VIAVI

FiberChek™ Sidewinder MPO Inspection Probe

Quick Start Guide

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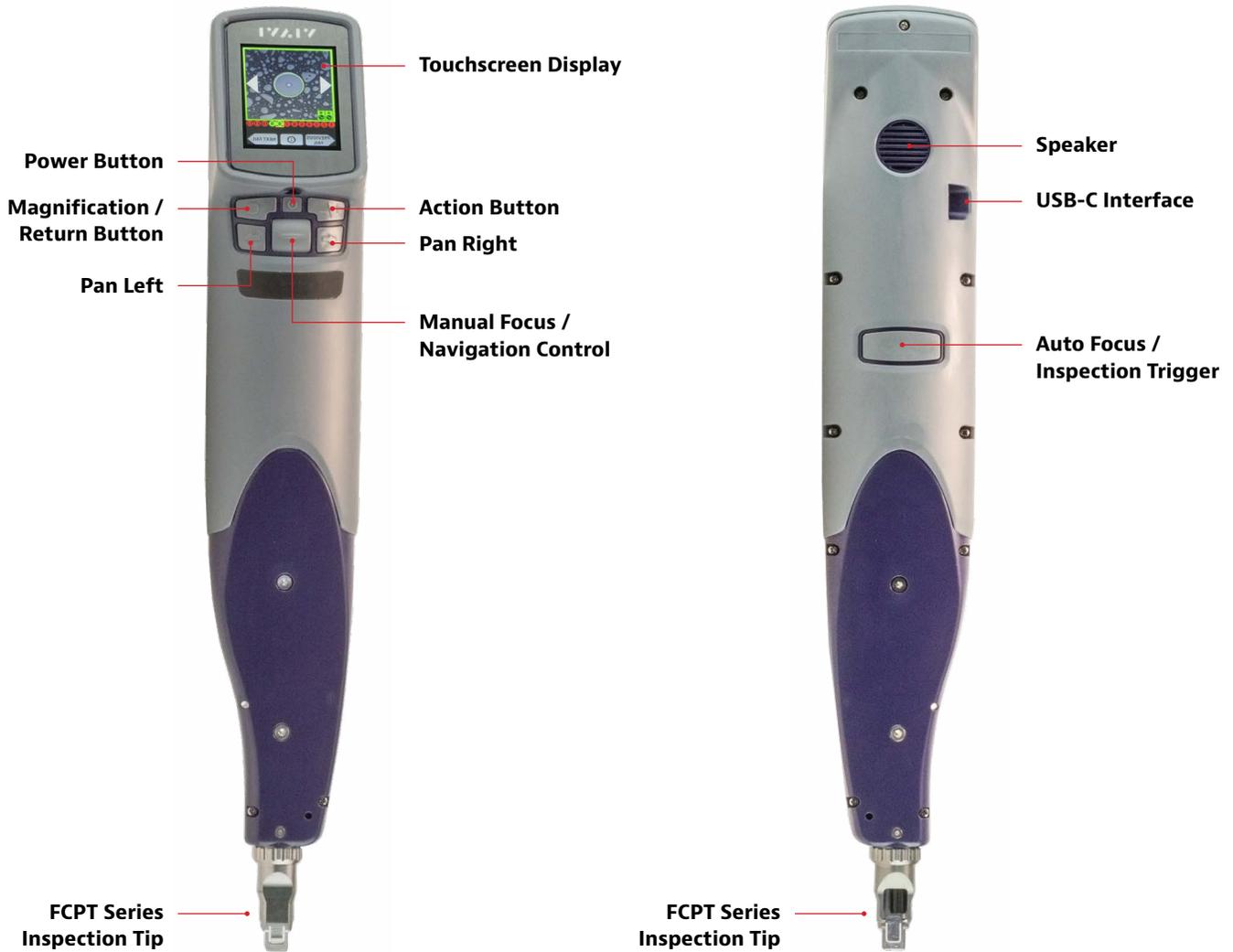# Contents

Chapter 1   **Introduction**

Thank you for purchasing the FiberChek Sidewinder MPO Inspection Probe.

