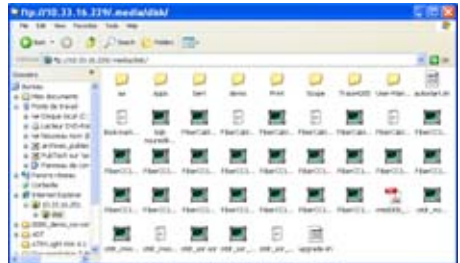
- 4 If an identification is required, enter:

- User name: mts6000
- Password: acterna

The PC then displays the contents of the internal memory or of the USB memory stick from the 6000A V2 Platform.



Internal memory open via Internet Explorer



Internal memory open via Windows Explorer

Fig. 48 Internal memory of the 6000A V2 Platform

- 5 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.

Sending files by mail

The 6000A V2 Platform can send files (traces or others) via e-mail, from the Explorer.

Configuring the sending of files by e-mail

Before sending files by e-mail, the unit must be configured:

- 1 On the **Home** page, press **System Settings** menu key
- 2 In the **I/O Interfaces** box, select **File Export** parameter.
- 3 Configure the following parameters;

Send Mail Choose **Ethernet** if you wish to use the sending mail function.

Sender Mode **Auto** or **Manual**.
 In **Auto** mode, you will not have the possibility to reply to the mail sent.

In **Manual** mode, the reply will be sent to the address entered in the line From. Use the button ► to enter into an edition window.



If **Sender Mode** is set to **Auto**, any reply to an e-mail sent by the 6000A V2 Platform will be lost.

Relay Mode **Auto** or **Manual**.
 If the e-mail sending is performed via a SMTP network, select the **Manual** Relay mode and indicate the SMTP server address in the field **Mail Relay**, using the edition window.
 In **Auto** mode, the sending of e-mail is performed automatically.



Fig. 49 File Export parameters

Sending files from the Explorer

- 1 Press **HOME** hard key
- 2 Press **App's** menu key and validate **File Explorer** icon
- 3 In the **Explorer** page, select the file(s) to be sent.

4 Click on **Export > Send by mail** .
 The editor is displayed



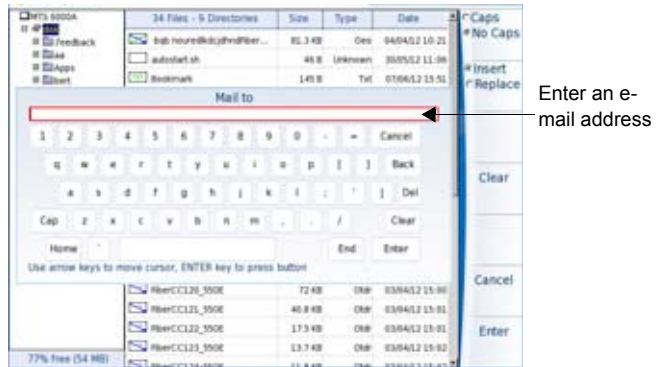


Fig. 50 Enter e-mail address

- 5 You will have to fill in the two following fields:
 - **Mail To:** in the edition window, enter the name of the recipient and press **Enter** to validate.
 - **Subject:** enter the subject of the mail or a comment if necessary. By default, the name of the mail is «Result + sending date».

NOTE

If at least one function is selected in the **System** page (yellow icon), this two parameters «**Mail to**» and «**Subject**» can be configured by default in the **Setup** page > **File Export** (see 8100 Module Manual)

- 6 Click on **Enter**

Once the mail has been sent, the following message is displayed: **Mail sent**. Click on any key to follow.

Creating a screenshot

You can create captures of what is displayed on the screen, directly from the 6000A V2 Platform.

Configuring the parameters of screenshots

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

- 1 On the **Home** page, press **System Settings** key to reach the **System Settings** page.
- 2 In the **Printer** box, on the line **Printer**, select **File (Screen)**

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.

- 3 On the line **File format**, select if the exported 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 left and right direction keys

or

Click on the upper banner of the screen, and click on **Print** in the control buttons bar displayed for few seconds.

The icon  displays until the end of process.

- 4 Press the **FILE** key to find the JPG, PNG or PDF file in the Explorer
 For trace results, the file is saved in the same directory than the file used for screenshot.

For other page open and used for a screenshot, the file is saved in the directory **Stratasync**, into the disk.

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/minut/second).jpg/png/pdf*



Fig. 51 Example of screenshot, open in the Web Browser of the 6000A V2 Platform

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 6000A V2 Platform.

Configuring the report

To configure the report and choose the format of the report file:



- 1 On the **Home page**, press **System Settings** key to reach the **System Settings** page.
- 2 In the **Printer** box, on the line **Printer**, select **File (Formatted)**.
Choosing this option, you can save the open file in a JPG, PNG or PDF file report, exactly as if the file was printed on paper.
Therefore, if the file is too large for one A4 page, several JPG, PNG or PDF files will be created.
- 3 On the line **File format**, select if the report file will be a **JPG, PNG or PDF** file.
- 4 To display a Logo on the upper right of the report pages, click on **Logo** line and select the Logo to be displayed on the upper right of the page:
 - a Press  to open the edition keypad
 - b Enter the path of the logo file with its extension (example: `disk/Logo.jpg`)
 - c Press  to validate.



Fig. 52 Example of Report configuration

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 8100 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/Summary**), the JPG/PNG/PDF file will contain the header and the trace (in one page).
- If the function is set to **Table** mode, 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/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 left and right direction keys
or

Click on the upper banner of the screen, and click on **Print** in the control buttons bar displayed for few seconds.

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 same directory than the trace file used for report.

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*

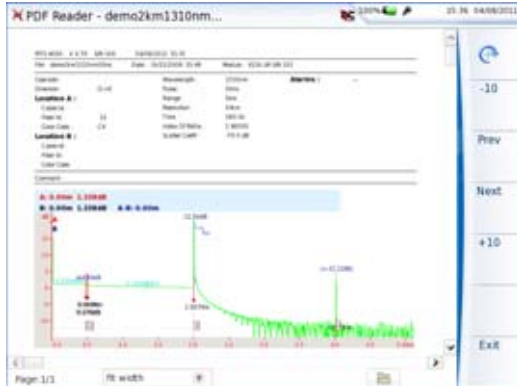


Fig. 53 Example of report (in pdf)

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** hardkey of the 6000A V2 Platform (see “[Creating a report](#)” on page 85)
 - The txt files that can be merged are those saved with the results trace (see OTDR Modules User Manual: E8100M02).
- 1 In the Explorer, select the two or more pdf/txt files generated
 - 2 Press **Export** menu key
 - 3 Press **Merge** key

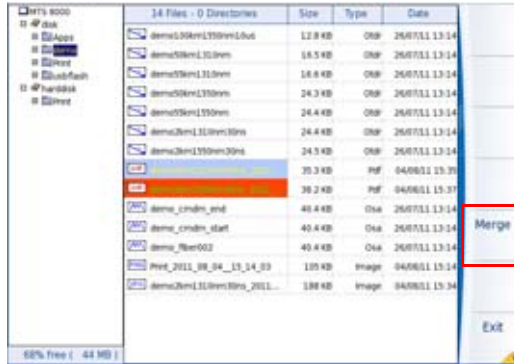



Fig. 54 Files selection and Merge key

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 74](#)).

Storage media

For saving or recalling data, the 6000A V2 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 6000A V2 Platform

The 6000A V2 Platform is delivered with an internal memory , which maximum capacity is of 2 Gbytes (with a minimum of about 128 MB are available for data storage).

The 6000A V2 Platform can also be delivered with a hard disk, available on option, which maximum capacity is of 100GB. It must be used with Transport applications.

External USB storage media

The 6000A V2 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 three 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 6000A V2 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 Press 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 USB port.

NOTE

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

See [Chapter 16 "Maintenance and Troubleshooting" page 137](#) 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 6000A V2 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 6000A V2 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 6000A V2 Platform

Configuring the 6000A V2 Platform

Once an account has been created on the Cloud site, configure the 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 65 and “[Proxy > Use proxy](#)” on page 66.

- 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.

