AVX-10K

Military Flight Line Test Set

Performance verification testing of mission-critical avionics systems

The AVX-10K is a comprehensive flight line test solution that provides today's Avionics Technician with an easy-to-use instrument for testing communication, navigation, and surveillance systems. With an intuitive user interface, testing is simplified with built-in auto-tests for transponder applications. Guided tests can be created to replicate existing procedures to assist users for Navigation and AM/FM Communication system verification. Built-in VSWR, DTF and Cable Loss measurements aid in troubleshooting faults found during normal testing or reported by the operator.



AVX-10K-MIL
NSN: 6625-01-724-4448

Features

- Configurable test capability
- Intuitive user interface
- Software-defined applications
- Guided Test for COMMS and Navigation Applications
- Built-in GPS receiver
- International test configurations

Benefits

- Time saving ease of operation
- Easily updated with future applications
- Efficient and repeatable testing
- Recall saved test sequences for future use
- Provides accurate positional data for ADS-B testing
- Compliant with global regulatory requirements

Test Usage

- Replaces the following test sets
  - IFR4000
  - IFR4000AR
  - IFR6000
  - IFR6015
  - 3515 Airborne COMMS Testing including scripting[1] capability

1 - Contact VIAVI for availability.

The Future of Flight Line Avionic System Testing

Building on nearly 60 years of providing superior avionics test sets, the AVX-10K is a compact, durable tester capable of providing a wide range of quick airborne system auto-tests and in-depth troubleshooting using software specific applications.

Using over-the-air, direct and coupled connections the AVX-10K can provide testing for the following systems:

Communications
- AM
- FM
- SSB (HF)
- SELCAL

Other Test Tool
- ELT
- VSWR
- Distance to Fault
- Cable Loss

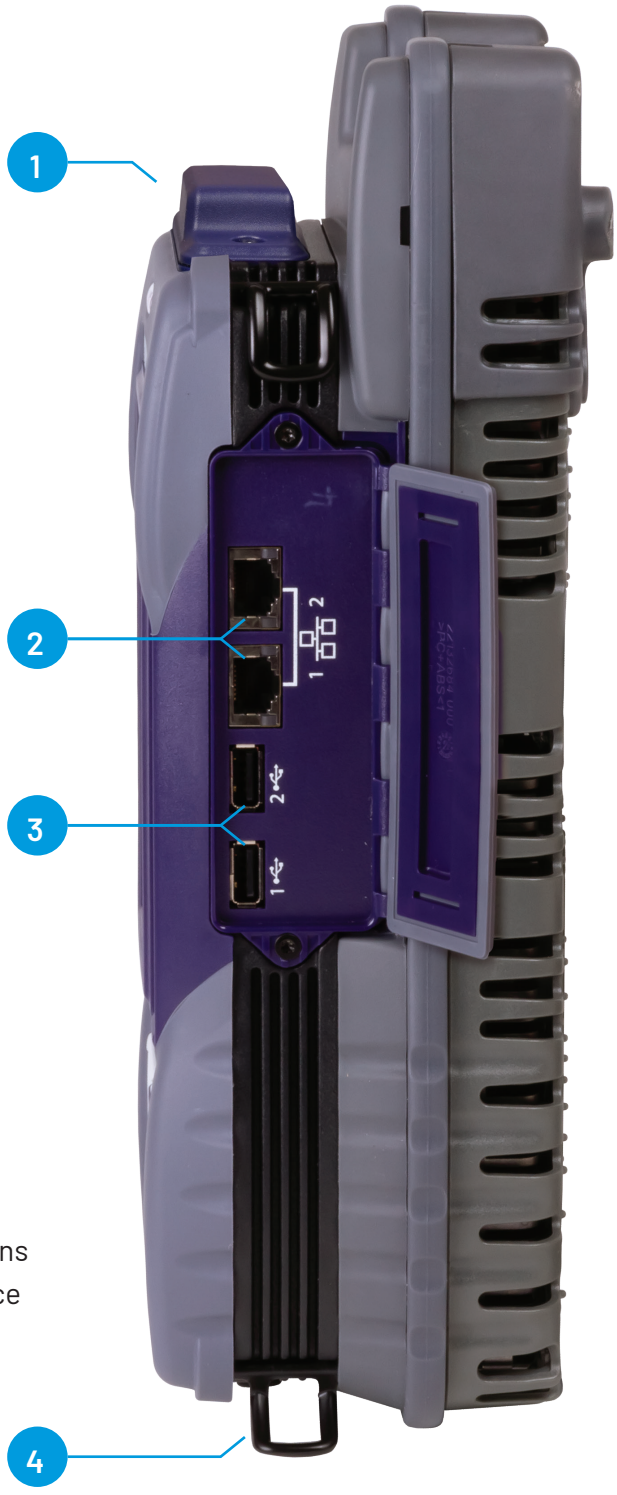
Navigation
- TACAN
- DME
- ILS
  - LOC
  - GS
  - MB
- VOR