Inspection of fiber optic interconnects is essential for the optimal performance and longevity of fiber optic networks. Every time they are handled, fiber connectors must be inspected to ensure no debris or damage is present. VIAVI has made this critical task easier than ever with the FiberChek Sidewinder MPO Inspection Probe. Sidewinder's standalone operation, color touchscreen display, and Wi-Fi connectivity allow fast, reliable maintenance of optical connector quality.

For more information, such as product specifications and how-to videos, please visit www.viavisolutions.com/sidewinder.

Chapter 2   Overview

Touchscreen Display

Power Button

Magnification /
Return Button

Pan Left

Action Button

Pan Right

Manual Focus /
Navigation Control

FCPT Series
Inspection Tip

Speaker

USB-C Interface

Auto Focus /
Inspection Trigger

FCPT Series
Inspection Tip

Using the Menu

Many of Sidewinder's features and settings can be found in the Menu. To access the menu, tap the touchscreen when in the Live Inspection View. *If the Sidewinder is displaying an analysis result or still image, return to the Live Inspection View by pressing the Autofocus/Inspection Trigger once.*

Navigating the Menu

· Select an item using the Manual Focus/Navigation Control.

· Press the Action Button or tap the underlined menu item to confirm a selection or view additional options.

· Press the Magnification/Return Button to return to the previous screen. Pressing the Magnification/Return Button from Sidewinder's top-level Menu will return to the Live Inspection View.

· Press the Autofocus/Inspection Trigger at any time to return to the Live Inspection View.

Using Tips and Adapters

Sidewinder uses the FCPT Series probe tips. These are purpose-built for Sidewinder, and must be installed correctly ensure that the fibers in the array are properly enumerated.

When looking at an FCPT tip, you will see that one side of the flat edge of the tip has a cutout and a key (Side A). The other side has a tab cutout (Side B). To ensure proper fiber enumeration, set the tip with the Side A facing up, so that when you hold the Sidewinder with the touchscreen-side up, the hollow/keyed side of the tip is facing toward you.

FCPT Tip Side A   **FCPT Tip Side B**

Sidewinder is primarily designed to inspect and analyze multi-fiber connector end faces, such as MTP® and MPO, but can also be configured to inspect and analyze simplex fibers.

Sidewinder ships with the FCPP-OLA-1 Optical Lens Assembly attached by default (see Figure 4). This is the required optical assembly for all FCPT Series multi-fiber connector tips for Sidewinder.

To inspect a simplex fiber, follow these steps

Step 1.   From the Live Image mode, enter the menu by tapping the touchscreen.

Step 2.   Enter the Connector Setup wizard, which should be the first option in the menu.

Step 3.   Select the appropriate profile for the type of simplex fiber you want to inspect; Sidewinder will move the objective to the right.

Step 4.   Select Simplex for the connector type by pressing the Action button.

Step 5.   Select the tip setting you will use for your simplex inspection *(for more information about tip settings, also called Optical Settings, refer to the FiberChekPRO user manual).*

Step 6.   Turn Sidewinder OFF.

Step 7.   Remove any FCPT tip on the front of the Sidewinder, if present, by unthreading the collar and pulling the tip away from the probe body.

Step 8.   Carefully unthread the FCPP-OLA-1 optical lens assembly on the front of the probe.

     a.   Be sure not to touch the lens on the front of the tip.

     b.   Store the FCPP-OLA-1 carefully to ensure it does not become dirty or damaged.

Step 9.   Attach the FCPT-UFBPT assembly (see Figure 1).

     a.   First install the short black hollow tube on the inside-front of the Sidewinder, threading it on using the included narrow collar.

     b.   Once the black tube is installed, attach the larger metal body of the FCPT-UFBPT to the outside-front of the Sidewinder using the larger collar.

     c.   Note that you may need to move the short black hollow tube manually to attach the FCPT-UFBPT.