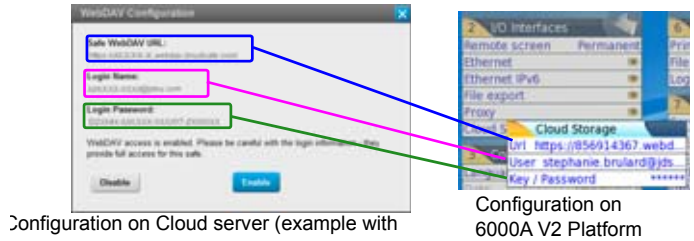


Fig. 55 Example of configuration

Connecting Cloud Storage

Once configuration has been established on the 6000A V2 Platform, it is ready to be connected with Cloud server:

Select one parameter of the Cloud Storage window on 6000A V2 Platform

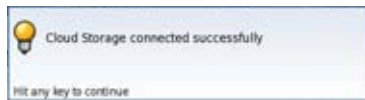
- 1 Press **Connect Cloud Storage** menu key




The connection launches



- 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 6000A V2 Platform from Cloud storage:

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

**Transferring files
using Cloud
Storage**

Once connection between 6000A V2 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 6000A V2 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 directory) into which files must be copied.
 - d Press **Paste** menu key.

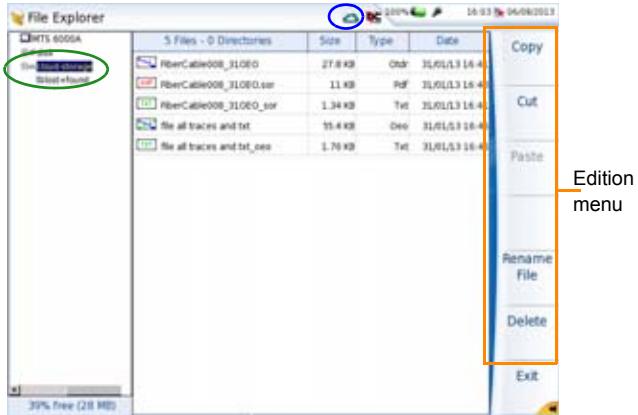


Fig. 56 File Explorer with cloud storage



The cloud storage is automatically disconnected once the Platform is switched off. Reconnect from the System Settings page of the 6000A V2 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
harddisk	Internal harddisk (option)
usbflash	USB memory stick
cloud-storage	Cloud storage media available on PC
bluetooth-inbox	Bluetooth storage media (option) ^a

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

Smart Access Anywhere

11

The 6000A V2 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 6000A V2 Platform or to access the internal memory / USB memory stick contents on the PC and perform files transfer from T-BERD/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").

Multiple licences are available:

- **Licence 1** (reference **SAA-6K-L1**): for SmartAccessAnywhere using Ethernet or Wifi hotspot connection
- **Licence 2** (reference **SAA-6K-L2**): for SmartAccessAnywhere using Ethernet, wifi hotspot connection, or USB / Wifi connection through 3G smartphone
- ["Connection modes" page 96](#)
- ["Pre-requisite for using the Smart Access Anywhere Application" page 98](#)
- ["Downloading the application on PC" page 98](#)
- ["Launching the SmartAccess Anywhere application" page 99](#)
- ["Using Remote screen and File Transfer applications" page 101](#)
- ["Connection information and settings" page 105](#)

Connection modes

Different kinds of connection are available to access to a distant 6000A V2 Platform.

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 6000A V2 Platform is directly connected to Internet via an Ethernet Cable.



Fig. 57 Ethernet connection

- 2 The WIFI connection can be used to access to 6000A V2 Platform from any location.
This connection is available exclusively if the **WIFI option is installed onto the T-BERD/MTS-6000A V2** which will be seen remotely.



Fig. 58 WIFI connection

USB/WIFI connection through 3G Smartphone

To access to a Platform 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 6000A V2 Platform and Smartphone using USB, connect the USB cable on 6000A V2 Platform and on 3G Smartphone connector.



Fig. 59 USB connection through 3G Smartphone

- 2 To establish connection between 6000A V2 Platform and 3G Smartphone using WIFI, the **WIFI option must be installed onto the 6000A V2 Platform.**



Fig. 60 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 6000A V2 Platform from any locations, specific requirements are mandatory:

- a licence installed on Platform which will be accessible from any locations.
- an Ethernet connection (the Platform must have an IP address - see “Ethernet > Mode” on page 65) and, if the network uses a proxy, this proxy must be configured (see “Proxy > Use proxy” on page 66).
- the Viavi application, downloaded for free at the address «<http://smartaccess.updatemyunit.net>».
- port 22 (SSH) or 443 (HTTPS) output opened
- according to connection mode selected:
 - the WIFI option installed on 6000A V2 Platform
 - a USB cable to connect Platform with 3G Smartphone
 - a 3G Smartphone from given list and having appropriate basic subscription for internet connection sharing

Downloading the application on PC

The application **Smart Access Anywhere** must be downloaded on the PC which will be connected to the 6000A V2 Platform remotely.

NOTE

It is not necessary to have administrator privileges to install the 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.
Once download is completed, the internet explorer can be closed.
- 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:

Enter Access Code (see [step 1](#) on page 100)

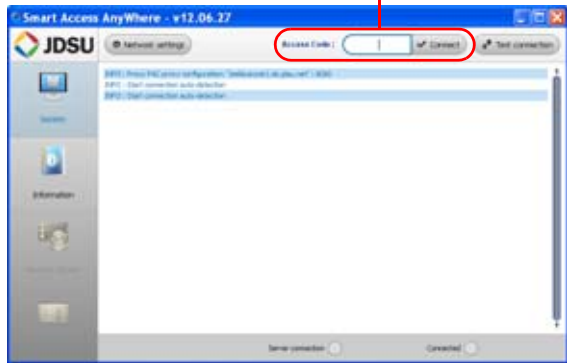


Fig. 61 Smart Access Anywhere: Connection page

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>.



Fig. 62 Warning message of a new version available

Launching the SmartAccess Anywhere application

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

- On 6000A V2 Platform**
- 1 On the **Home** page, press **Expert Tools**
 - 2 Press **Access Anywhere** menu key



The connection to SmartAccessAnywhere Server is in progress.



Fig. 63 Connection to SmartAccessAnywhere Server in progress

- 3 Once connection is established with the server, the 6000A V2 Platform displays a message with the code to be used to access to the equipment remotely.

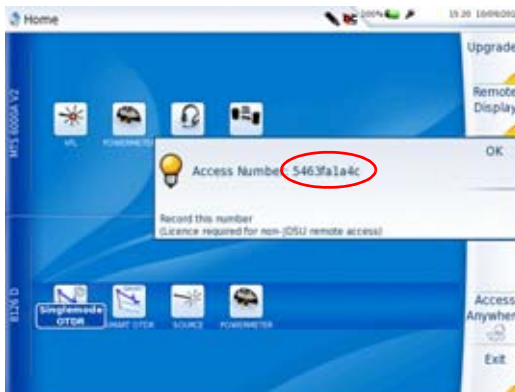


Fig. 64 Access code displayed

- 4 Note this access code and transfer it to the distant user, who will access the unit remotely.
- 5 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 
The following screen displays:



Fig. 65 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 6000A V2 Platform:

- 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 6000A V2 Platform onto the PC:

- 1 On the Introduction page, click on 
or
On the left menu, click on 

The current screen of the 6000A V2 Platform displays:

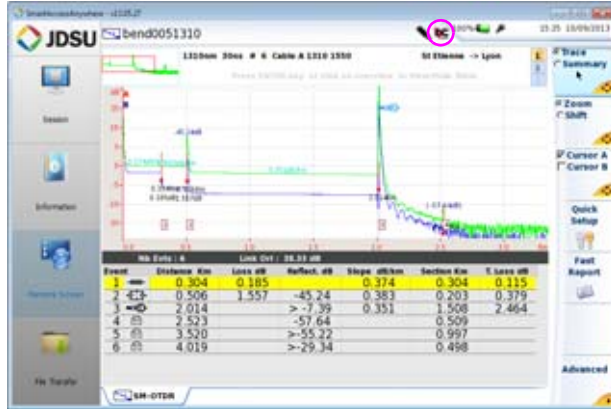



Fig. 66 Smart Access Anywhere: Remote screen

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

- Click on the upper banner of the 6000A V2 Platform 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 6000A V2 Platform.