Surveillance
- Military Modes 1, 2 & 3
- Modes A, C, S
- ADS-B Out
- ADS-B In (Target Gen)
  - 1090 MHz (ADS-B, ADS-R, TIS-B)
  - 978 MHz UAT (ADS-B, TIS-B, FIS-B)
- TCAS I/II and TAS testing
- ADS-B Monitoring
- GICB Monitoring
- UAT Monitoring

The added flexibility of software-based test configurations means the AVX-10K provides the right capabilities for every maintenance and troubleshooting need.

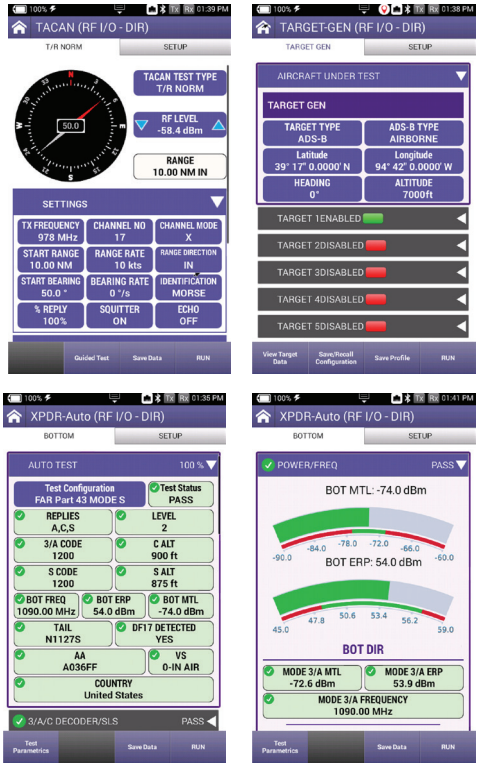


Transponder antenna couplers provide for a controlled test environment and eliminate the need for DD-1494 requirement.



AVX-10K Side Detail
1. GPS Antenna
2. Dual Ethernet Ports
3. Dual USB Ports
4. Hand Strap Clips





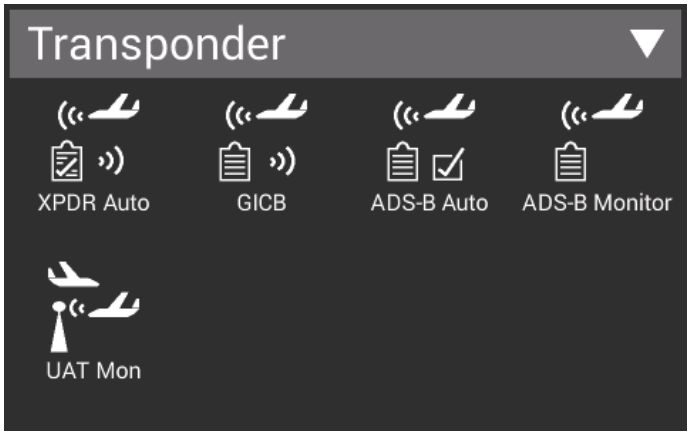
Simple and clean user interface provides clearly marked pass/fail results while expandable ribbons provide access to detailed data for further analysis.

