

# CHAMELEON

## RADAR TARGET AND ECM

### SIMULATOR



(Dual Channel System)

#### KEY FEATURES

- ENHANCED ECM AND RADAR TARGET SIGNAL GENERATION
- 500 MHz TO 40 GHz COVERAGE
- 10-BIT AMPLITUDE DRFM TECHNOLOGY
- 800 MHz - 1.2GHz BANDWIDTH
- IFM/LOG VIDEO RECEIVER
- READ/WRITE CONTROL TO DRFM MEMORY
- COMPLEX RADAR TARGET MODELLING, CHAFF AND CLUTTER

#### DESCRIPTION

CHAMELEON provides a complete solution for radar target generation and ECM signal generation in one package. Using a multiple channel, multi-DRFM architecture, Chameleon is able to simultaneously generate complex radar targets together with jamming signals.

The simulator features 3D radar target modelling with true multi-point scatterers,, clutter, and ECM signal generation using a full software GUI running under Windows. With its PowerPC technology, CHAMELEON provides real-time, high performance signal generation with the ability to create your own synthesised RF outputs using a unique DRFM READ/WRITE interface facility.

CHAMELEON is ideally suited for hardware-in-the-loop and radiating applications for radar and ECM test, evaluation and training.

#### RF CHARACTERISTICS

- Standard 2 - 18 GHz continuous operation with expansion to 0.5 - 40 GHz
- 800 MHz - 1.2 GHz instantaneous bandwidth
- IFM/LOG video threshold receiver
- -50 dBm sensitivity
- >100 dB dynamic range
- 0 dBm output power (typical)
- <-50 dBc harmonics/spurious

#### DRFM FEATURES

- 10 msec memory depth
- <0.5 ns delay resolution
- Up to 8 memory files
- User read/write to memory
- +/- 10 MHz Doppler at 0.5 Hz resolution
- Programmable system threshold
- CW operation
- Pipeline mode
- Doppler Correction

#### TARGET GENERATION FEATURES

- Full GUI Implementation
- Coherent Doppler targets
- Range extent target models
- 3-D targets with 6 DOF movements
- 24 point scatterer target models
- JEM line models using user definable I/Q data pairs
- Realistic Chaff mode
- Clutter (main beam, ALR)
- Multiple range targets
- Swerling Fluctuations
- Variable RCS

#### ECM FEATURES

- Full GUI Implementation
- >19 Programmable ECM techniques including:
  - RGPO/I
  - VGPO/I
  - Coordinated RGPO/I-VGPO/I
  - Noise: spot (burst, swept, blinking/Doppler), barrage

- Inverse gain
- Range/frequency false targets
- Amplitude modulation
- Range and velocity bin masking
- Synthetic CW and stretch pulse
- Masking techniques
- Pulse capture and synthesis
- Decoys
- User-defined ECM libraries

#### ADDITIONAL SPECIFICATIONS

- Optional PRI Predictor
- Optional DF Interfaces (Amp/Phase/Monopulse/Mechanical)
- Remote control interface
- VxWorks™ real-time processing
- Built-in test
- 110–240 VAC operation
- 19" rack mountable
- In-production availability



**making a difference**

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