- You can use keyboard mouse of the PC to control the 6000A V2 Platform.

Equivalence between the keyboard and 6000A V2 Platform

The PC keyboard can replaced all the buttons and keys of the 6000A V2 Platform except the **ON/OFF** button:

- The menu keys to the right of the screen are replaced by the function keys **F1** to **F7**.
- 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 6000A V2 Platform.



Function on the 6000A V2 Platform	External keyboard
HOME	Ctrl + H

Function on the 6000A V2 Platform	External keyboard
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 7 (from top to bottom)	F1 → F7
ABOUT	F11
Save and quit (Exit)	Enter
Quit without saving (Abort)	Escape

- a. The Export function is available directly on the 6000A V2 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 .

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

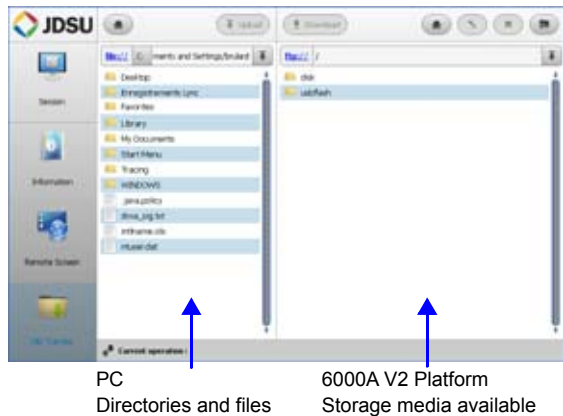
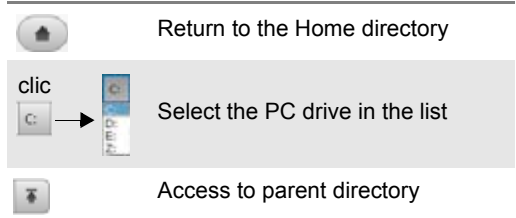


Fig. 67 File Transfer page

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

Navigation buttons



Transferring files from PC to 6000A V2 Platform

- 1 On the Platform 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:

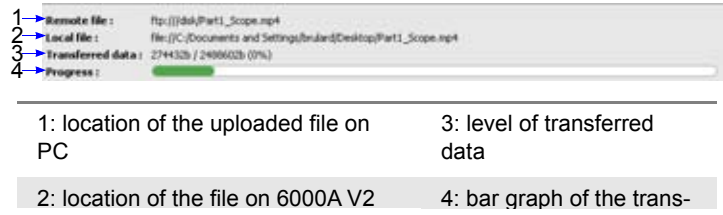


Fig. 68 Information on file transfer

NOTE

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 Platform explorer.

Transferring files from 6000A V2 Platform 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 Platform, 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

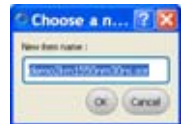
Under both file explorers, a new banner displays with information on file transfer (see [Figure 68 on page 104](#)).

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


Working with files and directories on 6000A V2 Platform

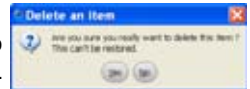
Renaming file or directory

- 1 Select a file/directory stored on the 6000A V2 Platform 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

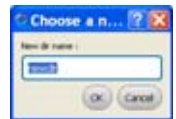
- 1 Select a file stored on the Platform hard disk or USB key.
- 2 Click on  .
- 3 In the new dialog box opened, press **Yes** to confirm the deletion (or **No** to keep the file).



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
- 2 A screen as the following one displays:





Fig. 69 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 69 on page 106](#)), press button 

The following screen displays:

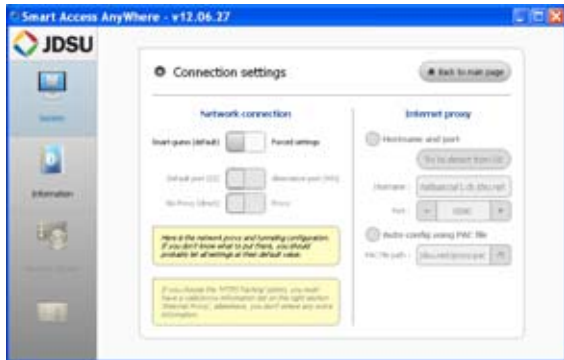


Fig. 70 Connection settings

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



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



The parameters for Port and HTTPS configurations turn automatically active.

- Modify, if necessary, the parameters for **SSI tunnel port** and/or **Internet proxy**.

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



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

- Once configuration is completed, press **Back to main page**.
The Home page displays (see [Figure 65 on page 101](#)).

Testing connection

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

- Open the Smart Access Anywhere application on PC
- Press **Test connection** button
The test is automatically launched
- Press **See full logs ...** to display logs in real time
Once completed, the results for connection display:

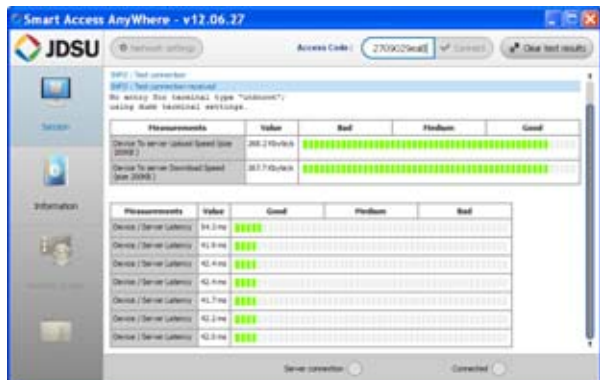
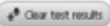


Fig. 71 Test results

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 100).

WIFI Option

12


The WIFI application is available on option with the 6000A V2 Platform, and installed in factory, except if it has been ordered after the Platform delivery, in which case the customer must install himself the option (see ["Installing the WIFI or Bluetooth option" on page 140](#)).

The topics discussed in this chapter are as follows:

- ["Configuration of the WIFI option" page 110](#)
- ["Connection to SSID" page 111](#)
- ["Configuring the WIFI mode to which the Platform is connected" page 112](#)
- ["Transferring the 6000A V2 Platform interface via WIFI on a PC" page 114](#)
- ["Transferring files to/from a PC via WIFI" page 115](#)

Configuration of the WIFI option

The WIFI option is delivered on a USB key installed into the Platform.

A new icon displays on the upper banner  once installation of the option is performed and Platform is re started.

To display the Wifi configuration screen:

- 1 Press **HOME** hard key to reach the **Home** page.
A new menu key is displayed on the right of the screen
- 2 Press the menu key to display the WIFI **Setup** screen.

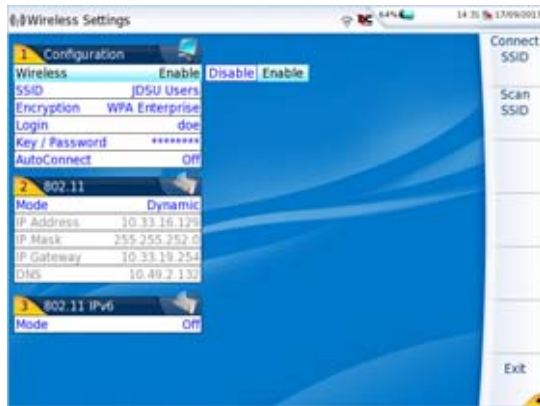



Fig. 72 WIFI Setup screen

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.

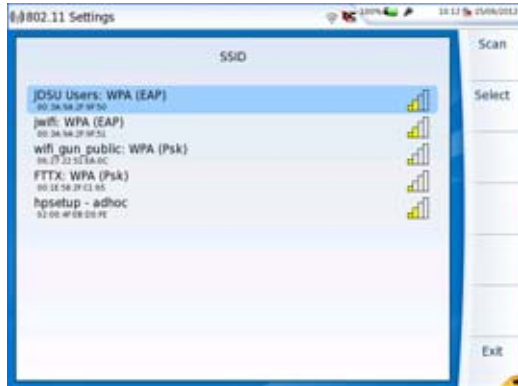


Fig. 73 List of SSIDs found

- 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 6000A V2 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 6000A V2 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 6000A V2 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 6000A V2 Platform is connected.