AVX-10K Front Detail

5. Power Button
6. Speaker
7. Back Button
8. Home Button
9. Quick Tray Button
10. Cursor Control Keys
11. Function Keys
12. Full Color Touch Screen Display
13. Status Indicator Lights
14. GPS Antenna
15. Antenna (ANT) Port
16. Direct (RF/IO) Port
17. SWR Port

Comprehensive All-In-One Test Set

Transponder



Transponder Auto — This test function provides a selection of configured test options, including Military Transponder Modes 1,2 & 3, ATCRBS, Mode S, Transponder FAR Part 43, and many more.

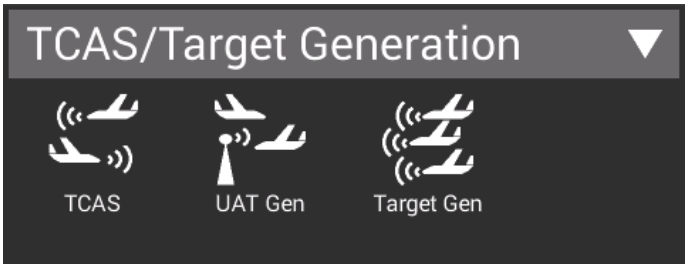
GICB — Testing the GICB capabilities can be performed in Simple Mode (known registers) or Advanced Mode (full register set).

ADS-B Auto — Available Test Types for this option include AC 20-165 and CS-ACNS. Testing supports both Airborne and Surface configurations.

ADS-B Monitor — GPS Position can be manually entered or can be determined with the built-in GPS Receiver. Monitoring supports both Airborne and Surface configurations.

UAT Monitor — Allows monitoring of received UAT messaging and will decode and display each received Aircraft Address and Payload Type Code.

TCAS/Target Generation

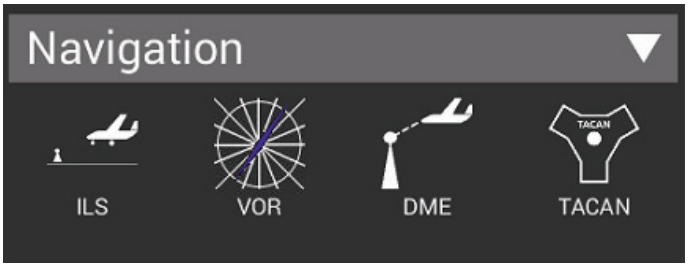


ACAS-TCAS/E-TCAS — This option lets you set up an intruder and run a scenario to ensure TCAS functionality. Intruder types include either Mode S or ATCRBS.

UAT Gen — Provides access to setup targets and run ADS-B, FIS-B and TIS-B testing for the UAT frequency.

Target Gen — This feature allows the user to set up and stimulate up to five static targets. Target types can be 1090 MHz ADS-B, ADS-R or TIS-B. Each target will be associated with the Aircraft Under Test's Latitude, Longitude, Heading and Position which are all configurable.

Navigation



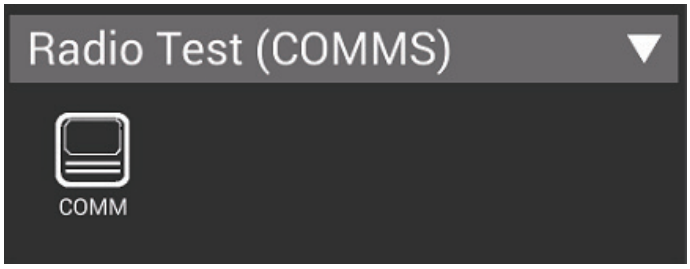
ILS — Provides simultaneous Localizer (with swept DDM), Glideslope and Marker Beacon Signals.

VOR — Generates signals over the VOR Band (108.00 to 117.95 MHz) with 30 Hz reference phase and 9960 Hz (sub-carrier frequency modulated with 30 Hz variable phase) amplitude modulated at 30% per tone. VOR bearing selection is provided in preset steps of 30° or variable steps of 0.1°.

DME — Single DME test screen provides control over DME Frequency/Channel, Range, Rate, RF level, % Reply, Squitter, Ident and Echo. UUT frequency, ERP, PRF P1/P2 width and Spacing are also displayed.

TACAN — Combines Range and Bearing control along with Range Rate and Bearing Rate including Air-to-air modes. Displays measured values on received signal.

