AVX-10K

Flight Line Test Set

Getting Started Guide

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Getting Started Guide

22135253 Rev. 006

VIAVI Solutions
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Warranty Information

Warranty information for this product is available on the VIAVI website at: https://www.viavisolutions.com/en-us/warranty-information.

Declaration of Conformity

VIAVI recommends keeping a copy of each Declaration of Conformity shipped with the equipment in an easily accessible location.

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1

General Information

This section provides General Information of the AVX-10K. The topics discussed in this chapter are as follows:

- Configuration Details 1-1
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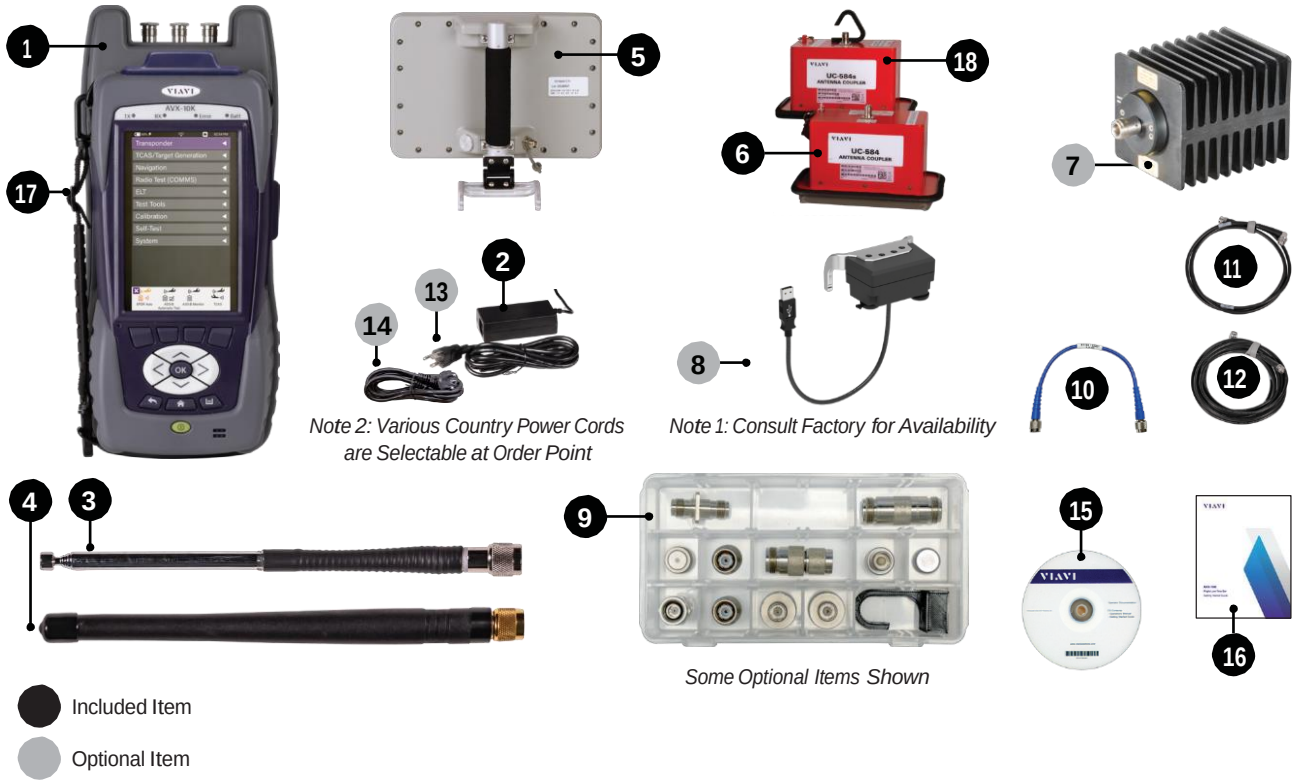
Configuration Details

See the following pages for the AVX-10K - Comprising Items List.

AVX-10K Commercial Kits Comprising Items List

ITEM #	QTY	PART #	DESCRIPTION	AVX-10K-NAV 22154862	AVX-10K-SVLC 22154822	AVX-10K-CNS 22154861
1	1	22137163	AVX-10K Base Unit	■	■	■
2	1	22146602	AC/DC Power Adapter	■	■	■
3	1	22153600	Antenna - ILS	■		■
4	1	22153599	Antenna 75 Mhz MB	■		■
5	1	22141787	Antenna, RF Flat Panel		■	■
6	1	87431	Shield / Coupler, UC-584		■	■
7	Opt	22183050	Attenuator			
8	Opt	22183051	Headset Adapter *(Note 1)*			
9	1	AC10K-ADPTRKIT	Adapter Kit *(Also shown on Figure 1)*	■	■	■
10	1	62401	Cable, Coax 1'	■	■	■
11	1	22152432	Cable, Coax 6'	■	■	■
12	1	141131	Cable, Coax 25'		■	■
13	Opt	22022754	Power Cord - US *(Note 2)*			
14	Opt	22022744	Power Cord - European *(Note 2)*			
15	1	22141759	Operations Manual	■	■	■
16	1	22135253	Quick Start Guide	■	■	■
17	1	22142165	Handstrap	■	■	■
18	1	142094	Shield / Coupler, UC-584S			■