Dynamic in this mode, which requires a DHCP server, the 6000A V2 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 6000A V2 Platform tries to establish a connection to obtain an address from a DHCP server. If for any reason, this process fails, the 6000A V2 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.

Note IP Address

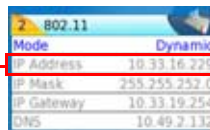


Fig. 74 WIFI connection in Dynamic mode

In **802.11 IPv6** mode, the following parameters (**Link, IP, GW** and **DNS**) are automatically defined and cannot be modified

1 The **802.11 IPv6** box is to be used if connection must be in conformance with the IPV6 standards. 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 are available:

- Site Name the user can enter the name of the site in the Edit menu.
- Link automatically displays the link name (cannot be modified)
- IP IP address of the Platform
- GW IP address of the machine enabling access outside the sub-network.
- DNS IP address of the machine providing the IP address on the basis of the name

Dynamic in this mode, which requires a DHCP server, the 6000A V2 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 tries to establish a connection to obtain an address from a DHCP server. If for any reason, this process fails, the 6000A V2 Platform reverses to static IP address mode with User1 IP address.

If **Dynamic** mode is selected, then the following parameters (**Link / IP / GW / DNS**) are automatically configured and cannot be modified (greyed).



Fig. 75 WIFI connection in Dynamic mode with IPV6

Transferring the 6000A V2 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 6000A V2 Platform (as shown [Figure 74 on page 112](#)), enter the following address in the Internet Explorer window:

`http://10.33.16.229:5800`

- 3 Press **Enter** to validate.

The screen of the 6000A V2 Platform appears offset on your PC.

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



Fig. 76 VNC window

See “Virtual control buttons bar” on page 68 and “Equivalence between the keyboard and 6000A V2 Platform” on page 68 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 6000A V2 Platform defined when the connection was configured):

ftp://mts6000:acterna@10.33.16.229/disk/
This allows to access to internal memory.

ftp://mts6000:acterna@10.33.16.229/usbflash/
This allows to access to the contents of the USB memory stick connected to the 6000A V2 Platform.



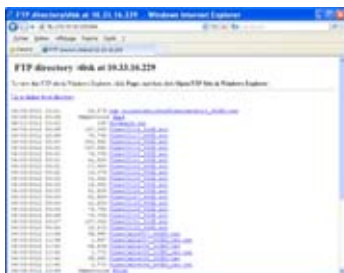
If you use Internet Explorer 7, the following address must be entered:

ftp://mts6000:acterna@10.33.16.229/acterna/user/disk Or
ftp://mts6000:acterna@10.33.16.229/acterna/user/usbflash

- 3 If an identification is required, enter:

- User name: mts6000
- Password: acterna

The PC then displays the contents of the internal memory or of the USB memory stick from the 6000A V2 Platform.



Internal memory open via Internet Explorer



Internal memory open via Windows Explorer

Fig. 77 Internal memory of the 6000A V2 Platform

- 4 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.

Chapter 12 WIFI Option

Transferring files to/from a PC via WIFI

Bluetooth option

13

The Bluetooth application is available on option with the 6000A V2 Platform, and installed in factory, except if it has been ordered after the Platform delivery, in which case the customer must install himself the option (see "Installing the WIFI or Bluetooth option" on page 140).

The topics discussed in this chapter are as follows:



- "Setting up a Bluetooth connection" page 118
- "Transferring files via Bluetooth" page 121
- "Transferring the Platform interface on a laptop PC via Bluetooth" page 122
- "Removing the Pairing" page 124



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

The Bluetooth option allows file transfers between the 6000A V2 Platform and another 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 6000A V2 Platform.

A screen as the following one displays:

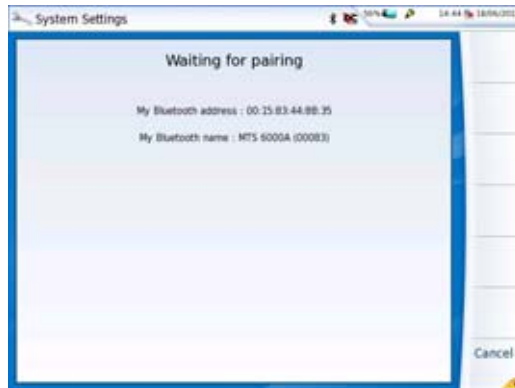


Fig. 78 Waiting for pairing

- 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:



Fig. 79 Enter Pairing code

- 8 Press **Enter** to validate.
Both equipment are now paired:

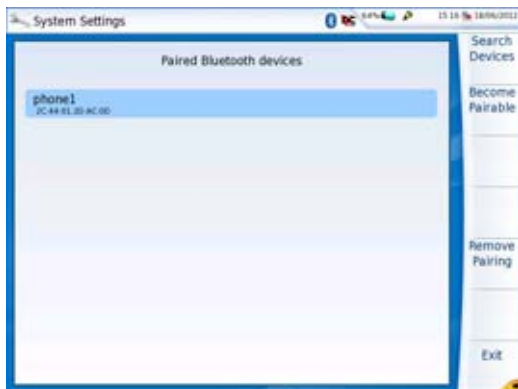




Fig. 80 Platform paired with one equipment

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

If the desired device is not displayed on the screen, or if no devices are detected, press the **Search Devices** soft key.

The 6000A V2 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 bar graph is displayed during research 




Once the research is completed, a list of the available devices is displayed, with the level of detection of the 6000A V2 Platform 



Fig. 81 List of devices found

- a Using the direction keys ▲ and ▼ or touchscreen, 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
- 1 If prompted, enter a pairing code. The code must be identical on the 6000 and the device.
 - 2 Once the bluetooth device and the Platform are paired, a screen is displayed with the description of the device (see [Figure 80 on page 119](#)).
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 6000A V2 Platform toward the bluetooth device and vice versa (see [“Transferring files via Bluetooth” on page 121](#)) or transfer the Platform interface on VNC via Bluetooth (see [“Transferring the Platform interface on a laptop PC via Bluetooth” on page 122](#)).

Transferring files via Bluetooth

Once the connection has been established with a bluetooth device:

- 1 Press the **HOME** key and then press the **System Settings** soft key.
- 2 Use the down arrow ▼ or touchscreen to move to the **I/O Interfaces** settings and then to **File export**.
- 3 In the Send Mail parameter, select **Bluetooth** and then exit the menu.



Fig. 82 Configuration of files sending by Bluetooth

- 4 On the **Home** page, press **App's** menu key and select **File Explorer** icon to go in the File Explorer.
- 5 Select the file(s) to be transferred from the Platform toward the PC.
- 6 Push **Export** > **Send by Bluetooth** menu keys .

A confirmation message displays once the transfer is completed.

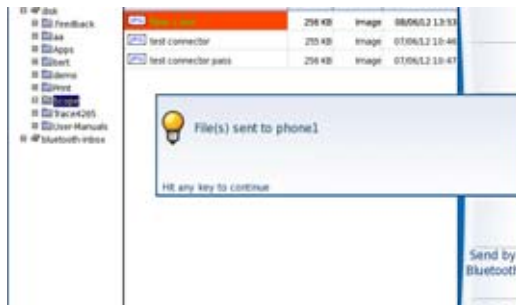


Fig. 83 Confirmation of files sending

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*.



Fig. 84 Confirmation of file receiving



WARNING

The files stored in bluetooth-inbox will be lost once the 6000A V2 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 6000A V2 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 Remote Operation application on the laptop PC:
 - a Download the application
 - b Double click to launch it and follow the instruction for installationThe application is available on PC, in **Start > All Programs > Viavi > Remote Operation**.
- 2 Pair the 6000A V2 Platform with laptop PC via Bluetooth (see [“Setting up a Bluetooth connection” on page 118](#)).
- 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 6000A V2 Platform displays the list of detected equipment.