Radio Test (COMMS)



COMM AM — Provides signal generation over the range of 10.00 to 512.00 MHz in 1 kHz increments. Monitoring of transmitter power and modulation depth over the same range while directly connected. A calibrated 1020 Hz tone, amplitude modulated at 30%, is also provided. Frequency control is provided in 8.33 kHz/25 kHz channel steps or in 1 kHz variable steps. Audio output is available. Over-the-air measurements include metering for power (RSSI), frequency, AM modulation. User defined pass/fail limits can be added via Scripted Test application.

COMM FM — Provides signal generation over the range of 10.00 to 512.00 MHz in 1 kHz increments and monitoring of transmitter power and modulation deviation over the same range while directly connected. A 1000 Hz tone, frequency modulated at 5 kHz, is also provided. Frequency control is provided in 12.5 kHz/25 kHz channel steps or in 1 kHz variable steps. Audio output is available. Over-the-air measurements include metering for power (RSSI), frequency range 136.0 to 512.00 MHz and FM deviation. User-defined pass/fail limits can be added via the Scripted Test application.

COMM OTA UUT Sensitivity Test — Provides 800 Hz/1200 Hz repeating tone pattern, allowing the operator in the cockpit to easily identify a tone pattern.

COMM SSB — Provides signal generation and monitoring of transmitter power and modulation depth over the range of 10.00 to 30.00 MHz. A 1000 Hz tone is also provided. Audio output is available.

SELCAL — Provides selectable consecutive amplitude modulated tone pulse pairs, which may be sent continuously or as a burst.

Enhanced COMMS — Expands on the functions of AM/FM COMMS by providing over the air signal measurements.

Headset Adapter — Allows for two-way voice communication for clarity checks and ease of testing while capturing over the air signal measurements. Compatible with civil/military low and high impedance single and dual plug connection types.



AVX-10K shown with optional headset adapter.

Continuous Tone-Coded Squelch System (CTCSS) - CTCSS is a sub-tone frequency used on systems to squelch signals that do not carry the specific sub-tone. The AVX-10K is currently set to a single fixed sub-tone of 150 Hz with a deviation of 3 kHz for FM transmission and 10% Modulation for AM transmissions.

When enabled, the 150 Hz sub-tone will allow the AVX-10K to break squelch using any tone setting or two-way voice communications via Enhanced COMMS.

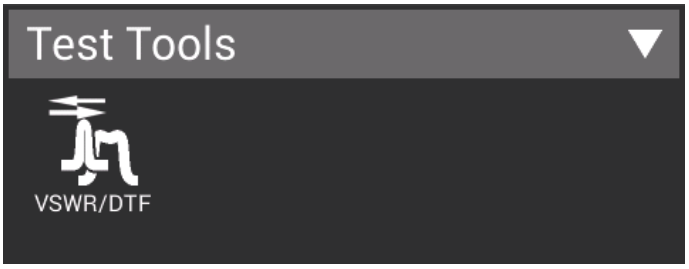
ELT



121.5/243 BEACON Modes — Provides monitoring for 121.5/243 MHz swept tone short range Beacons and displays transmitter frequency, power and start/stop tone frequencies. Audio output is available.

406 BEACON Mode — Provides monitoring for 406 MHz COPAS/SARSAT Emergency Locator Transmitter (ELT), Emergency Position Indicating Radio Beacons (EPIRB), and Personal Locator Beacons (PLB). The Beacon utilizes BPSK data to transmit position information derived from a long-range navigation system or GPS receiver. The Protocol management and data field decode is automatically handled by the AVX-10K.

Test Tools



Cable Loss — This feature helps identify problems, as the loss identified on a cable may not be correct causing erroneous readings in test set ups and also to identify issues with coaxial cable that can contribute to poor system performance.

Guided Test — Available in the COMMS and NAVIGATION instruments, guided test allows you to create and save a test sequence by either manually stepping to the next test or automatically stepping to the next test based on a user set time interval. This is a user created test and is beneficial for replicating existing procedures for a consistent and repeatable test.

Templates — allows the user to save all set-up parameters for the entire test set and recall for a later use. This is useful should you have common repeatable set-up parameters across multiple test applications for a specific aircraft platform. Next time you test that platform, simply choose the desired template and all saved set-up parameters will be recalled, saving time.