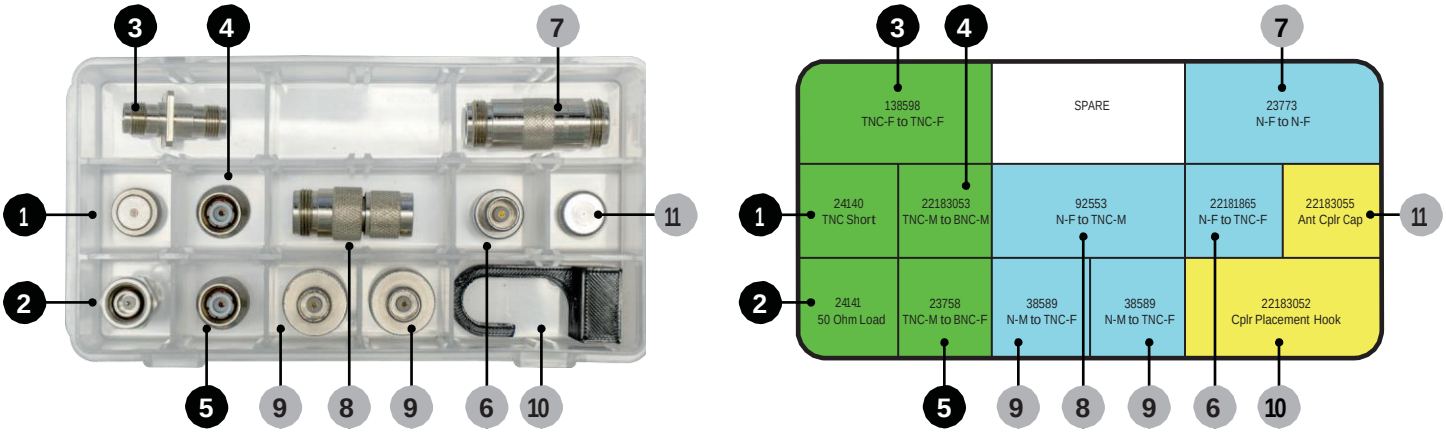
AVX-10K Commercial Kits Software Options

ITEM #	QTY	PART #	DESCRIPTION	AVX-10K-NAV 22154862	AVX-10K-SVLC 22154822	AVX-10K-CNS 22154861
1	1	22142210	AVX-10K-SXPDR; Transponder Modes A,C,S		■	■
1	1	22142212	AVX-10K-SADSB; ADS-B-In/Out / GICB / Target Gen / FIS-B		■	■
1	1	22142213	AVX-10K-STCAS; TCAS I/II			
1	1	22154823	AVX-10K-SDME; DME	■	■	■
1	Opt	22142214	AVX-10K-SUAT; UAT In/Out			
1	1	22142216	AVX-10K-SNAV; Navigation (ILS / MB / VOR)	■		■
1	Opt	22142217	AVX-10K-SELT; ELT 121.5 / 243 / 406MHz			
1	1	22142218	AVX-10K-SCOM; Radio Test AM/FM (Comms)	■		■
1	Opt	221183325	AVX-10K-SECOM; OTA / Headset			
1	Opt	22183049	AVX-10K-SSECURE; Wireless Enable/Disable			

AC10K-ADPTRKIT (22183132) Comprising Items List

ITEM #	QTY	PART #	DESCRIPTION	AVX-10K-NAV 22154862	AVX-10K-SVLC 22154822	AVX-10K-CNS 22154861
1	1	24140	CAP, TNC, FEMALE SHORT	■	■	■
2	1	24141	Conn;Conn Acc; LOAD 50 Ohm; TNC/F; DC - 6.0GHz	■	■	■
3	1	138598	Adapter, TNC-F to TNC-F	■	■	■
4	1	22183053	Adapter, TNC-M to BNC-M	■	■	■
5	1	23758	Adapter, TNC-M to BNC-F	■	■	■
6	Opt	22181865	Adapter, N-F to TNC-F			
7	Opt	23773	Adapter, N-F to N-F			
8	Opt	92553	Adapter, N-F to TNC-M			
9	Opt	38589	Adapter, N-M to TNC-F			
10	Opt	22183052	Hook, Cplr Placement			
11	Opt	22183055	Cap, TNC for Coupler Hook			