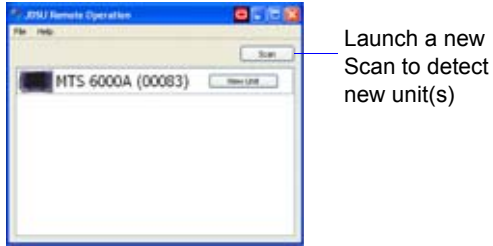


Fig. 85 6000A V2 Platform detected via Bluetooth on PC

- 1 Click on **View Unit** button to remote the screen on PC.
The current screen of the 6000A V2 Platform displays on a new window on the PC.
In the small window next to VNC window (see [Figure 85 on page 123](#)), the button **View Unit** becomes **Stop Viewing**.

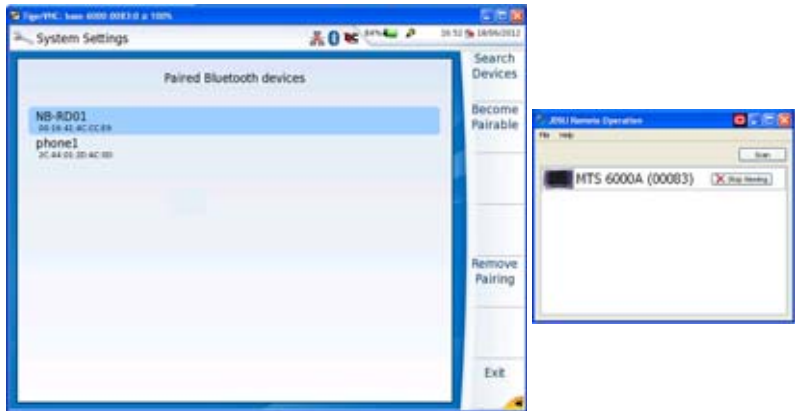


Fig. 86 Remote screen on PC

See “Virtual control buttons bar” on page 68 and “Equivalence between the keyboard and 6000A V2 Platform” on page 68 to get information on use of PC to work on 6000A V2 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 123](#)) 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

14

This chapter contains the technical specifications of the 6000A V2 Platform.

The topics discussed in this chapter are as follows:

- “Display” on page 126
- “Memory” on page 126
- “Input/Output” on page 126
- “Power supply” on page 127
- “Dimensions - Weight” on page 128
- “Environment” on page 128
- “Characteristics of the options” on page 129

Display

- Screen**
- Back-light color screen
 - Size: 8 inches
 - Resolution: 800 x 600 pixels
 - Standard high visibility touchscreen
 - 2 options are available:
 - Resistive touchscreen panel (RTP)
 - Capacitive touchscreen panel (CTP)

Memory

- Standard memory: internal memory, minimum capacity 8 Gbytes (of which 128 Mbytes are available for data storage).
- 2 GB Nand Flash (program + storage)
- 64 MB acquisition memory

Input/Output

- Two USB 2.0 Master ports.
- One mini USB 2.0 device
- One RJ 45 connector for Ethernet interface LAN 10/100/1000 Mbit/s
- One RS422 interface (for future use)
- One micro SD interface
- One Audio jack
- Built-in microphone and loudspeaker
- One optical option board (optional)
- Built-in SATA 2"5 Hard Disk (optional)
- Built-in Bluetooth or built-in WIFI (optional)

Power supply

Battery The instrument is supplied with one Lithium Ion battery:

- a standard Lithium Ion battery with the 6000A V2 Platform and 6100 module box
- a high power Lithium Ion battery with the 6000A V2 Platform and 6200 module box
 - Reference for the MTS/T-BERD 6000A V2 - 6100: E60LIION/ DC 11.1V / 6.6Ah
 - Reference for the MTS/T-BERD 6000A V2- 6200: E60LIHP1 / DC 10.8V / 7.2Ah 8A max

Endurance of the 6000A V2 Platform with one standard lithium ion battery (ref E60LIION)

Measurement conditions:

- at +25 °C,
- at nominal capacity (6.6 Ah),
- 6000A V2 Platform equipped with an OTDR plug-in, type 8126B.

Endurance

- Test carried out in accordance with Telcordia GR-196-CORE recommendations: lighter backlight for the screen, (3 acquisitions of 30s per 15 minutes and auto-off): up to 9 hours.

With continuous acquisition:

- up to 4 hours with normal screen lighting.

Mains adapters

	Standard Mains Adapter
Input	100-240 V, 50-60 Hz
Output	19 V continuous, 4.73 A max
Compliance	EN 60950

Dimensions - Weight

Dimension

- Mainframe with module box type 1 : L x H x W = 290mmx188mmx97 mm (11.5"x7.4"x3.8")

Weight

- 2.4 kg (5.3 lbs) without battery nor module.
- 3.4 kg (7.5 lbs) with one module carrier and battery

Environment

- Temperature**
- Operation on mains supply, excluding options:
-20°C to +50°C.
 - Operation including all options (guaranteed specifications):
0° to +40° C
 - Storage: -20°C to +60°C

- Humidity**
- 5 to 95% without condensation

- EMI/ESD**
- CE Class A Compliant
 - FCC 47-1 Part 15 Compliant



Class A product: in a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures.

- Drop test**
- In accordance with the Telcordia GR-196-CORE recommendations, the 6000A V2 Platform resists the following test:

- 6 impacts dropped from a height of 76 cm (1 impact on each of its 6 sides, with power off).

- Shocks**
- The 6000A V2 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 6000A V2 Platform resists the following test:

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

Sinusoidal vibration **Non Operational mode**

The 6000A V2 Platform resists the following vibration tests:

- Complete test comprising 6 cycles along each of the x, y and z axes.
- 3 mm amplitude displacement test, for the range 5 Hz to 22 Hz.
- 3 cycles of 23 Hz to 500 Hz and back to 23 Hz with a 3g acceleration and a sweep rate of one octave/minute.

Operational mode

The 6000A V2 Platform resists the following vibration tests:

- Complete test comprising 2 cycles along each of the x, y and z axes.
- 1 mm amplitude displacement test, for the range 5 Hz to 22 Hz.
- 1 cycle of 23 Hz to 500 Hz and back to 23 Hz with a 3g acceleration and a sweep rate of one octave/minute.

Random vibration The EUT shall be operational when subjected to random vibration of a white power spectral density (PSD) of 0.03 g²/Hz, 30 min per axis at frequency range between 10-500 Hz.

Flammability The housing of the 6000A V2 Platform (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 nm
- 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

Chapter 14 Technical specifications

Characteristics of the options

- Measurement range: +5 to -50 dBm (-45 dBm from 800 to 1250 nm)
- Linearity within the measurement range: ± 0.2 dB

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

- Talkset**
- Dynamic range: typically 45 dB at 25°C.
 - Jack socket for headset
 - Laser, typical wavelength 1550 nm, class 1 (EN60825 and FDA21 CFR Part 1040.10)

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

Options and accessories

15

This chapter shows the references of the options and accessories of the 6000A V2 Platform.

The topics discussed in this chapter are as follows:

- [“References of options for the 6000A V2 Platform mainframe” on page 132](#)
- [“References of scopes and associated accessories” on page 134](#)
- [“References of accessories” on page 134](#)

References of options for the 6000A V2 Platform mainframe²

Platforms	References
6000A V2 Platform with high visibility colour touchscreen	EM6000AV2M /ETB6000AV2M (US)
6000A V2 Platform with colour touchscreen	EM6000AV2S /ETB6000AV2S (US)

Module carriers	References
Single Module Carrier for one FO plug-in, with standard Liion battery and AC/DC adapter/charger (to be configured)	E6100
Single Module Carrier for one FO or Transport plug-in, with High Liion battery and AC/DC adapter/charger (to be configured)	E6200

Memory options	References
Built-in hard disk option for 6000A V2 Platform (100GB SATA) - Required for Transport applications	E60V2HDISK

Adapter/Charger for cigar lighter	References
High Power mains adapter/charger for cigar lighter	E80lighter

Mains options for MTS/T-BERD 6000A ^a	References
Standard additional AC/DC adapter/charger (US)	E90WPWUS
Standard additional AC/DC adapter/charger (Europe)	E90WPWE
Standard additional AC/DC adapter/charger (UK)	E90WPWUK

