ARTICLE Gigg-tronics Call (925) 328-4650 or email sales@gigatronics.com

Adaptive Real Time Closed Loop Emulators

COTS Highly Integrated Open Architecture Hardware Emulators for Radar and EW System Development & Test

Real Time Closed Loop (RTCL) Adaptive Radar Emulator (RTCLARE)

- Ideal for Cognitive EW System Development & EA Technique Evaluation
- Multiple Parallel Phase Coherent and Time Synchronous Channels
 - Digital and IF Core based on the DARPA-funded RF System On a Chip • Incorporates Xilinx® Zyng® UltraScale+™ RFSOC
 - 5 GigaSamples/Sec (GSpS) A/D, 10 GSpS D/A Conversion Rates
 - 4 or 8 Parallel Digital Channels
 - PCIe or 3U Open VPX form factors in Digital/IF Subsystem
- Multiple Parallel Phase Coherent, Agile, Wideband RF Upconverters and RF Downconverters/Receivers out to 20GHz with Real Time Control of Frequency, Phase, and Amplitude/Gain (1Hz, 0.1°, 0.5dB resolutions; 300ns typical to 800ns worst case Switching/Settling times) – Ideal for HWIL applications
- Open Architecture Embedded Software (Firmware) with basic/generic Radar Modes, Waveforms, Digital Signal Processing and Decision Logic plus Radar Schedulers delivered - Puts an Adaptive Radar In The Loop
 - Firmware (FW) can be User-Customized/Upgraded with proprietary IP or Giga-tronics can be contracted to upgrade the FW to include Classified operating parameters/modes



COTS and Custom Configurations Available

- Standard Item COTS configs for 2 to 4 RF Channels
- 4U and 7U height 19" width rack mount subsystems
- Custom configs for 5 to 16 Channels available: Contact Us

Solutions for Next Gen EW / Radar Test & Deployment

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Adaptive Real Time Closed Loop Emulators

COTS Highly Integrated Open Architecture Hardware Emulators for Radar and EW System Development & Test

Real Time Closed Loop (RTCL) Electronic Warfare System (RTCLEWS) Ideal for Development and Eval of Radar Electronic Protection (EP) Techniques

- Multiple Parallel Phase Coherent and Time Synchronous Channels
- Digital and IF Core based on the DARPA-funded RF System On a Chip
 - Incorporates Xilinx® Zyng® UltraScale+™ RFSOC
 - 5 GigaSamples/Sec (GSpS) A/D, 10 GSpS D/A Conversion Rates
 - 4 or 8 Parallel Digital Channels
 - Inherent Low Latency Digital RF Memory (DRFM) Architecture
 - PCIe or 3U Open VPX form factors in Digital/IF Subsystem
- Multiple Parallel Phase Coherent, Agile, Wideband RF Upconverters and RF Downconverters/Receivers out to 20GHz with Real Time Control of Frequency, Phase, and Amplitude/Gain (1Hz, 0.1º, 0.5dB resolutions; 300ns typical to 800ns worst case Switching/Settling times) – Ideal for HWIL applications
 - Puts an Advanced Adaptive/Cognitive DRFM Jammer In The Loop Open Architecture Embedded Software (Firmware) with basic/generic
 - "Legacy" and DRFM Jammer modes delivered
 - Firmware (FW) can be User-Customized/Upgraded with proprietary IP or Giga-tronics can be contracted to upgrade the FW to include Classified operating parameters/modes



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