CHAMELEON II
RADAR TARGET AND ECM SIMULATOR

FEATURES

- 500 MHz to 40 GHz coverage
- 10-bit amplitude DRFM technology
- 800 MHz bandwidth
- IFM/LOG video receiver
- READ/WRITE control to DRFM memory
- Complex radar target modelling, chaff and clutter
- Advanced ECM techniques

DESCRIPTION

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

The simulator features 3D radar target modelling, clutter, and ECM signal generation using a full software GUI running under Windows. With its PowerPC technology, CHAMELEON II 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 II 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 instantaneous bandwidth
• IFM/LOG video threshold receiver
• -60 dBm sensitivity
• >100 dB dynamic range
• 0 dBm output power (typical)
• <−45 dBc harmonics/spurious

DRFM FEATURES

• 8 msec memory depth
• 0.5 ns delay resolution
• Up to 8 memory files
• User read/write to memory
• +/- 60 MHz Doppler at 0.5 Hz resolution
• Programmable system threshold
• CW operation
• Pipeline mode
• Doppler Correction

TARGET GENERATION FEATURES

• Full GUI Implementation
• 4 coherent Doppler targets per DRFM
• Range extent target models
• 3-D targets with 6 DOF movements
• 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
• 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