Power Meter / VFL / Talkset options	References
Talk set option for 6000A V2 Platform	E80ETS
Power meter option for 6000A V2 Platform	E80EPM
Power meter and VFL option for 6000A V2 Platform	E80EPMVFL
Power meter and Talk set for 6000A V2 Platform	E80ETSPM
Powermeter, Talk Set and VFL for 6000A V2 Platform	E80ETSPMVFL

Universal connectors for Talkset ^a	Reference
Universal PC connector with FC adapter	EUNIPCFC

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

Universal connectors for Talkset ^a	Reference
Universal PC connector with SC adapter	EUNIPCSC
Universal PC connector with ST adapter	EUNIPCST
Universal PC connector with DIN adapter	EUNIPCDIN
Universal APC connector with FC adapter	EUNIAPCFC
Universal APC connector with SC adapter	EUNIAPCSC
Universal APC connector with ST adapter	EUNIAPCST
Universal APC connector with DIN adapter	EUNIAPCDIN
Extra adapter for Talkset ^b	Reference
Universal FC adapter	EUFCAD
Universal SC adapter	EUSCAD
Universal ST adapter	EUSTAD
Universal DIN adapter	EUDINAD

- a. At least one connector must be chosen
- b. Interchangeable in the field

Connector for VFL and power meter	References
Universal push/pull connector/adapter, 2.5 mm fiber	EUPP2.5

WIFI and Bluetooth options	References
Built-in WIFI option for 6000A V2 Platform	E60V2WIFI
Built-in Bluetooth option for 6000A V2 Platform	E60V2BLUE

Smart Access Anywhere (Software license)	References
Smart Access Anywhere for 6000A V2 Platform - L1: Remote coaching and file transfer for T-BERD/MTS-6000 using Ethernet or WIFI hotspot connection	SAA-6KAV2-L1
Smart Access Anywhere for 6000A Platform - L2: Remote coaching and file transfer for T-BERD/MTS-6000 using Ethernet, WIFI and selected 3g Smartphone (via USB or WIFI)	SAA-6KAV2-L2

SmartFTTA (Software license)	References
SMARTFTTA OTDR function for T-BERD/MTS-6000A V2	ESMARTFTTA-6KV2
SMARTFTTA OTDR upgrade option for T-BERD/MTS6000A V2	ESMARTFTTA6KV2U

SmartLink (Software license)	References
Smartlink OTDR function for T-BERD/MTS-6000A V2	ESMARTLINK-6KV2

SmartLink (Software license)	References
Smartlink OTDR Upgrade for T-BERD/MTS-6000A V2	ESMARTLK6KV2UPG

FTTH SLM (Software license)	Références
FTTH-SLM OTDR option for T-BERD/MTS 6000A V2	ESMARTFTTH-6KV2
FTTH-SLM OTDR Upgrade for T-BERD/MTS-6000A V2	ESMARTFTTH6KV2U

Optipulses (Software license)	Références
Optipulses OTDR option for T-BERD/MTS-6000A V2	EOPTIPLS-6KV2
Optipulses OTDR Upgrade for T-BERD/MTS-6000A V2	EOPTIPLS6KV2UPG

References of scopes and associated accessories

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)	EDFSCOPE5K
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)	EDFSCOPE5Ki
Carrying case for fiber microscope and accessories	EOCIS-SC1

References of accessories

Soft and hard carrying cases	Reference
Wrap around carrying case for 6000A V2 Platform	ESCASE6KV2
Wrap around Soft Case	E40SCASE1

User manual for 6000A V2 Platform platform	Reference
User manual for 6000A V2 Platform (French)	E6000AV2M01
User manual for 6000A V2 Platform (English)	E6000AV2M02
User manual for 6000A V2 Platform (German)	E6000AV2M03

NOTE

The User Manuals for MTS/T-BERD 6000A V2 (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.

Chapter 15 Options and accessories
References of accessories

Maintenance and Troubleshooting

16

This chapter describes how to maintain your unit and identify and correct problems related to the 6000A V2 Platform.

The topics discussed in this chapter are as follows:

- [“Maintenance procedure” on page 138](#)
- [“Recycling Information” on page 154](#)
- [“Troubleshooting” on page 154](#)
- [“General information on warranty” on page 158](#)

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 6000A V2 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 6000A V2 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.

Changing the module carrier

If the module carrier installed onto the Platform must be changed, proceed as follows:

- 1 Switch off the Platform and disconnect the mains supply.
- 2 Turn the instrument face down on the work surface.
- 3 Unscrew the 4 screws on the 4 extremities of the pack module installed onto the Platform.
- 4 Pull the pack gently to remove it from the Platform.
- 5 Set the new module carrier, making flush the connectors (2a & 2b) on both parts and the 4 screws with the 4 holes provided for those screws (1a -> 1d).
- 6 Fix the module tightening the screws.

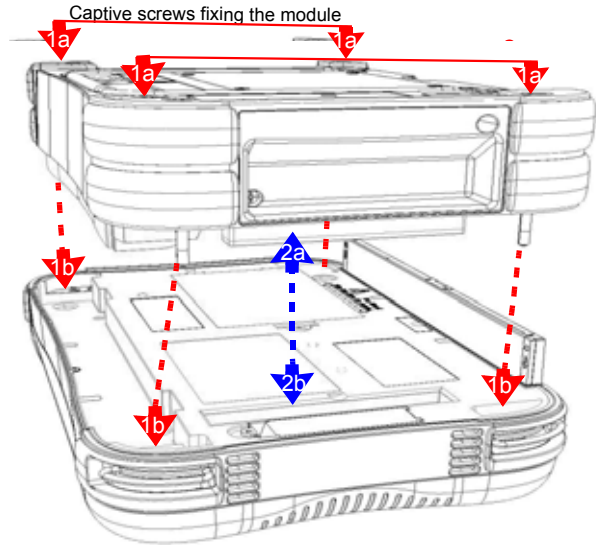


Fig. 87 Installing a module

Installing the options

If some options have been ordered after the delivery of the T/BERD-MTS 6000A V2, they have to be mounted by the customer.

Installing a Hard disk

If the hard disk is ordered after the delivery of the Platform, it has to be inserted into the equipment by the customer.

- 1 Follow [step 1](#) to [step 4](#) to isolate the base unit from the module.
- 2 Remove the hard disk cover
- 3 Insert the hard disk into the location provided for that purpose onto the base pack
- 4 Push gently the hard disk to correctly insert it
- 5 Set back the cover



Fig. 88 Location for the hard disk and WIFI/Bluetooth options

- 6 Set back the module pack onto the base pack
- 7 If necessary plug the equipment to charge the battery
- 8 Switch on the 6000A V2 Platform.
- 9 Press **FILE** hard key to display the explorer, with the new drive «hard disk» on the left of the screen
If the hard disk has not been detected, turn off the instrument and check the installation of the hard disk into the base.

Installing the WIFI or Bluetooth option If the option WIFI or Bluetooth is delivered after the platform delivery, the customer needs to install himself the option into the equipment.

- 1 Proceed as described from [step 1](#) to [step 4](#) in the chapter “[Changing the module carrier](#)” to remove the pack Base from the module.
- 2 Open the cover of the optical options (see [Figure 88 on page 140](#)).
- 3 Install the option wished, WIFI or Bluetooth, in the connector.



Fig. 89 WiFi / Bluetooth option installation

- 4 Set back the cover, then the module pack onto the base pack
- 5 If necessary plug the equipment to charge the battery
- 6 Switch on the 6000A V2 Platform.
- 7 Press **HOME** hard key to display the **Home** page and press **System Settings** menu key to display the WiFi/Bluetooth parameters..
If the options have not been detected, turn off the instrument and check the installation into the base.

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, trichloro-ethylene, 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-linting 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 6000A V2 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 6000A V2 Platform information On the 6000A V2 Platform, some screens allow to display information on different elements of the equipment.

To display the information on the 6000A V2 Platform

- 1 On the **Home** page, press **About** to display the presentation screen of the 6000A V2 Platform.

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



Fig. 90 General page

This page shows:

- The software version information
- The product contents: base, optical options, battery type, module installed and date of calibration for options concerned.

The options set into the 6000A V2 Platform are marked with a green tick.