Step 10.   Attach your simplex tip or barrel.

     a.   If using a hollow tip that requires an FBPP-BAP1 barrel assembly, attach the FBPP-BAP1 to the FCPT-UFBPT (see Figure 2).

     b.   If your tip is hollow, it requires a FBPP-BAP1.

     c.   If using a tip that contains its own optics, you can attach the tip directly to the FCPT-UFBPT without a barrel assembly (see Figure 3).

     d.   Examples of tips containing optics include long reach (-L) tips, 60-degree (-A6) tips, and certain others.

Step 11.   Once your simplex tip is attached, you are ready to configure your probe for simplex inspection— See Inspecting Simplex Fiber.

Step 12.   Remember that when you are ready to return to inspecting ribbon fiber, you will need to perform Steps 6 through 10 in reverse, including removing the hollow tube part of the FCPT-UFBPT and reattaching the FCPP-OLA-1.

Important: Do not turn Sidewinder ON with the FCPT-UFBPT attached unless you are certain that you have configured the probe for simplex inspection. Doing so will cause the x-axis motor to grind against the constraints of the FCPT-UFBPT, potentially damaging the motor.
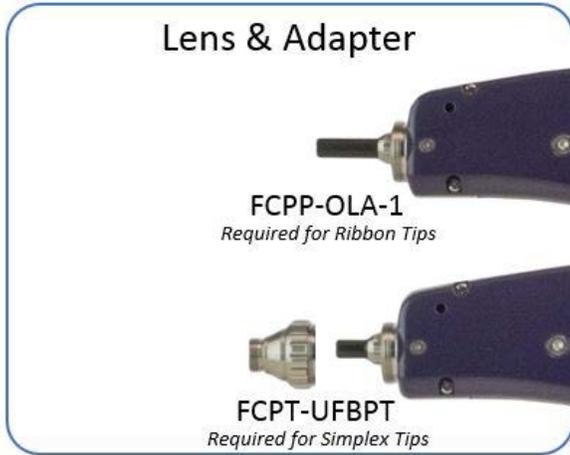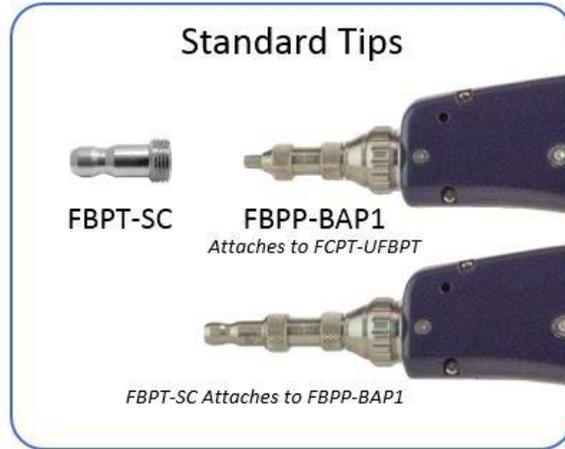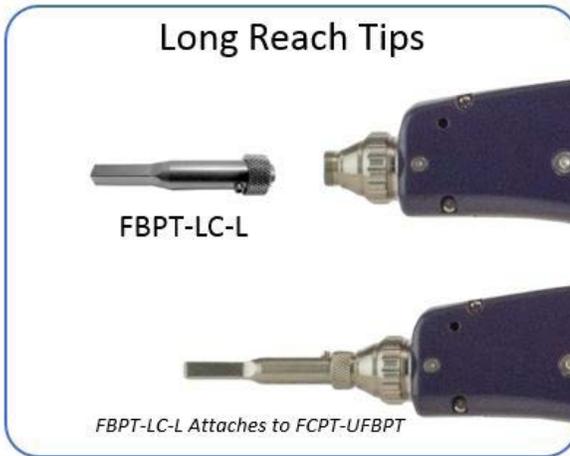
Figure 1

Figure 2

Figure 3

Quick Start Guide: FiberChek™ Sidewinder MPO Inspection Probe

3

Chapter 3   Operation

Setting up PASS/FAIL Analysis for Multi-fiber Connectors

Step 1.   From the Live Inspection View, tap the Touchscreen Display to enter the Menu.

