

Laboratory-Based Digital RF Memory (DRFM)

Easily Configurable for Custom Applications



- High-fidelity signal delay
- Coherent target return generation
- ECM technique development
- RF capture and analysis
- Building block of RF/ECM simulators

Mercury Systems produces the widest range of Digital RF Memories (DRFM). Ranging from one to 12 bits of quantization, these lab-based DRFM units are used in a wide variety of applications.

They operate in both Pipeline and Stored Delay modes.

Features

- 1–12 bits of amplitude sampling
 - 50 MHz to 1 GHz of instantaneous bandwidth
 - Up to 6 DRFMs per chassis
 - Excellent range delay control
 - Up to 16.6 ms of delay
 - Down to <1 ns resolution
 - VMEbus open architecture
 - 19" rack mountable
 - PowerPC® embedded processor with VxWorks®
 - Extensive built-in test
 - Standard Gbit Ethernet interface
 - Read/Write memory control
 - RF capture and analysis
 - Custom waveform generation
 - Optional Doppler and amplitude modulations
 - Optional host PC and GUI for scenario/technique development
 - Easily configurable for custom applications
- Extensive list of options available*

Parameter**Description**

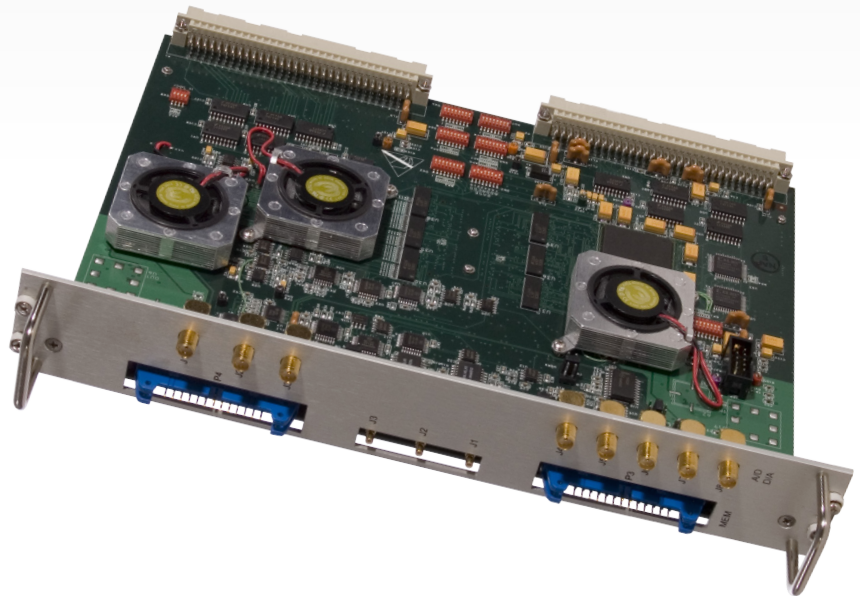
Frequency coverage	Base band or customer defined IF or RF Frequency
Instantaneous BW	500 MHz (standard)
Input power level	-55 dBm to +5 dBm (standard)
Output power level	>0dBm (standard)
VSWR	<2.0: 1 (standard)
Pulse Repetition Frequency (PRF)	<100 Hz to >5MHz (standard)
Doppler offset	+/-2 MHz (standard)
Doppler resolution	<0.05 Hz (standard)
Spurious	<-42 dBc worst case <-50 dB typical
Noise floor	<-120 dBm/Hz (DRFM active) <-150 dBm/Hz (inactive)
LO leakage	<-60 dBc
Pulse width	< 20 ns to CW
Range delay	<120 ns to 16 ms
Delay resolution	< 1 nanosecond

Physical Characteristics**19-Inch Rack Mount Unit**

Dimensions	15.75 x 19 x 28 inches
Weight	60 pounds
Cooling	Forced air

Power

Nominal	<250 watts
Input voltage	110 - 240 VAC, 46-400 Hz
Input current	3.5 amps at 110 VAC



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