Software options page This page allows to visualize the software options available on the 6000A V2 Platform.

Services Data page This page allows to display information about the elements inside the 6000A V2 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 6000A V2 Platform.



Fig. 91 Services Data page

Accessing to the 6000A V2 Platform documentation All documents necessary for the 6000A V2 Platform use are directly available onto the equipment.

To display the list of documents available for 6000A V2 Platform use:

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



Fig. 92 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 6000A V2 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 In Internet Explorer, enter the address: <http://www.updatemy-unit.net>
- 3 Click on the link: «T-BERD®/MTS-6000 and 6000A Platform with SN > 10000»

- 4 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
- 5 In the new dialog box displayed, click on **Save** to save the exe file on the PC.
- 6 Once completed, connect the USB memory stick to the PC and follow the instructions chapter “[Installation from a USB memory stick](#)” on page 147, from [step 2](#).

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

- 1 Connect the 6000A V2 Platform to a PC via an Ethernet link.
- 2 On the **Home** page, press **System 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 **6k.updatemyunit.net** is automatically displayed.
- 5 Select if the new release for 6000A V2 Platform must be automatically detected (**Enable**) or not (**Disable**). See “[Checking new upgrade on Viavi Server](#)” on page 148.



Fig. 93 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 menu key **Exit** to return to **Home** page.
- 8 Press, in succession the menu keys: **Expert Tools > Upgrades > Software Upgrade > Upgrade via Ethernet**.
The message `Verify IP address of PC server appears`.
- 9 Click on **Continue**.

The list of the software versions available on the PC is displayed next to the versions installed on the 6000A V2 Platform.



Fig. 94 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 6000A V2 Platform to a PC via an Ethernet link.
- 2 On the **Home** page, press **System 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 6000A V2 Platform (see [Figure 94 on page 146](#)).

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 6000A V2 Platform” on page 155](#)).

- 1 Once formatted, disconnect the USB memory stick from the 6000A V2 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 stick:
 - a Download and save on your PC the .exe upgrade file that you can get from the web (see [“Downloading from Internet” on page 144](#)).
 - 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.



Fig. 95 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 the **HOME** hard key, then 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 6000A V2 Platform (see [Figure 94 on page 146](#)).

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 6000A V2 Platform (see [Figure 94 on page 146](#)), 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 6000A V2 Platform is automatically rebooted. Upgrading takes several minutes. Finally, the 6000A V2 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 93 on page 145](#)), 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.




Fig. 96 Checking new release

- 4 Press **Ok** to display the list of software versions available (see [Figure 94 on page 146](#)) and follow instructions “[Launching the upgrade](#)” on page 148.

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

- 1 Turn off the 6000A V2 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 6000A V2 Platform.
- 5 A menu is displayed, then the screen allows to select **Upgrade from 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 6000A V2 Platform will automatically turrs on and display the **Home** page.

Installing licenses

The menu key **Install Option** allows to import the licence to get a software option.

```
# J252 Software Option License File for FTTC PLATFORM
#
# This license file contains your licenses.
#
# Lines starting with #, blank lines, email header lines, and any
# other lines not starting with a J252 keyword are comments that
# licenses reader ignores.
#
# Except as noted, please do not modify lines starting with keywords.
#
#-----
# This file should be loaded onto your FTTC 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 Licenses'
#
# 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
# Challenge# Codes
# lic_6000A_00001_00001_00001_00001_00001_00001_00001_00001_00001_00001
# FTTCJ252LIC AAAA1A-AAA00x#EKKKXW0T1x#J2F9656415Aaaw4#pmw0126ab
```

License Code

Fig. 97 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 6000A V2 Platform.



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

Enter Manually the Licence code

- 1 In the **Home** page, click on **Expert Tools > Upgrades > Install Option > Enter Challenge**

The edition keypad is displayed

- 2 Enter the challenge code of the option, set at the bottom of the file (see [Figure 97 on page 150](#)),




Fig. 98 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, click on **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.
- 2 In the File Explorer, select the USB stick, then the license file (.lic) to be imported,
- 3 Click on **Load**
- 4 The challenge codes contained in this file will then be loaded automatically and your software options will be installed.

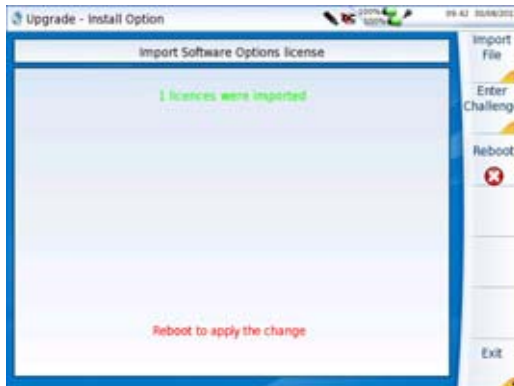



Fig. 99 License imported

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

Locking the 6000A V2 Platform

The 6000A V2 Platform can be locked at any time:

- 1 In the **Home** page, press **Expert Tools > Instrument Lock Out**
- 2 Confirm the 6000A V2 Platform locking by clicking on **Confirm** (or use the **Cancel** key to cancel the process).
The numeric keypad is displayed
- 3 Enter the password to lock the instrument: **42000**.



Fig. 100 Password

4 Click on **Enter**

The 6000A V2 Platform locking screen is displayed.



Fig. 101 Locking screen

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

Unlocking the 6000A V2 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 14).
Nothing happens on screen, whatever is the action done (menu key or hard key pressed...)	- The Platform must be rebooted. See “Resetting the 6000A V2 Platform” on page 16 .
You are using the 6000A V2 Platform in the ordinary way when it suddenly switches off.	- Check the instrument is not configured to Auto off. See “Defining the Automatic shutdown of the 6000A V2 Platform” on page 22 . - Check the battery charge level. See “Charging the battery” on page 14 .
The battery refuses to charge (the Battery indicator does not go on when the instrument is connected to the mains and is not operating).	- 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 156 .
When using the touchscreen, nothing happens	- The touchscreen needs to be calibrate. See “Touchscreen calibration” on page 156

Troubleshooting	Solution
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 89) - 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 89). - The USB memory stick is not detected by the 6000A V2 Platform: use another memory stick, or another storage media; or transfer data via USB cable (see “Transferring files to/from a PC with a FTP server” on page 78).
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 146)
Error message when upgrade via USB key is confirmed	<ul style="list-style-type: none"> - Check the USB key is correctly connected (see “USB memory stick connection” on page 89)
Error message when unlocking the instrument	<ul style="list-style-type: none"> - The password is not the correct one (see “Locking the 6000A V2 Platform” on page 152).

Formatting the USB memory stick onto the 6000A V2 Platform

If the USB icon  is displayed on the upper banner of the screen, when a USB memory stick is connected to the 6000A V2 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 port on the top of the 6000A V2 Platform.
- 2 In the **Home** page, press successively **Expert tools > Media utilities > Usbflash Format**.
- 3 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/harddisk

To delete all the disk contents of the 6000A V2 Platform:

- 1 On the **Home** page, press **Expert Tools > Media Utilities**,
- 2 Select **Erase Disk/Erase Harddisk** to delete all the disk contents into the 6000A V2 Platform.
- 3 Confirm the deletion clicking on **Confirm**

- 4 Enter the password **02468753** and confirm clicking on **Enter**
A window displays during deletion and once the deletion is completed, a message inform you.
- 5 Press any key to continue.

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 6000A V2 Platform touchscreen. To calibrate the touchscreen, proceed as follows:

- 1 In the **Home** page, press **System Settings** menu key.
- 2 In the **System Settings** page, press menu key **Touch Screen**.
A blue slightly smaller screen appears, displaying a little target on the left hand corner.
- 3 Click on this target (preferably with the stylus for touchscreen).
- 4 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.