VSWR/DTF — This test tool is provided to assist in troubleshooting RF level issues. Test mode for both VSWR and Distance To Fault (DTF) testing can be set to VSWR or Return Loss.

Secure Use Options (Enable/Disable Wireless)

AVX-10K-SSECURE Option
Available as an option for commercial models and standard on all military variants. This feature lets users enable or disable wireless capability (WiFi/BT) under password control.

When wireless is enabled, the AVX-10K can be operated from a mobile device using the VIAVI Mobile Tech App.

Note – all military kit configurations include the AVX-10K-SSECURE Option, and are shipped from the factory with the wireless capability disabled.

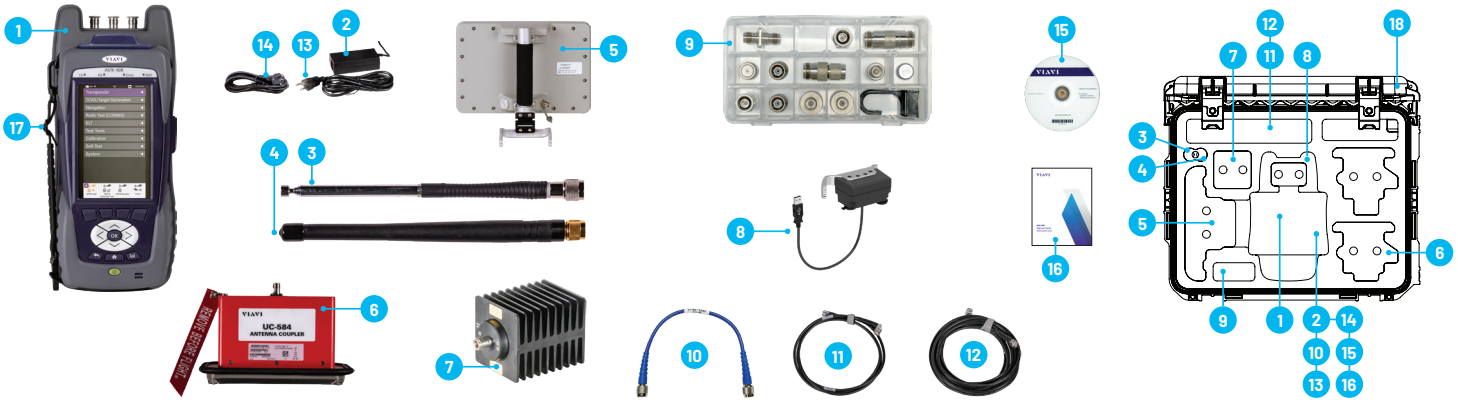
AVX-10K-SXSECURE Option
Provides maximum protection by permanently disabling all wireless capability (WiFi/BT).

AVX-10K Military Configurations and Ordering Information (CAGE: 51190)

Preconfigured Kits (• = Standard Item, all other items optional)