Figure 1: Adapter Kit

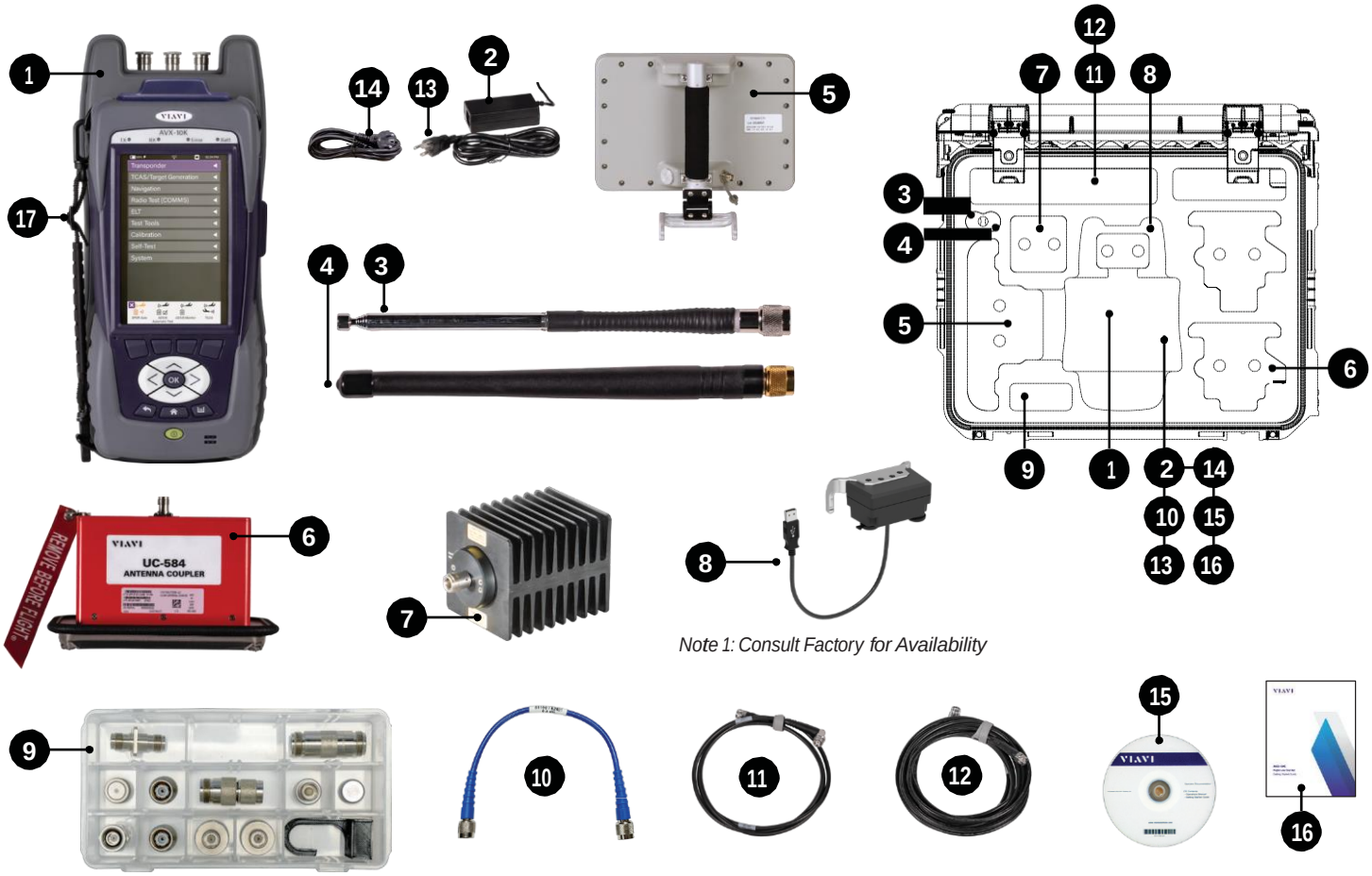


Included Item

Optional Item

AVX-10K Military Kits Comprising Items List (CAGE: 51190)

ITEM #	QTY	PART #	DESCRIPTION	AVX-10K-NAV-M 22182233	AVX-10K-SVLC-M 22182230	AVX-10K-MIL 22182232
1	1	22137163	AVX-10K Base Unit	■	■	■
2	1	22146602	AC/DC Power Adapter	■	■	■
3	1	22153600	Antenna - ILS	■		■
4	1	22153599	Antenna 75 Mhz MB	■		■
5	1	22141787	Antenna, RF Flat Panel		■	■
6	1	87431	Shield / Coupler, UC-584		■	■
7	1	22183050	Attenuator	■		■
8	Opt	22183051	Headset Adapter *(Note 1)*			
9	1	AC10K-ADPTRKIT	Adapter Kit *(Also shown on Figure 1)*	■	■	■
10	1	62401	Cable, Coax 1'	■	■	■
11	1	22152432	Cable, Coax 6'	■	■	■
12	1	141131	Cable, Coax 25'	■	■	■
13	1	22022754	Power Cord - US	■	■	■
14	1	22022744	Power Cord - European	■	■	■
15	1	22141759	Operations Manual	■	■	■
16	1	22135253	Quick Start Guide	■	■	■
17	1	22142165	Handstrap	■	■	■



Note 1: Consult Factory for Availability

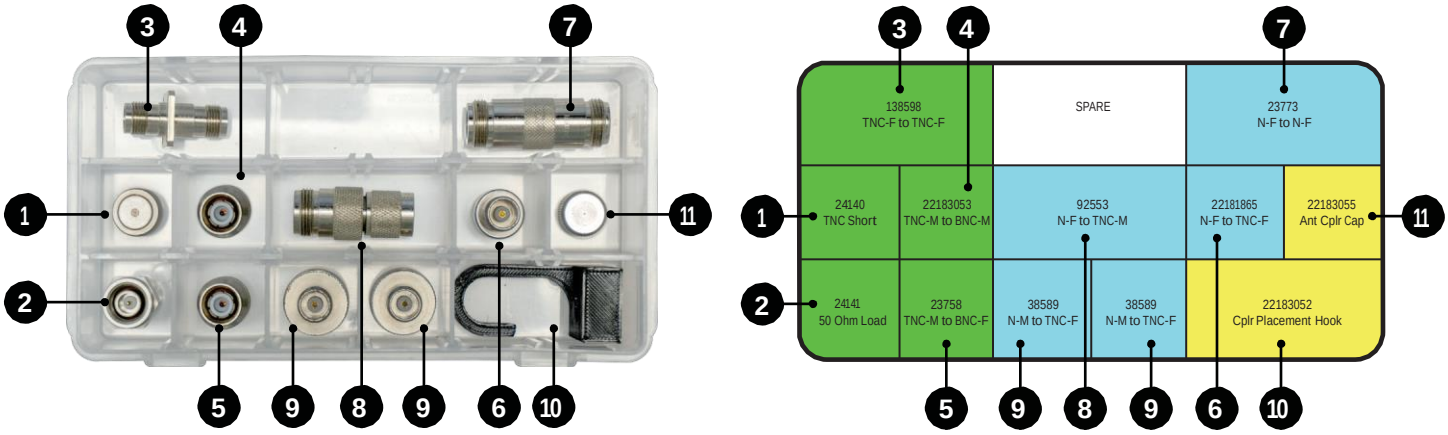
AVX-10K Military Kits Software Options (CAGE: 51190)