Step 2.   Select CONNECTOR SETUP using the Manual Focus/Navigation Control, then press the Action Button. (See Figure 1)

Step 3.   Choose the desired inspection profile using the Manual Focus/Navigation Control, then press the Action Button. (See Figure 2)
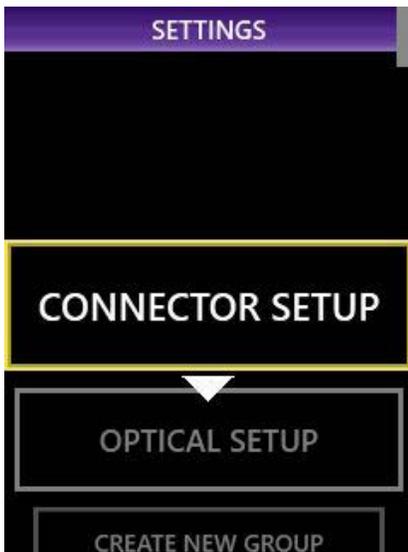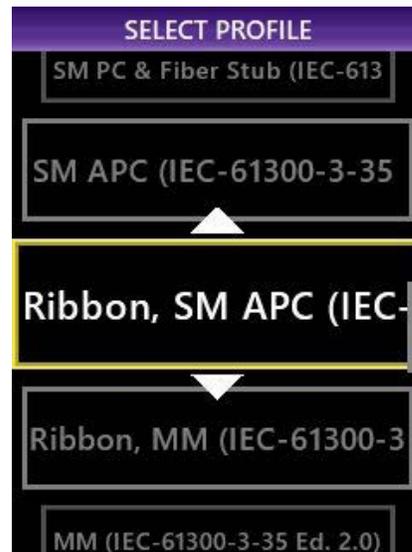

Figure 1

Figure 2

Step 4.   Select the connector configuration (number of fibers x number of rows), then press the Action Button. (See Figure 3)

Step 5.   Select the tip setting, then press the Action Button. (See Figure 4)

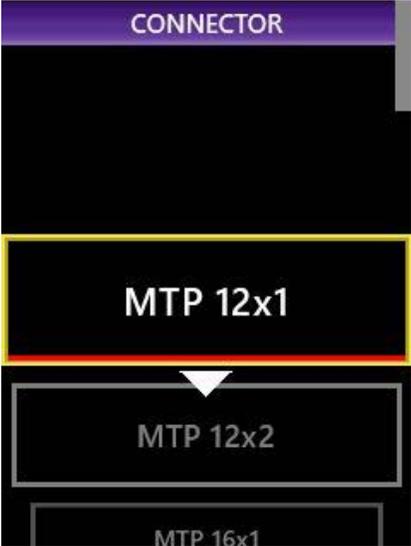Step 3.   Return to the Live Inspection View by pressing the Autofocus/Inspection button.

Figure 3

Figure 4

Creating or Editing an Optical Setting

Different manufacturers of MPO connectors use different ferrule materials and different polishing processes. Because of this, MPO connectors may appear very different from one another. Sidewinder is pre-loaded with an Optical Setting suitable for most MPO connectors. For some connectors, however, you may need a custom Optical Setting. There are two ways to create a custom Optical Setting: by connecting your Sidewinder to FiberChekPRO and using the software interface, or by running the Optical Setting routine directly on the Sidewinder. Note that you will need a stable connection to the connector under test.

