

MINIATURIZED AIRBORNE DRFM SYSTEMS

KOR Electronics produces the widest range of Digital RF Memories (DRFM) available today. KOR Electronics DRFMs range from one to twelve bits of quantization and are used in a wide variety of applications utilizing both Pipeline and Stored Delay modes of operation. Applications include Pods, UAVs, laboratory, test ranges, anechoic chambers, onboard aircraft and ships. To date, KOR Electronics has designed over 45 different models of DRFMs and well over 600 units have been fielded. Individual sample rates, bandwidths, memory depths, delay resolutions, and modulations are possible, allowing tailoring of DRFM capabilities to system requirements.

The **Model 1225** is a 3-Bit Miniaturized DRFM for Airborne, Pod, and UAV applications. The Model 1225 provides up to 1200 MHz of instantaneous bandwidth and internal techniques in a self contained unit including RF and power supplies. This 3-Bit DRFM has > 15 dBc worst case spurious suppression across the entire band with typical spurs < -20dBc. The Model 1225 is fully self-contained with storage for up to 48 user defined deception programs. Through the user-friendly interface, ECM techniques for Pipeline, Stretched Pulse (SP), Synthetic CW and Multiple False Target (MFT) Modes can be defined.

KOR Electronics has also developed a **Tactical DRFM** solution implemented as a conductively cooled IEEE-STD-1101.2 VME form factor for MIL-E-5400 Class 2 airborne uninhabited fighter environment. The system has been tested with a -20°C to +80°C cold wall with -40°C to +100°C ambient temperature as well as a broad range of vibration, shock, and temperature/altitude tests. A reliability demonstration has been performed which indicates an MTBF of over 11,000 hours at +95°C.



KOR Electronics DRFMs have been flight qualified and have and continue to be carried on the A-4, A-6, A-7, F-4, F-14, F-15, F-16, and F-18 (qualified for carrier operations and Mach 1.5 operation) fighters plus various unmanned aerial vehicles that demand a unit that is not only flight qualified, but is also low power, low weight, and very small in size. Foreign customers have qualified the units on their own aircraft as well as their inventories of F-16s, F-4s, and other aircraft

KEY FEATURES

- Ruggedized for Pods, UAVs, Aircraft, And Other Platforms
- Up to 1.2 GHz Bandwidth
- Light Weight, Low Power, Small Size
- Output Attenuation Control
- Fully Integrated – Stand Alone Units Include:
 - *DRFM and Technique Generator
 - *RF/IF Up and Down Converters
 - *Power Supplies, Fans, etc.
- Software for Menu Based ECM Technique Development
- Autonomous or Remote Control Operation
- PRI Filters and Doppler Included
- Stores up to 48 ECM Techniques
- In Production

Extensive List of Options Available



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APPLICATIONS

- Self Protection Jamming
- Radar Operator Training
- Radar ECM Vulnerability
- ECCM Effectiveness Verification
- Target Simulation



SPECIFICATIONS

PERFORMANCE CHARACTERISTICS

Baseband, S, and X Bands	
1200 MHz Instantaneous Bandwidth	
<i>Other Bands Available</i>	
Input Power	-55 dBm to +10 dBm
Output Power	-30 to + 10 dBm
	In / dB Steps
Flatness	<±2 dBm
VSWR (In/out)	<2.0:1
Noise Floor	<-40 dBc (DRFM active)
	<-60 dBm (Inactive)
Spurious	<-15 dBc (worse case)
	<-20 dBc (typical)
Pulse Widths	20 ns – CW
Range Delay	90 ns – 2.3 ms
Range Resolutions	<4.4 ns
Doppler	-300 kHz to
	+300 kHz with
	<20 Hz resolution

COHERENT ECM TECHNIQUES

R/VGPO/I
 Coordinated R/VGPO/I
 Multiple False Range and Doppler Targets
 Cover Pulse
 Stretched Pulse and Synthetic CW
 Keeper Pulse and More

PHYSICAL CHARACTERISTICS (MODEL 1225)

Dimensions	4.75 x 6.25 x 12 Inches
Weight	<13 pounds
Cooling	Forced Air
Input Power	23-31 VDC at 4 amps max
	60 Watts nominal
Temperature	-40° to +71° C Operating
	-54° to +71° C Storage
Shock	12G for 11 ms
Altitude	Sea Level to 50K Feet
Humidity	>95% R.H. from
	+28° to +71° C
Vibration	10 to 2000 Hz +/- 10 G RMS

NON-COHERENT ECM TECHNIQUES

Uncoordinated R/VGO/I
 Random Range/Doppler
 Narrowband Spot Noise

Conductivity Cooled 6U VME Tactical
 Configuration Available