ITEM #	QTY	PART #	DESCRIPTION	AVX-10K-NAV-M 22182233	AVX-10K-SVLC-M 22182230	AVX-10K-MIL 22182232
1	1	22142210	AVX-10K-SXPDR; Transponder Modes A,C,S		■	■
1	1	22174692	AVX-10K-SM1/2; Transponder Military Modes 1/2/3		■	■
1	1	22142212	AVX-10K-SADSB; ADS-B-In/Out / GICB / Target Gen / FIS-B		■	■
1	1	22142213	AVX-10K-STCAS; TCAS I/II		■	■
1	1	22174693	AVX-10K-SETCAS; E-TCAS		■	■
1	1	22154823	AVX-10K-SDME; DME	■	■	■
1	1	22174694	AVX-10K-STACAN; TACAN		■	■
1	1	22142214	AVX-10K-SUAT; UAT In/Out			■
1	1	22142216	AVX-10K-SNAV; Navigation (ILS / MB / VOR)	■		■
1	1	22142217	AVX-10K-SELT; ELT 121.5 / 243 / 406MHz	■		■
1	1	22142218	AVX-10K-SCOM; Radio Test AM/FM (Comms)	■		■
1	1	221183325	AVX-10K-SECOM; OTA / Headset	■		■
1	1	22183049	AVX-10K-SSECURE; Wireless Enable/Disable	■	■	■

AC10K-ADPTRKIT (22183132) Comprising Items List (Cage: 51190)

ITEM #	QTY	PART #	DESCRIPTION	AVX-10K-NAV-M 22182233	AVX-10K-SVLC-M 22182230	AVX-10K-MIL 22182232
1	1	24140	CAP, TNC, FEMALE SHORT	■	■	■
2	1	24141	Conn;Conn Acc; LOAD 50 Ohm; TNC/F; DC - 6.0GHz	■	■	■
3	1	138598	Adapter, TNC-F to TNC-F	■	■	■
4	1	22183053	Adapter, TNC-M to BNC-M	■	■	■
5	1	23758	Adapter, TNC-M to BNC-F	■	■	■
6	1	22181865	Adapter, N-F to TNC-F	■		■
7	1	23773	Adapter, N-F to N-F	■		■
8	1	92553	Adapter, N-F to TNC-M	■		■
9	2	38589	Adapter, N-M to TNC-F	■		■
10	1	22183052	Hook, Cplr Placement		■	■
11	1	22183055	Cap, TNC for Coupler Hook		■	■

Figure 1: Adapter Kit



Where to Find More Information

This Getting Started Guide provides basic information about how to setup and use the AVX-10K Flight Line Test Set.

The web page for AVX-10K Flight Line Test Resources on the VIAVI web site provides access to additional resources, including the *AVX-10K Flight Line Test Set Operation Manual*, product brochures, data sheet, selection guides, and software release notes.

For detailed information about using StrataSync™ to update AVX-10K software, refer to the web page for StrataSync Resources on the VIAVI web site.

NOTE: For maintenance information, contact your VIAVI Customer Service representative.

Safety

Refer to the *AVX-10K Flight Line Test Set Operation Manual*, 22135254, for complete safety information.

CAUTION

- Only use the AC Adapter/Charger provided with the product to charge the battery.
- Only connect the AC Adapter/Charger to the correct mains voltage indicated on the ratings label.
- Do not use or store the battery in temperatures that exceed the manufacturer’s specifications. Follow manufacturer’s instructions for battery storage and use.
- The battery included with the product is only to be used with the AVX-10K.
- Do not overload input connectors. Refer to product specifications or product labeling for maximum input ratings.

Grounding Power Cord

WARNING

DO NOT USE A THREE-PRONG–TO–TWO-PRONG ADAPTER PLUG. DOING SO CREATES A SHOCK HAZARD BETWEEN THE EQUIPMENT AND ELECTRICAL GROUND.

For AC operation, the AC Line Cable connected to the DC power supply is equipped with a standard Continental European plug and must be connected to a properly grounded receptacle that is easily accessible.

It is the customer's responsibility to ensure the following:

- Have a qualified electrician check receptacles for proper grounding.
- Replace any ungrounded receptacle with a properly grounded receptacle.

CAUTION

A forced shut down is not recommended and may lead to a loss of data, file system errors or data corruption. Please contact VIAVI support for any questions.