To create or modify an Optical Setting in FiberChekPRO

Step 1.   Connect your device to a PC/laptop with FiberChekPRO installed.

    a.   FiberChekPRO is available for download at **http://fcpro.updatemyunit.net/**.

    b.   You may download FiberChekPRO as many times and to as many computers as you need at no additional cost.

Step 2.   Launch FiberChekPRO.

Step 3.   Click the Inspection tab at the top of the screen, if necessary.

Step 4.   From the Live Image mode in FiberChekPRO, ensure the Sidewinder is panned to the leftmost fiber to achieve the optimal lighting value during the lighting adjustment routine.

Step 5.   Open the Setup menu, then select your Sidewinder device from the menu.

Step 6.   Select Optical Settings from the left-hand pane.

Step 7.   If modifying an existing Optical Setting, select it from the right-hand frame and click the Edit... button.

Step 8.   If creating a new Optical Setting, press the New... button.

Step 9.   FiberChekPRO will run a quick initialization of the end face.

Step 10.   Once the initialization is complete, you can enter a name for your Optical Setting in the text box at the upper-left (if necessary).

Step 11.   Make sure the Associated Fiber Type is Ribbon, then click the Auto Focus button.

Step 12.   Click the Auto Adjust Optical Setting button; this will run the lighting adjustment routine.

Step 13.   Once the lighting adjustment routine finishes, align the red cross-hairs to the edges of the fiber.

Step 14.   Select OK at the bottom-left of the screen.

Note: For detailed, illustrated instructions on creating and modifying Optical Settings in FiberChekPRO, consult the FiberChekPRO User Manual, available from the Help menu.

To modify an Optical Setting on the Sidewinder

Step 1.   For best results, pan to the leftmost fiber in the Live Image mode.

Step 2.   From the Live Image mode, tap the touchscreen to enter the Menu.

Step 3.   Scroll down to Optical Setup and press the Action Button, or tap the menu item to confirm (see Figure 5).

Step 4.   Select either CREATE NEW Optical Setting or Cancel.

Step 5.   Sidewinder will locate a fiber in the array and place a blue circle around its circumference (see Figure 6).

      a.   The circle should be just inside the fiber's edge

      b.   To make the circle larger, push the focus wheel up or move the on-screen slider to the right

      c.   To make the circle smaller, push the focus wheel down or move the on-screen slider to the left

Step 6.   Once the blue circle is aligned, press NEXT.

Step 7.   Press the AUTO button at the bottom-left of the screen; this will start the automatic lighting adjustment (see Figure 7).

Step 8.   Sidewinder will search for the optimal lighting value; press DONE to finish.

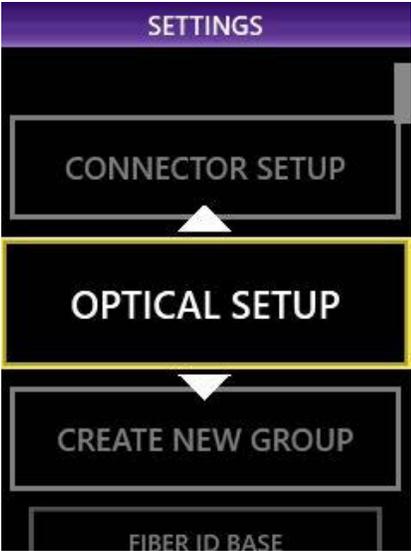**Note:** You can discard your changes at any time by pressing the X in the upper-left corner of the screen.
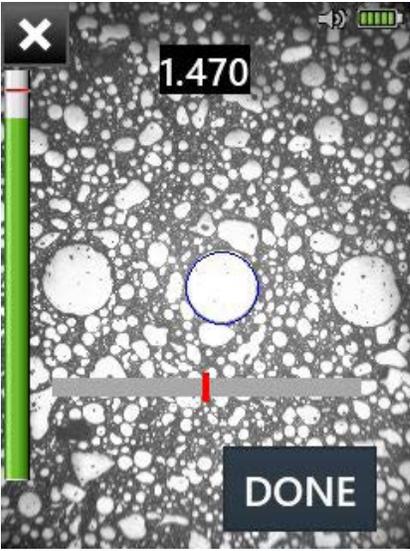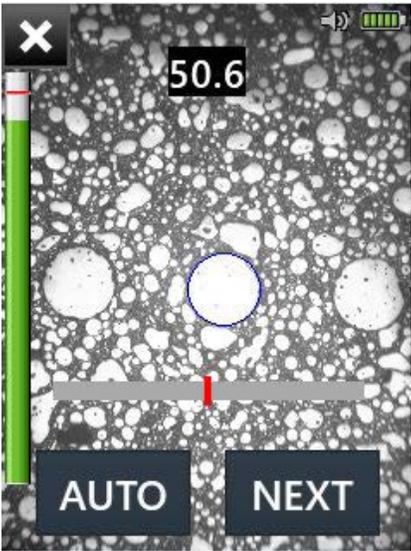

