

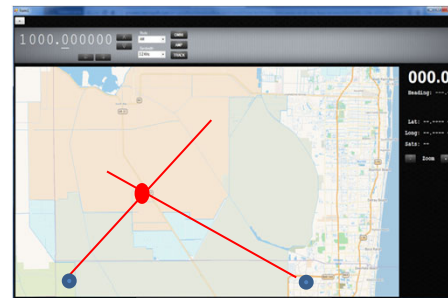
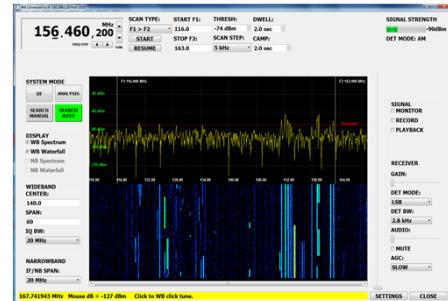
TC-9330VM & TC-9332VM HF/VHF/UHF COMINT-DF SYSTEMS

¾ ATR Shock Mount Package



Signal Search & Acquisition

Windows Based Mission GUI



Geo-Location

SYSTEM FEATURES

- Multi-Role: DF and COMINT Signal Search/Analysis
- 0.2-3000 MHz Frequency Range w/sub-octave-tunable preselection
- TC-9330VM Single Channel, TC-9332VM Dual Channel
- Advanced digitally implemented algorithm DF processor
- ¾ ATR and Full ATR, or 2U and 3U Rack Mount Chassis Options
- Vehicle, shipboard and fixed site Applications
- Uses rugged laptop, Windows based tablet or user host workstation
- Mission/Platform specific DF Antenna Arrays (shipboard, vehicle, fixed)
- Comprehensive Operator GUI, built-in compass and GPS
- DF and Signal Intercept for AM/FM/SSB/CW and complex signal formats (third party software option)

SYSTEM DESCRIPTION

The TC-9330VM and TC-9332VM COMINT/DF Systems provide advanced geo-location capability over the 0.2-3000 MHz frequency range in a next-gen single channel or dual channel architecture. The TC-9332VM is available in a full ATR package or 3U rack chassis for simultaneous DF and COMINT functions. The systems are designed for tactical and strategic ground, vehicle and shipboard applications. Systems are complete with TC-6526FO HF DF array and TC-8111-3E VHF/UHF DF array to seamlessly cover the entire frequency range. The processor unit contains a high performance SDR tuner-digitizer, DF processor/demodulator, choice of rugged PC, tablet and battery pack/AC-DC power adapter. Windows based software and GUI is provided for system control, BIT status, RF/Baseband spectral displays, DF LOB plots, moving map display and mission data logging. The systems include built-in GPS and electronic compass and accept external platform NAV data. The TC-9330VM and TC-9332VM provide direction finding and signal intercept for AM, NBFM, WBFM, USB, LSB, CW and PM signals. Optional Krypto500/1000 and Signal Works/Mod-Rec decoding, classification and analysis software packages are available to address a wide range of complex signal formats.

The TC-9330VM and TC-9332VM systems use proven, in-production COTS equipment configured onto ATR shock mount tray enclosures for transportable, bulkhead mount, OTM and fixed applications that are mission/platform specific. This approach provides a **'Customized COTS'** solution.

Call or visit our web site for more details and to view a narrated operations video for the TC-9300 COMINT/DF system.

Phone: 954-712-7777 Fax: 954-712-8880 E-Mail: TechComm@techcommdf.com

This document meets the requirements of ITAR paragraph 125.6 governing the distribution of public domain product marketing literature. Any technical data, demonstration or sale of equipment described herein is subject to U.S. State Department Export License requirements in accordance with ITAR regulations.

SPECIFICATIONS

DF/Intercept Frequency Range	0.2-3000 MHz (receive option in TC-9332VM second channel to 6000 MHz)
System Noise Figure	25 dB HF, 10 dB VHF/UHF, 12-14 dB SHF, typical
Preselection	HF; 8-band sub-octave filters, VHF/UHF; 4 voltage tuned and 4 sub-octave
DF Array	HF: TC-6526FO crossed ferrite loops/sense element; VHF/UHF 8-element broadband annular slot TC-8111-3E (3000 MHz) TC-8111-6 (6000 MHz)
DF Methodology	Single channel phase/amplitude, proprietary algorithm, 8 port goniometer/commutator/combiner
DF Accuracy and Resolution	HF: 4-8 degrees RMS (non skywave) VHF/UHF: 4 degrees RMS, 1-degree resolution
DF Measurement	5 MSec., internal/external 'tip-off' command with LOB confidence factor
DF Processor	Phase/amplitude digitally implemented proprietary design. Built-in compass/GPS and ext. NAV data interface, external DF cueing and event time stamping
Receiver Channel	High performance SDR tuner-digitizer, rugged mini-brick, 300 uSec. tuning time, 16-bit A/D, 120 dB dynamic range, Ethernet I&Q output stream
System Computer	Rugged MIL-STD-810, choice of laptop or tablet, 64-bit windows CPU, 2.6 GHz processor, 8GB SDRAM, 320GB HDD, 1 GIGe/ USB 2.0 ports,
Signal Processing	Performs DF on AM/NBFM/WBFM/LSB/USB/CW and PM signals. Optional software supports classification, decode for over 2500+ plus complex signal types
GUI Screens	System Control: Receiver operation, DF processor modes, system BIT, outside world interface set-up, signal search and DF (auto, manual and directed), touch screen, mouse and display System Displays: RF and baseband spectral, mouse click on signal receiver tuning, band-scope, BIT panel, LOB and geo-location display on moving map, mission log, Remote/Local hand-off for DF
Audio Outputs	800 mW, 8-ohm mono; 600-ohm balanced line
Environmental	Designed to meet but not tested to applicable MIL-STD-810F methods and procedures
Operating Temperature	-20 to +60 degrees C
Storage temperature	-40 to +70 degrees C
Humidity	Deployed equipment, 0 to 95%, non-condensing
Salt Fog	MIL-STD-810F, 509.4
Shock	MIL-STD-810F, 526.5
Vibration	MIL-STD-810F, 514.5
RFI/EMI	Designed to meet but not tested to applicable MIL-STD-461E, CS and RS methods and procedures
Power Requirements	TC-9330: 35 Watts, 12-15VDC (nominal platform 14VDC) external, or AC power adapter at 90-260VAC/48-63Hz input, high density Lithium-Ion battery pack equivalent to BA- 5590 (single channel system). TC-9332: 70 Watts, AC or DC power source

Specifications (cont'd)

Size	TC-9330VM: ¾ ATR, 7.86" x 6.75" x 15.75" including connectors and hardware protrusions. 2U std. rack mount chassis option available TC-9332VM: Full ATR, 10.56 x 6.75 x 15.75". 3U std. rack mount chassis option available
Weight	TC-9330 COMINT/DF Processor Unit, ATR, 6.8 lbs. 2U rack mount, 14.6 lbs. TC-9332 COMINT/DF Processor Unit, ATR, 10.9 lbs. 3U rack mount, 20.4 lbs.

Note: See TC-6526FO and TC-8111-3E product data sheets for DF Antenna specifications.

Block Diagram – TC-9330 COMINT-DF System