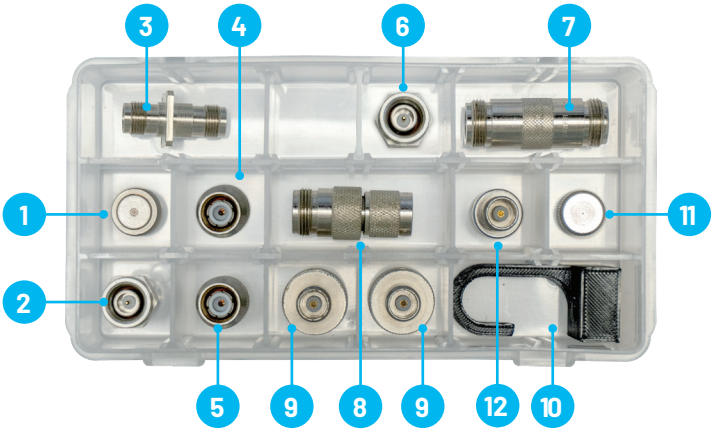
		Catalog No.	P/N	Item Description	AVX-10K-NAV-M 22182233 6625-01-559-2384	AVX-10K-SVLC-M 22182230	AVX-10K-MIL 22182232 6625-01-724-4448 6625-01-726-6289
TEST CAPABILITY	SOFTWARE OPTIONS	AVX-10K-SXPDR	22142210	Transponder Modes A,C,S		•	•
		AVX-10K-SADSB	22142212	ADS-B-In/Out/GICB/FIS-B		•	•
		AVX-10K-STCAS	22142213	TCAS I/II		•	•
		AVX-10K-SDME	22154823	DME		•	•
		AVX-10K-SUAT	22142214	UAT In/Out			•
		AVX-10K-SNAV	22142216	Navigation (ILS - LOC, GS, MB)	•		•
		AVX-10K-SELT	22142217	ELT 121.5/243/406 MHz	•		•
		AVX-10K-SCOM	22142218	Radio Test AM/FM (COMMS)	•		•
		AVX-10K-SECOM	22183325	Radio Test Enhanced (COMMS) [2]	•		•
		AVX-10K-STACAN	22174694	TACAN		•	•
		AVX-10K-SETCAS	22174693	E-TCAS		•	•
		AVX-10K-SM1/2	22174692	XPDR Military Modes 1/2/3		•	•
		AVX-10K-SSECURE	22183049	Wireless Disabled - Local Admin Control	•	•	•
		AVX-10K-SXSECURE	22194257	Wireless Permanently Disabled			
Item #	**Qty**						
1	1	AVX-10K TEST SET	22137163	AVX-10K Base Unit	•	•	•
2	1	AC10K-PWRADPTR	22146602	AC/DC Power Adapter	•	•	•
3	1	AC10K-ANT-ILS	22153600	Antenna, ILS and COMMS	•		•
4	1	AC10K-ANT-MB	22153599	Antenna, 75 MHz MB	•		•
5	1	22141787	22141787	Antenna, RF Flat Panel		•	•
6	1	87431	87431	Shield/Coupler, UC-584		•	•
7	1	22183050	22183050	Attenuator	•		•
8	1	22183051	22183051	Headset Adapter [3]	•		•
9	1	AC10K-ADPTRKIT	AC10K-ADPTRKIT	Adapter Kit	•	•	•
10	1	62401	62401	Cable, Coax 1'	•	•	•
11	1	AC10K-CBL6FT	22152432	Cable, Coax 6'	•	•	•
12	1	141131	141131	Cable, Coax 25'		•	•
13	1	AC10K-PWRCRD-US/CAN	22022754	AC Power Cord, US/Canada	•	•	•
14	1	AC10K-PWRCRD-EU	22022744	AC Power Cord, Continental Europe	•	•	•
15	1	AC10K-OPSMNL	22141759	Operations Manual	•	•	•
16	1	AC10K-QSGUIDE	22135253	Quick Start Guide	•	•	•
17	1	AC10K-HANDSTRAP	22142165	Hand Strap	•	•	•
18	1	AC10K-TRANCASE	22138519	Transit Case	•	•	•

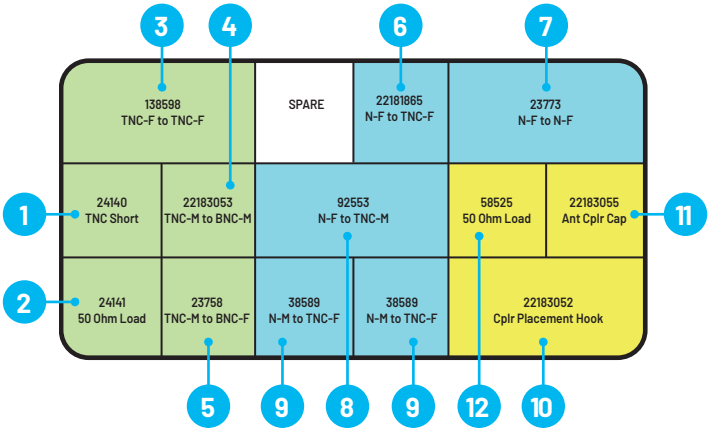
2. AVX-10K-SCOM is a prerequisite for AVX-10K-SECOM.
3. Standard item for all orders placed after March 1, 2026 and requires the AVX-10K-SECOM option.