Figure 5

Figure 6

Figure 7

Performing PASS/FAIL analysis

Test: Ensure the Sidewinder is in Live mode. Press and hold the Autofocus/Inspection trigger for one second and release. Hold the Sidewinder steady in the bulkhead until you hear or see the PASS/FAIL result.

- The above process will automatically focus and test all fibers in the array

- To manually focus and test, use the Joystick to adjust focus and press the Action button to run the analysis

Review results: Sidewinder will briefly display the analysis result, then enter the Analysis Result view. If enabled, you will also hear an audio tone indicating whether the result is a PASS (double chime) or a FAIL (long buzzer).

- A green screen with a "check" graphic indicates a PASS result

- A red screen with an "X" graphic indicates a FAIL result

The above indicates the result for the entire connector. If one or more fibers fail, the entire connector is recorded as a FAIL. To achieve a PASS result, all fibers must individually pass.

- Tap the Touchscreen Display to show or hide additional information. The modes are **No Overlay, Rings, and Rings + Table**.

- To move to an adjacent fiber, use either the on-screen arrows or use the arrow buttons on the Sidewinder.

- To view only fibers that failed the analysis, select "NEXT FAIL" or "PREVIOUS FAIL" from the on-screen display.

- Press the Action button to save the current analysis to Sidewinder's storage or current group. See "Working with Groups."

- Press the Autofocus/Inspection trigger to return to the Live Inspection view.

Working with Groups

You may find it useful to collect several analysis results or still images into a group. Saving completed PASS/FAIL results into a group makes it easy to keep track of analyses from the same job. To begin adding analyses or images to a group:

Creating a new group

Step 1.   From the Live Inspection View, tap the Touchscreen Display to enter the Menu.

Step 2.   Select CREATE NEW GROUP using the Manual Focus/Navigation Control, then press the Action Button. An on-screen keyboard will be displayed, which you can use to name your group.

Step 3.   Return to the Live Inspection View by pressing the Autofocus/Inspection Trigger once, or by pressing the Magnification/Return Button twice. You may begin performing PASS/FAIL analysis as usual. See "Performing PASS/FAIL Analysis." Saving an analysis result will add it to the current group.

Closing the current group

Step 1.   From the Live Inspection View, tap the Touchscreen Display to enter the Menu.

Step 2.   Select CLOSE GROUP using the Manual Focus/Navigation Control, then press the Action Button.

Step 3.   Return to the Live Inspection View by pressing the Autofocus/Inspection Trigger once, or by pressing the Magnification/Return Button twice. Sidewinder will now save analysis results or still images without a group.

Connecting Sidewinder to FiberChekPRO™

By connecting the Sidewinder to a PC, you can view inspection results on your computer, download data saved on the Sidewinder, and keep your probe's firmware up to date. Sidewinder can connect with FiberChekPRO using a USB cable or built-in Wi-Fi.