Mise en Garde

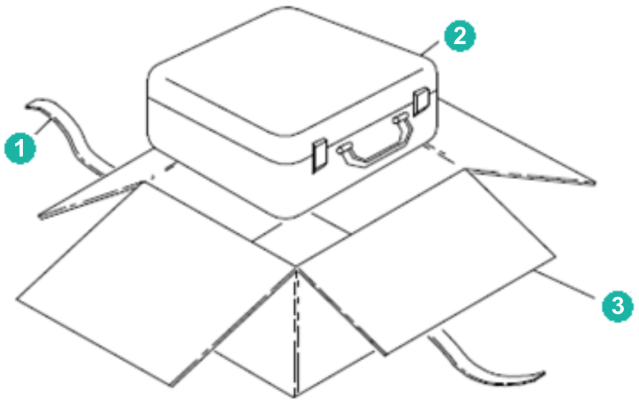
Un arrêt forcé n'est pas recommandé et peut entraîner une perte de données, des erreurs du système de fichiers ou une corruption des données. Veuillez contacter le support VIAVI pour toute question.

Unpacking Equipment

Do the following:

1. Unpack the equipment from the shipping container.
   - New units purchased with a transit case are shipped inside the transit case.
   - Units returned to the customer from VIAVI are shipped in accordance with VIAVI shipping standards, and are shipped inside the transit case, as applicable.
   - Store dunnage, packing material, and the shipping container for possible future use.
2. Verify that the shipment is complete in accordance with the packing list and/or the configuration ordered. Report any discrepancies to VIAVI.
3. Check all accessory equipment for damage incurred during shipment. If any equipment has been damaged, report the damage to VIAVI.

Figure 1-1 Unpacking Equipment



1	Shipping Tape
2	Transit Case
3	Shipping Container

Table 1-1 Selectable Power Cords

AC10K-PWRCRD-US/CAN	AC Power Cord - US / Canada
AC10K-PWRCRD-EU	AC Power Cord - Continental Europe
AC10K-PWRCRD-AUSNZ	AC Power Cord - Australia / New Zealand
AC10K-PWRCRD-INDIA	AC Power Cord - India
AC10K-PWRCRD-UK/IRE	AC Power Cord - UK / Ireland
AC10K-PWRCRD-SWITZ	AC Power Cord - Switzerland

Table 1-2 Optional Accessories

AC10K-ANTBRKT	Required for use with IFR6000 1030/1090 RF Antenna
AC10K-CC	Soft Side Carrying Case
AC10K-BATTERY	Internal Battery, Lithium Ion 7.3V 13Ah
AC10K-CBL12FT	Cable, Coax 12'
141131	Cable, Coax 25
142839	Cable, Coax 50'
140889	TC-201A TCAS/XPDR Directional Antenna Coupler
22163082	TC-201B TCAS/XPDR Directional Antenna Coupler
112350	UC-584 Single Coupler Kit
112349	UC-584 Dual Coupler Kit
90106	UC-584S Coupler Placement Pole
22166192	Maintenance Manual CD

Figure 1-2 AVX-10K kit example

Specifications

Refer to the AVX-10K data sheet for complete specifications. For information about accessing the data sheet, see "Where to Find More Information" on page 1-8.

Table 1-3 AVX-10K Specifications

Parameter	Specification
Temperature	
Storage	-30 to 71 °C (-22 TO 159 °F)
Operating	-20 to 55 °C (-4 TO 131 °F)
Charging	0 to 45 °C (32 TO 113 °F) ≤ 85% RH
Power	
Battery Operation	>4 hrs continuous, > 8 hrs typical
Power Supply Input	100 – 240 VAC, 1.5A, 50 – 60 Hz
Power Supply Output	12 VDC, 5.0A max., DC input connector
Maximum Input Ratings: Input Connectors	
SWR Connector	20 mW max., 0V DC
RF I/O Connector	4 kW peak, 10 W average
Antenna Connector	10 W peak, 0.5 W average

2

Product Familiarization

This section provides product familiarization of the AVX-10K. The topics discussed in this chapter are as follows:

- Controls, Connectors, and Indicators 2-2
- Indicators 2-3
- Interaction 2-4

Controls, Connectors, and Indicators

1	GPS Antenna	**9**	Quick Tray Button
2	Dual Ethernet Ports	**10**	Cursor Control Keys
3	Dual USB Ports	**11**	Function Keys
4	Hand Strap Clips	**12**	Full-color Touchscreen Display
5	Power Button	**13**	Status Indicator Lights
6	Speaker	**14**	Antenna (ANT) Port
7	Back Button	**15**	Direct (RF/IO) Port
8	Home Button	**16**	SWR Port

Indicators

Figure 2-1 Front-panel LEDs

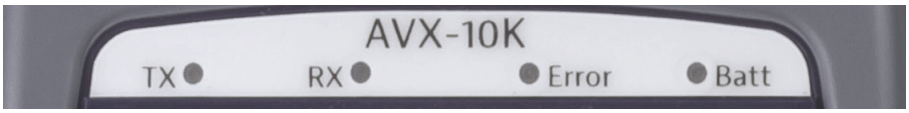
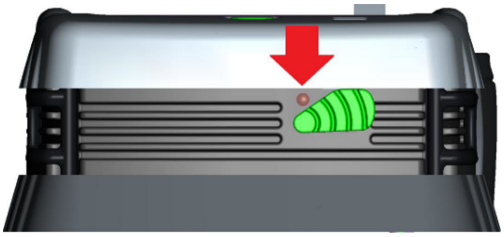


Figure 2-2 Charge Status LED



NOTE: UI indicators appear at the top of the touchscreen display.