CAGE: 51150 - AVX-10K Adapter Kit Comprising Items List
P/N: AC10K-ADPTRKIT

Item #	Qty	P/N	Description	AC10K-ADPTRKIT	Configurations		
					AVX-10K-NAV-M 22182233	AVX-10K-SVLC-M 22182230	AVX-10K-MIL 22182232
1	1	24140	Cap, TNC, Female Short	•	•	•	•
2	1	24141	Load 50 Ω, TNC-F, DC - 6.0 GHz	•	•	•	•
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	•	•	•	•
Items below are not part of AC10K-ADPTRKIT, but are included when ordering the above configurations AXV-10K-NAV-M, AVX-10K-SVLC-M, AVX-10K-MIL. These must be purchased separately if not ordering one of these configurations.							
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, Coupler Placement			•	•
11	1	22183055	Cap, TNC Coupler Hook			•	•
12	1	58525	Load, 50 Ω 1 kW Peak			•	•





Additional Selectable Power Cords

Catalog No.	Item Description
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

Optional Accessories

Catalog No.	SERD/NSN	Item Description
Antenna Couplers		
113532		F-15 IFF Antenna Coupler Kit
140600	65530	F-16 IFF Antenna Coupler Kit
140889		TC-201A TCAS/XPDR Directional Antenna Coupler (Min. 110" fuselage)
22163082		TC-201B TCAS/XPDR Directional Antenna Coupler (Min. 92" fuselage)
112350	6625-01-656-1915	UC-584 L-Band Coupler Kit (Single)
112349	6625-01-656-1993	UC-584 L-Band Coupler Kit (Dual)
AC10K-UC584S		Shield Coupler, UC-584S w/ 25' Cbl (141131)
90106		UC-584S Coupler Placement Pole
Optional Accessories		
141589		TCAS Accessory Kit
AC10K-CC		Soft Side Carrying Case
AC10K-BATTERY		Internal Battery, Lithium Ion 7.3V 13Ah
AC10K-CBL12FT		Cable, Coax 12'
141131	4920-01-699-6237	Cable, Coax 25'
142839		Cable, Coax 50'

Physical Characteristics

Test Set	12″ H x 5.3″ W x 3.75″ D 30.48 cm x 13.5 cm x 9.5 cm
Transit Case Size	24.5″ H x 19.3″ W x 12.2″ D 62.23 cm x 49.2 cm x 31 cm
Weight	6.5 lbs. (2.94 kg) test set only
	32 lbs. (14.51 kg) shipping weight
Battery	>4 hrs continuous, >8 hrs typical
Power	100 - 250 VAC, 1.5 A max, 47-63 Hz

Environmental

Operating Temp	≥45°C to 55°C (113° to 131°F) Intermittent Use (protected by automatic shutdown)[1]
Storage Temp	-30° to 71° C (-22° to 159.8° F)

[1] Li-Ion Battery must be removed below -20°C and above 60°C.

General Specification

Care Support Extended Warranty

AVX-10K-SILVER-5	5 Yr Total HW Warranty + Certified Calibrations - SILVER-5	60 Month
AVX-10K-SILVER-3	3 Yr Total HW Warranty + Certified Calibrations - SILVER-3	36 Month
AVX-10K-BRONZE-2	1 Yr Extended HW Warranty only - BRONZE-2	24 Month

Certified Calibration Care Plan Add-ons (Requires corresponding Silver Care/MaxCare Plan)

CERT-CAL-DATA-3	Certified Calibration Data - Pre and Post Cal Data Report for Care Plans - First 3 Years
CERT-CAL-DATA-5	Certified Calibration Data - Pre and Post Cal Data Report

Training

AVX-10K-TT	How to test with the AVX-10K - On-Site Instructor-Led Training, 1 day

Certificates and Certifications

AVX-10K Calibration Certificate (ISO 9001) (Included)
AVX-10K Calibration Certificate with Test Data (ISO 9001)
MIL-PRF-28800F Class 2
MIL-STD-810F
UL
EN
CE
Note: See AVX-10K data sheet for a complete listing of certifications



Ergonomic integrated kick stand makes running tests and reviewing results simple.



Flat panel antenna, whip antenna, or antenna couplers provide a variety of methods to connect to the system under test.

Contact Us: +1 800 835 2352 | avcomm.sales@viavisolutions.com.

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