

# IFF-7300S Series

IFF/Crypto/TACAN Automated Test System

**COBHAM**

Product Specification

Cobham AvComm



**General**

Temp Range	0° C to 50° C
Altitude	3000 meters, max.
Warmup (for specified accuracy)	45 minutes
Size	19.25" W x 17" H x 24.5" D (49 cm x 43.2 cm x 62.2 cm)
Weight	120 lbs. (54.4 kg) with DC power supply 150 lbs. (68 kg) with AC/DC power supply
Safety Compliance	CE

**ATB-7300S Control/Interface**

**DC Power Supply (for PXI cards)**

DC Output Voltage	
Channels	2
Range	0-40 VDC
Accuracy	±0.5% of programmed value ±50 mV
DC Output Current	
Range	0 – 2.0 Amps (60 W Total programmable)
Accuracy	±0.5% ±50 mA
Output Readback	
Voltage Accuracy	±0.2% of reading + 60 mV
Current Accuracy	±0.5% of reading + 10 mA

**Synchro/Resolver Interface Options**

*Synchro/Resolver to Digital (RX) (IFF-7300S Option 4)*

Channels	4
Frequency	380 Hz to 420 Hz
Accuracy	±1 arc-minute (0.016°)
Ref. Input Voltage	2-28 Vrms

*Digital to Synchro/Resolver (TX) (IFF-7300S Option 5)*

Channels	3
Frequency	380 Hz to 420 Hz
Accuracy	±0.1°
Ref. Input Voltage	2-28 Vrms

*On-Board Reference Supply (for TX) (part of Option 5)*

Output Voltage	2-28 Vrms
Resolution	0.1 Vrms
Accuracy	±2.0%
Output Frequency	380 Hz to 420 Hz
Resolution	1 Hz
Accuracy	±1.0%

**Oscilloscope (DSO)**

Channels	2
Bandwidth	All Scales > 5 mV per DIV DC to 125 MHz Scales < 10mV per DIV DC to 100 MHz (-3 dB, X1 Probe)
Input Impedance	50 Ω and 1 MΩ    26Pf (typical)

**Vertical Accuracy (Bandwidth DC -20MHz)**

DC Coupling (OV offset)	DC Waveform ±(1.5% of input +0.3% of FS + 200 μV) AC Waveform ±2.5% Full Scale
AC Coupling	Cutoff Frequency (-3dB) 12Hz 1MΩ
Internal Sample Clock Freq	250 MS/s sampling rate with decimation by n, 1 ≤ n ≤ 65,535
Timebase Accuracy	±25 ppm (± 0.0025%)
Input Coupling	AC, DC, GND AC coupling on 1MΩ only
Memory per Channel	64 MB
Trigger Modes	Auto, Normal, Single Shot
Trigger Sources	CH1, CH2, External

**Digital Multimeter(DMM)**

DC Functions	
Ranges	100 mV, 1 V, 10 V, 100 V, 300 V
Accuracy	±0.1% of full scale
Resolution	6 ½ digits
Resistance Functions	
Ranges	100 Ω, 1 kΩ, 10 kΩ, 100 kΩ, 1 MΩ, 10 MΩ, 100 MΩ
Accuracy	100 Ω thru 1 MΩ: ±0.05% of full scale 10 MΩ ±0.2% of full scale 100 MΩ: < 30 MΩ ± 1.0%, >30 MΩ ±1.5% of full scale
Resolution	6 ½ digits
AC Functions	
Ranges	500 mV, 5 V, 50 V, 300 V
Accuracy	500 mV scale: ±0.2% of full scale 5V, 50V, 300V scales: ±0.8% of full scale 10 Hz to 20 kHz
Resolution	6 ½ digits

**Arbitrary Waveform Generator (AWG)**

Voltage Output	
Impedance	50Ω (typical)
Amplitude	100 mV to 8 V PK-PK
Accuracy	±3% of programmed value, or ±10 mV, whichever is greater
Resolution	1 mV
Frequency Range	
Sine Wave	10 Hz to 1 MHz
Square Wave	10 Hz to 1 MHz
Pulse Mode Rise Time	< 50 nS
Sample Rate	100 MS/s
Frequency Accuracy	1.0 %
External Input	
Input Impedance	10 KΩ nominal
Threshold Level	TTL