Interaction

The AVX-10K features hard keys for control and navigation, as well as a Liquid Crystal Display (LCD) capacitive touchscreen.

The touchscreen supports gestures such as press to open/select/activate, press and hold, drag and drop, swipe sideways, and pinch-to-zoom where applicable. The layout and content of the touchscreen depend on the selected function, user settings, and modes of operation.

Most screens consist of a Header Bar, the Main Display area, and a Footer area. The Main Display area has ribbons that can be opened or closed, and each ribbon provides access to various applications. See the *AVX-10K Flight Line Test Set Operation Manual*, 22135254, for more information.

3

First-time Use

This section provides First-time Use of the AVX-10K. The topics discussed in this chapter are as follows:

- Powering on the AVX-10K 3-2
- Running a Self-test on the AVX-10K 3-2
- Powering Off the AVX-10K 3-3
- Charging the AVX-10K Battery 3-3
- Software Download 3-3
- Accessing StrataSync 3-5
- StrataSync Update Procedure 3-7
- AVX-10K Serialization 3-7

CAUTION

A forced shut down is not recommended and may lead to a loss of data, file system errors or data corruption. Please contact VIAVI support for any questions.

Mise en Garde

Un arrêt forcé n'est pas recommandé et peut entraîner une perte de données, des erreurs du système de fichiers ou une corruption des données. Veuillez contacter le support VIAVI pour toute question.

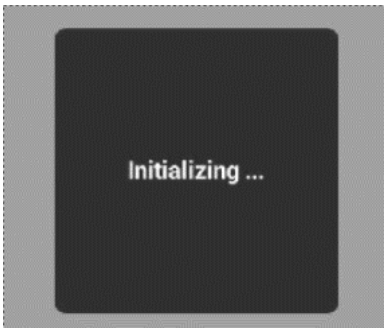
CAUTION

Read this section carefully and in its entirety before powering on the AVX-10K test set.

Powering on the AVX-10K

NOTE:
VIAVI recommends that you fully charge the battery prior to first use. See "Charging the AVX-10K Battery" on page 3-3.

- Press and release the Power button, and note the following power-on sequence:
  - The initialization screen appears.



  - The Battery LED lights, and the Home screen appears on the touchscreen when the test set is ready for use.
  - A chime might sound (optional setting).

Running a Self-test on the AVX-10K

NOTE:
A cable is required for the External Loopback test of the self-test. This cable is supplied with the AVX-10K.

1. Remove the protective film from the touchscreen.
2. Power on the test set, and then perform the self-test:
   - i On the Home screen, open the Self-Test ribbon, and then start the Self-Test application.
   - ii Select RUN, and follow the prompts as directed.
   - iii When the Self-Test has completed running all tests, verify that each test has passed. If any test fails, contact your VIAVI Customer Service representative.

Powering Off the AVX-10K

- Press the Power button, and then release it when with the VIAVI logo appears on the touchscreen.

  The AVX-10K performs a series of power-down processes and then powers off.

Charging the AVX-10K Battery

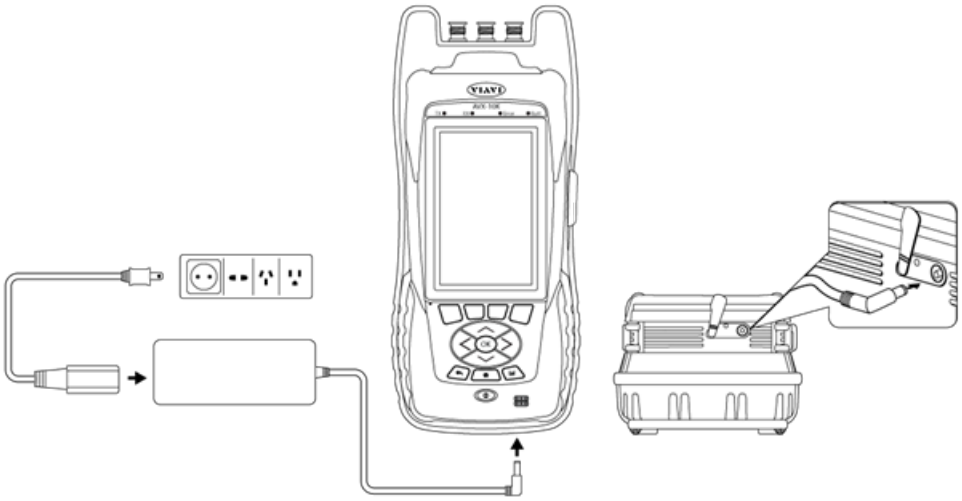
The AVX-10K is designed to be powered by either an internal battery or AC power. VIAVI recommends that you fully charge the battery prior to first use.

1. Connect the AVX-10K to an AC power source:

i Connect the power cord to the AC Adapter/Charger.

ii Connect the DC connector to the DC input connector.

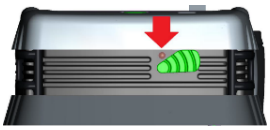
iii Connect the power cord to properly grounded AC power.



2. Refer to the Battery LED:

i The LED lights amber while the battery is charging.

ii The LED lights green when the battery is fully charged.