Connecting Sidewinder using Wi-Fi

Step 1.   From Sidewinder's Live Inspection View, tap the Touchscreen Display to enter the Menu.

Step 2.   Select RADIO SETTINGS using the Manual Focus/Navigation Control, then press the Action Button.

Step 3.   Select WiFi ENABLE using the Manual Focus/Navigation Control, the press the Action Button. WiFi ENABLE will be highlighted.

Step 4.   Launch FiberChekPRO, then open the Setup menu. Select FiberChekPRO Setup, then select WiFi. Your Sidewinder will appear in the list of Available Devices. Select it and click Connect.

Notice

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

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

Warranty

VIAVI warrants this equipment to be free of defects in material and workmanship for one (1) calendar year from the date of purchase. Any mishandling or unauthorized repairs will void this warranty. For additional warranty terms and conditions, see **www.viavisolutions.com/terms**.

Disclaimer

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Federal Communications Commission (FCC) Notice

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

The authority to operate this product is conditioned by the requirements that no modifications be made to the equipment unless the changes or modifications are expressly approved by VIAVI.

Caution: RF Radiation Exposure

- This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure limits. This transmitter must not be collocated or operating with any other antenna or transmitter.

Industry Canada (IC) requirements

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

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

This device complies with Industry Canada's licence-exempt RSSs. Operation is subject to the following two conditions: 1) This device may not cause interference; and, 2) This device must accept any interference, including interference that may cause undesired operation of the device.

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

Caution: RF Radiation Exposure

- To comply with IC RF exposure requirements, this device and its antenna must not be collocated or operating in conjunction with any other antenna or transmitter.

- Pour se conformer aux exigences de conformité RF canadienne l'exposition, cet appareil et son antenne ne doivent pas étre co-localisés ou fonctionnant en conjonction avec une autre antenne ou transmetteur.

EU WEEE and Battery Directives

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

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

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

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

EU REACH

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

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

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

This product conforms with all applicable CE marking directives. Please see EU Declaration of Conformity for details.

EU Radio Equipment Directive

In accordance with Article 10.8 of the EU Radio Equipment Directive 2014/53/EU, the following table provides information on the frequency bands and the maximum RF transmit power of this product for sale in the EU:

Frequency range (MHz)	Channels used	Max. Transmit Power (dBm)
2400-2483.5	1-13	ODFM: 13.5 dBm CCK: 17.25 dBm DSSS: 17 dBm

China RoHS - 中国 RoHS

明该产品或其配件含有有毒、有害物质（详情见下表）。

其中的数字代表在正常操作条件下至少在产品生产日期之后数年内该产品或其配件内含有的有毒、有害物质不会变异或泄漏。该期限不适用于诸如电池等易耗品。

产品生产日期请参见产品的原始校准证书

元器件	有毒、有害物质和元素					
	铅(Pb)	汞 (Hg)	镉(Cd)	六价铬	多溴联苯	多溴二苯醚
产品主体						
印刷电路板组件	X	O	O	O	O	O
内部配线	X	O	O	O	O	O
显示器	O	O	O	O	O	O
键盘	O	O	O	O	O	O
电池	O	O	O	O	O	O
电工零件	X	O	O	O	O	O
金属外壳零件和紧扣件	O	O	O	O	O	O
塑料外壳零件	O	O	O	O	O	O
标签和胶带	O	O	O	O	O	O
配件						
外接电缆和适配器	X	O	O	O	O	O
手册和其它印刷材料	O	O	O	O	O	O
包装箱和缚带	O	O	O	O	O	O
本表是按照 S / T 11364 的规定编制的: **O**：表示该有害物质在该部件所有均质材料中的含量均在 GB/T 26572 规定的限量要求以下。 **X**：表示该有害物质至少在该部件的某一均质材料中的含量超出 GB/T 26572 规定的限量要求。						

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English