

CHAMELEON II Radar Target and ECM Simulator



Powerful Performance for In-the-Loop Application

- 10-bit amplitude DRFMS
- Dual DRFM architecture
- 2 to 18 GHz coverage
- Over 500 MHz bandwidth
- IFM/LOG video analysis receiver
- READ/WRITE control to DRFM memory, including digital receiver
- Radar target modeling and clutter
- Advanced ECM generation

An enhanced version of the successful CHAMELEON ECM simulator, CHAMELEON II provides one or two DRFM channels, each with 10-bit amplitude encoding for applications requiring high-fidelity signal replication. CHAMELEON II also includes a digital receiver facility for ELINT signal analysis.

The simulator features radar target modelling, clutter, and ECM signal generation using a full software GUI running under Windows XP. With its PowerPC technology, CHAMELEON II provides real-time, high-performance signal generation with the ability to create your own synthesized RF outputs using a unique DRFM READ/WRITE interface facility.

CHAMELEON II is ideally suited for hardware-in-the-loop applications such as free-space testing of radars and training of operators in anechoic chambers and open-air ranges.



Specifications



RF Characteristics

- 2 to 18 GHz continuous operation (Other bands optional)
- 500/800 MHz instantaneous bandwidth
- IFM/LOG video threshold receiver
- Digital receiver for signal analysis
- -60 dBm sensitivity
- >100 dB dynamic range
- 0 dBm output power (typical)
- <-40 dBc harmonics/spurious

DRFM Control Features

- 3 msec memory depth
- <4 ns delay resolution
- Up to 8 memory files
- User read/write to memory
- 10 MHz Doppler at 0.5 Hz resolution
- RF output amplitude control
- Programmable system threshold
- CW operation
- Pipeline mode, capture-delay modes
- RF bypass modes
- 4 coherent Doppler targets per DRFM
- Maximum range delay >8 msec
- JEM (option)
- PRI prediction (option)

Software Features

- Full suite of ECM techniques
 - *RGPO/I*
 - *VGPO/I*
 - *Coordinated RGPO/I-VGPO/I*
 - *Noise: spot (burst/swept/blinking/Doppler), barrage*
 - *Inverse gain*
 - *Range/frequency false targets*
 - *Amplitude modulation*
 - *Simulated coherent clutter*
 - *Range and velocity bin masking*
 - *Synthetic CW and stretch pulse*
 - *Masking techniques*
- Windows™ GUI software
- Read/write DRFM memory control for signal analysis and target synthesis
- "Fill-in-the-blanks" ECM techniques
- User-defined ECM libraries
- Simulated target with variable RCS modelling
- Range and Doppler clutter models

Other Features

- Internal VME bus structure
- External PC control
- VxWorks™ real-time processing
- Power PC™ implementation
- Built-in test
- 110–240 VAC operation
- 19" rack mountable
- In-production availability

Information Subject to Change Without Notice.

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