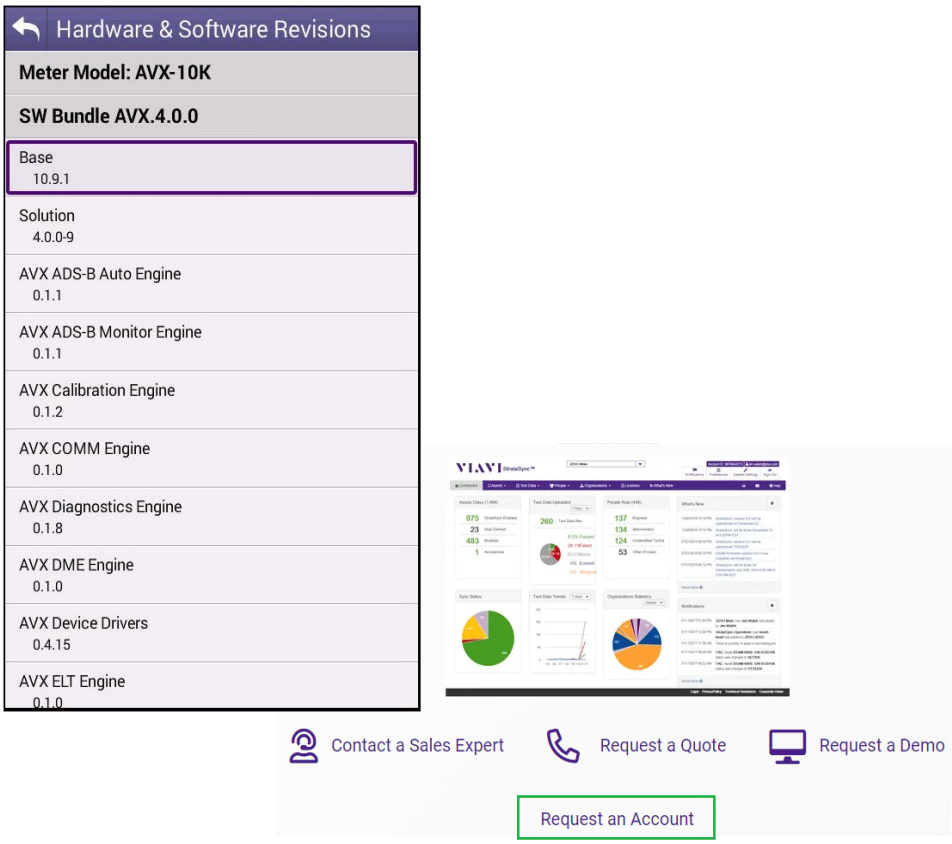


Software Download

Before using the AVX-10K, verify that the test set is running the most recent software version.

1. On the touchscreen, open the System ribbon, and then start the System Settings application.
2. Select Hardware & Software Revision, and note the software version at the top of the screen.
3. To locate (and download) the most recent software version, do the following to obtain a StrataSync account.
   i Using a web browser, go to https://www.viavisolutions.com/en-us/products/stratasync.
   ii Click **Request an Account** (see Figure 3-1).

Figure 3-1 Software Download

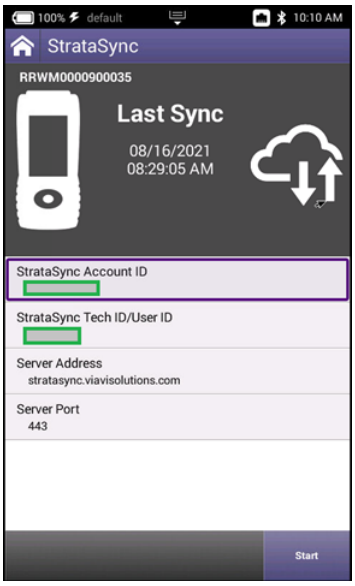


4. Do one of the following:
   - If you purchased AVX-10K test sets directly from VIAVI, obtain a Customer number by filling out the form and submitting your StrataSync account request. You should shortly receive an email with your StrataSync account ID number, username and temporary password.
   - If you purchased AVX-10K test sets from a VIAVI Channel Partner or authorized VIAVI reseller, have the Channel Partner or reseller send a request to stratasyncadmin@viavisolutions.com on your behalf to create the StrataSync account.

Accessing StrataSync

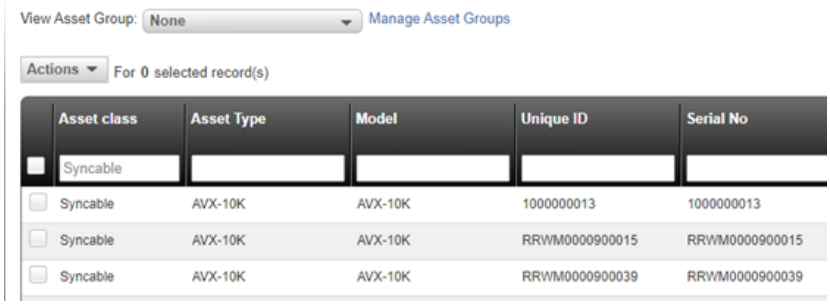
After you have obtained a StrataSync account, start the StrataSync application.

1. From the System ribbon on the AVX-10K touchscreen, enter the StrataSync account ID number and a Tech ID / User ID. The Tech ID / User ID will be included on all test reports that are run on the AVX-10K.