**IFF-45TS**

See IFF-45TS Product Specification Sheet

**Power Supply (for unit under test)**

**DC SUPPLY (Standard in -01, -03 systems)**

Format	1U Rack
Input Voltage	90 ~ 132 VAC or 180 ~ 264 VAC
Input Frequency	47 ~ 63 Hz, single phase
Output Power	600 W
Output Voltage	0 to 40 V DC
Maximum Current	15 A

**AC/DC SUPPLY (Standard in -02, -04 systems)**

Format	2U Rack
Input Voltage	115 Vrms ±10% or 230 Vrms ±10%
Current	<8.5 Arms @ 115 V <4.4 Arms @ 230 V
Frequency	47 to 63 Hz
AC Characteristics	
AC Output Voltage	Hi: 0 - 300 Vrms Low: 0 - 150 Vrms
Accuracy	0.1% FS
Max. Current	Hi: 3.25 Arms Low: 6.5 Arms
AC Max Power	750 VA
Phase Output	1
AC Frequency	16-1000 Hz

DC Characteristics

DC Output Voltage	Hi: 0-400 VDC Low: 0-200 VDC
Max. Current	Hi: 1.63 Adc max Low: 3.25 Adc max
DC Max Power	500W
DC Accuracy	0.1% FS

**Versions, Options and Accessories**

Order Number	Description
90973	IFF-7300S-01 Test System with IFF-45TS-A (Modes 1, 2, 3/A, 4, C, S) and DC UUT power supply
90974	IFF-7300S-02 Test System with IFF-45TS-A (Modes 1, 2, 3/A, 4, C, S) and AC/DC UUT power supply
90975	IFF-7300S-03 Test System with IFF-45TS (Modes 1, 2, 3/A, 4, 5, C, S) and DC UUT power supply. For NATO countries requiring Mode 5.
139626*	IFF-7300S-03 Test System with DC UUT power supply. For NATO countries requiring Mode 5. Note: IFF-45TS (Modes 1, 2, 3/A, 4, 5, C, S) not included - customer must supply.
90976	IFF-7300S-04 Test System with IFF-45TS (Modes 1, 2, 3/A, 4, 5, C, S) and AC/DC UUT power supply. For NATO countries requiring Mode 5.
112402*	IFF-7300S-04 Test System with AC/DC UUT power supply. For NATO countries requiring Mode 5. Note: IFF-45TS (Modes 1, 2, 3/A, 4, 5, C, S) not included - customer must supply.
112285	IFF-7300S-50 Test System with 2 IFF-45TS's (Modes 1,2,3/A, 4, 5, C, S). For NATO countries requiring Mode 5.
92717*	IFF-7300S-50 Test System with 1 IFF-45TS (Modes 1,2,3/A, 4, 5, C, S). For NATO countries requiring Mode 5. Note: 2nd IFF-45TS (Modes 1, 2, 3/A, 4, 5, C, S) not included - customer must supply.

\*Note: This configuration requires customer supplied IFF-45TS

**NSN Information:**

6625-01-612-8238 IFF-7300S-01/02/03/04  
6625-01-624-7151 IFF-7300S-50

**Options**

83404	45TSOPT1 IFF Xndr Mode 5 option
83407	45TSOPT4 DME/TACAN option
88631	45TSOPT6 KIV-77 adapter
89879	45TSOPT8 KIT/KIR adapter
86075	45TSOPT9 KIV-78/KIV 6 adapter
90983	IFF7300S-OPT01 MIL-STD-1553 bus control
90986	IFF7300S-OPT04 Synchro/Resolver Receiver (Required for TACAN testing)
90987	IFF7300S-OPT05 Synchro/Resolver Transmitter (Required for TACAN and indicator testing)

Order Number	Description
91074	IFF7300S-OPT08 THORsi TPS Developer Training Program
72438	IFF-45TS Transponder Modes 1,2,3/A,4 (Internal Crypto),C,S (Mode 5 capable)
83405	45TSOPT2 Interrogator Modes 1,2,3/A,C,S,4
83406	45TSOPT3 IFF Interrogator Mode 5 (requires Option 2)

*For a complete list of Test Program Sets (TPS) available, see the IFF-7300S Series Brochure, p/n1040BR.*

**EXPORT CONTROL:**

This product is controlled for export under the International Traffic in Arms Regulations (ITAR). A license from the U.S. Department of State is required prior to the export of this product from the United States.

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