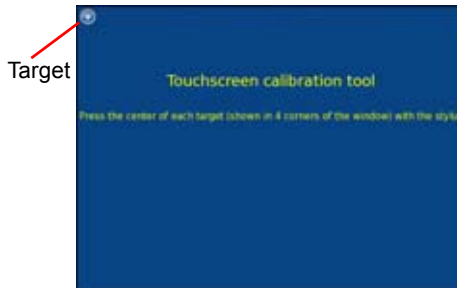


Fig. 102 Touchscreen calibration

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

Removing the damaged battery

To access the battery of the 6000A V2 Platform, proceed as follows

- 1 Switch off the 6000A V2 Platform and disconnect the mains supply.
- 2 Turn the instrument face down on the work surface.

- 3 Slacken the two screws located at the bottom of the instrument using a coin, and unscrew them
- 4 Remove the cover of the battery pack.
The battery can then be removed, taking care not to damage the connectors into which it is plugged.

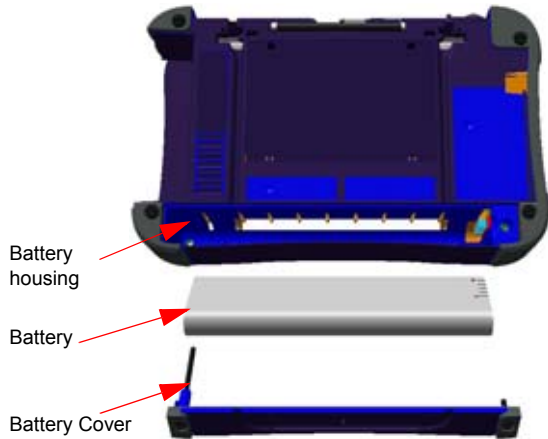


Fig. 103 Battery seatings

- Setting a new battery**
- 1 Set the new battery into the housing provided for that purpose, taking care not to damage the connector.
 - 2 Press gently but firmly to make sure it is correctly set.

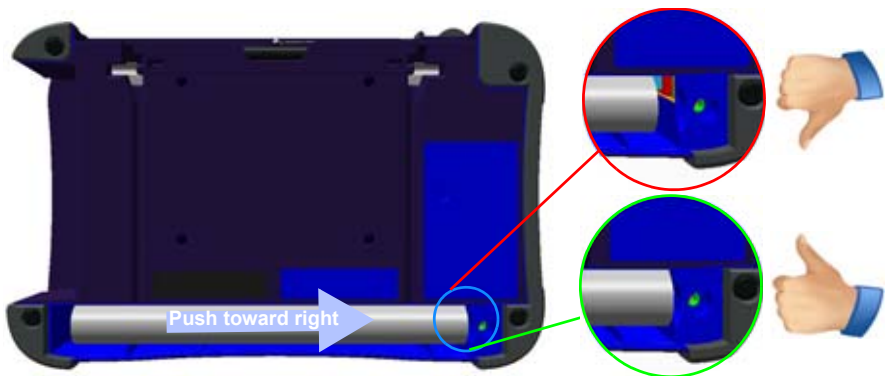


Fig. 104 Battery position

- 3 Put back the battery cover and lock the screws.

NOTE

If the battery is not correctly installed, the cover cannot be screwed.

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.

Chapter 16 Maintenance and Troubleshooting
General information on warranty

Calibration Recommended

A

The following appendix provides recommended calibration period for the MTS/T-BERD 6000 and MTS/T-BERD 6000A.

Recommended Calibration Period

Mainframe equipped with Power Meter option	12 months
Mainframe equipped with Laser Source option	12 months
Mainframe used with Reflectometer module	12 months
Mainframe used with Fiber Characterization module (CD / PMD / AP)	12 months
Mainframe used with MSAM module (MTS/T-BERD 6000A only)	36 months

The calibration interval shall be regarded as a recommendation.
The real definition of the calibration interval should be made by the user.
The type of application and the environmental conditions should be taken into account.

Due date of the calibration certificate shall be calculated accordingly by the user.

Index

A

- About page [142](#)
- AC Adaptor
 - specifications [127](#)
- Accessories [131](#)
- AP file [75](#)
- Application
 - calculator [57](#)
- Assembling the component parts [12](#)
- Attenuation
 - accuracy of measurement [24](#)

B

- Battery
 - specifications [127](#)
- Battery charger
 - specifications [127](#)
- Bluetooth [117](#)
 - file export [121](#)
 - interface transfer [122](#)
 - pairing [118](#)
 - reference [133](#)
 - remove pairing [124](#)
 - search devices [119](#)

C

- Calculator [57](#)
- CD OTDR file [75](#)
- Cladding [43](#)
- Cleaning
 - connectors [141](#)
 - plates, housings and screen [141](#)
- Connectors [4](#)
- Connectors & adapters
 - references [132](#)
- Core [43](#)
- CSV file [76](#)

D

- Datalink [32](#)
- Delete disk
 - password [156](#)
- Dimensions [128](#)

E

- Environment [128](#)
- Epoxy [43](#)
- Equivalence

keyboard and platform 68, 102

Ethernet
mode 65

Ethernet IPv6 66

F

Ferrule 43

File
merge 87
storage media 88
transfer
connection for 77
process 78

File explorer 57

File Transfer
Bluetooth 121
E-mail 81
FTP 78
Smart Access Anywhere 103
WIFI 115

Front Panel 4

G

Guarantee conditions 153

H

Hard disk
reference 132

Hard disk (option) 89

Hard keys 5

HTML file 76

I

Indicators 6

Internal memory
access 80
contents 81

J

JPG,JPEG file 76

L

License
enter manually 150
import from USB 151

License file 76, 150

M

Memory
capacity 126

Module carrier 2

MSOR file 75

O

ODM file 75

OEO file 75

Optical connectors
precautions 8

OSA file 75

OTDR file 75

P

PDF
reader 50
report 85
scope report 47

PDF file 76

Platform
locking 152
reset 16
switching off 16
switching on 15
troubleshooting 154
unpacking 12

PMD file 75

PNG file 76

Position of the instrument 13

Power meter
 alarm 26
 attenuator compensation 26
 connection 24
 file management 30
 measurement 29
 reference 132
 reference measurement 29
 results 26
 specifications 129
 zero value 28

Powermeter file 75

Proxy 66

R

Report 85
 result 87

S

Scope
 about page 40
 auto center 38
 capture button 38
 cladding 43
 comment 45
 core 43
 epoxy 43
 feature 36
 ferrule 43
 fiber config 39
 file config 38
 freeze 38, 41
 link config 39
 load picture 45
 mosaic 44
 overlay 43
 pass/fail config 37
 profile 37, 40
 references 134
 report display 47
 test results 43
 tip 38

Screen
 specifications 126

Screenshot
 PDF,JPG 84

Services data 143

Smart Access Anywhere
 access code 100
 application 99
 connection settings 106
 connection test 107
 creating directory 105
 deleting file 105
 Ethernet connection 96
 home page 101
 install 98
 Licence 1 95
 Licence 2 95
 references 133
 renaming file 105
 session information 105
 USB connection & 3G smart-
 phone 97
 WIFI connection 96
 WIFI connection & 3G smart-
 phone 97

Soft and hard cases
 references 134

Software update
 via Internet 144
 via USB 147
 via Viavi Server 145

Specifications 125

Storage media 88
 abbreviations 93

T

Talkset
 connection 24
 connections 31
 icons 32
 reference 132
 remote screen 33
 VNC session 34
 volume 32

Text Editor 51

Time synchronization 19

Transfer interface
 Bluetooth 122
 Ethernet 67
 Ethernet config 65
 proxy config. 66
 remote screen 64
 Smart Access Anywhere 101
 WIFI 114

TXT file [76](#)

U

USB

- connection [89](#)
- disconnection [89](#)
- upgrade via [147](#)

User manual

- references [134](#)
-

V

VFL

- connection [24](#)
- emission of light [30](#)
- function [29](#)
- reference [132](#)
- specifications [130](#)

Virtual control buttons bar [68](#)

Virtual control buttons bar, [102](#)

VNC [67](#)

VNC (Talkset) [34](#)

W

Web Browser

- access [53](#)
- bookmarks [55](#)
- navigation [55](#)
- pdf document [56](#)
- quit [56](#)

WIFI

- 802.11 [112](#)
 - 802.11 IPv6 [113](#)
 - configuration [112](#)
 - file transfer [115](#)
 - interface transfer [114](#)
 - reference [133](#)
-

X

XML file [76](#)



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