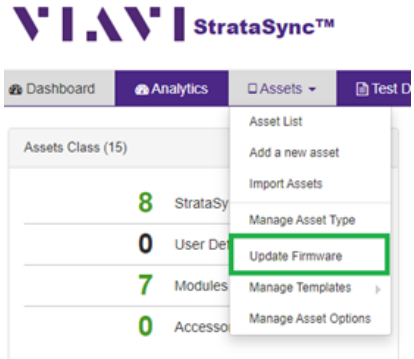


2. Connect the AVX-10K to the network via WiFi or Ethernet, and then select START to begin the synchronization procedure.

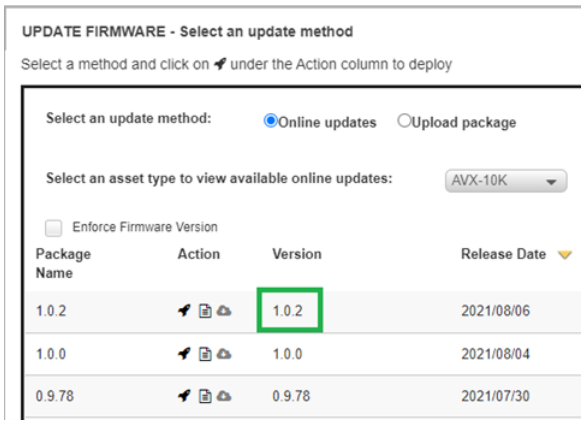
   After the synchronization procedure completes, the AVX-10K appears on the assets list on the StrataSync web site. Verify that the serial number on the side of the AVX-10K (see "AVX-10K Serialization" on page 3-7) appears in the asset list.



3. To check for the latest available software version, select the Assets menu, and then select Update Firmware.



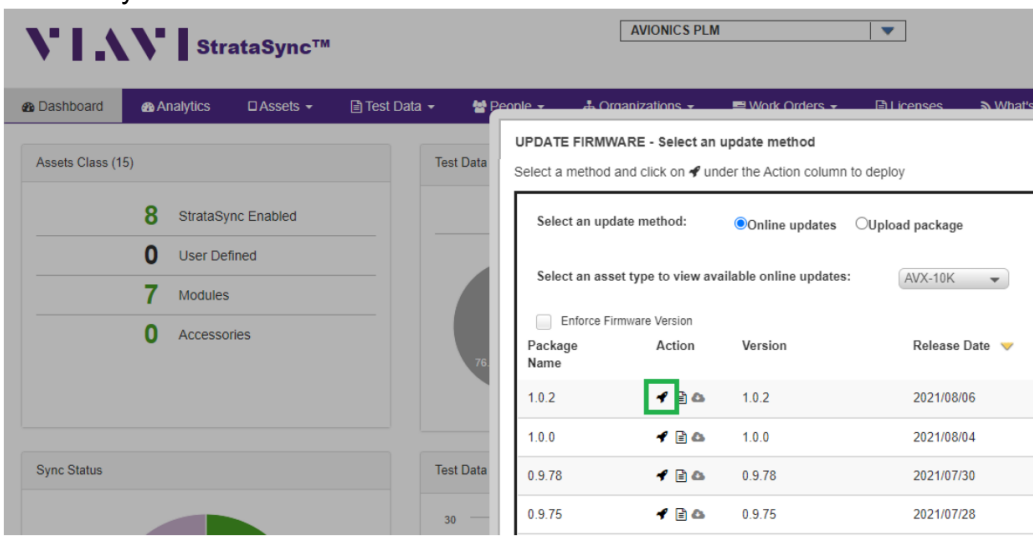
The latest software version appears at the top of the list.



4. If required, refer to "StrataSync Update Procedure" on page 3-7 for information about updating the software.

StrataSync Update Procedure

1. On the Update Firmware screen in StrataSync, select the icon for the software version you want to install.



2. Locate each AVX-10K test set you want to update, select the box in the leftmost column, and then select YES on the next screen to proceed.
3. For each test set selected for update, select START on the StrataSync page, and then follow the prompts to finalize the software update. The test set will power off after the update is complete. Power on the AVX-10K to use.

NOTE:
For information about accessing StrataSync documentation, see "Where to Find More Information" on page 1-8.

AVX-10K Serialization

The AVX-10K is supported with three serial tags. VIAVI recommends keeping track of all serial-tag information.

On a pre-configured kit, the serial tag is affixed to the transit case. This serial tag is the composite-level serial tag for the entire kit associated with the configuration.This information should be used when requesting an RMA for service. Provide this serial number when requesting an RMA.

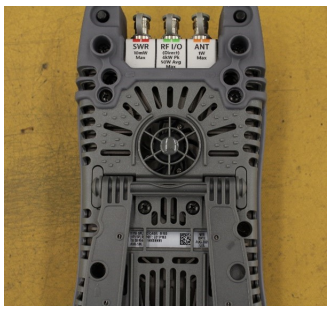
Figure 3-2 Example: Serial Tag – AVX-10K Transit Case

A serial tag that relates to the base unit (upper half) of the AVX-10K test set is affixed to the side of the test set.This serial tag is the parent serial number that StrataSync recognizes for a registered test set, and is also the serial number required to request new software options. If the base unit is replaced, the serial tag information will also change and will appear as a new asset when synchronized with StrataSync.

Figure 3-3 Example: Serial Tag – AVX-10K Base Unit

A serial tag and UID label that relates to the handheld unit of the AVX-10K test set is affixed to the back of the test set.

Figure 3-4 Example: Serial Tag, UID Label – Back of AVX-10K Test Set



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AVX-10K Getting Started Guide

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