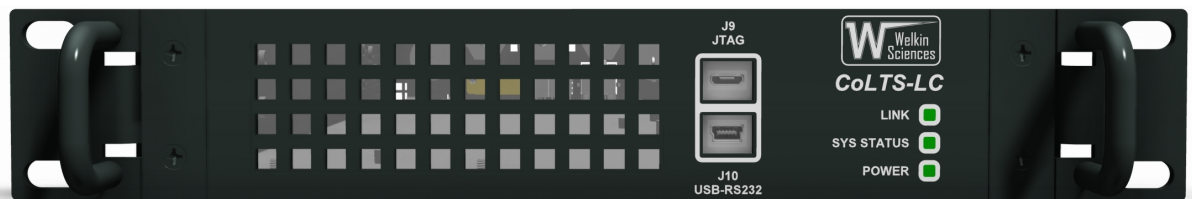


Configurable Link Test Set (CoLTS-LC)

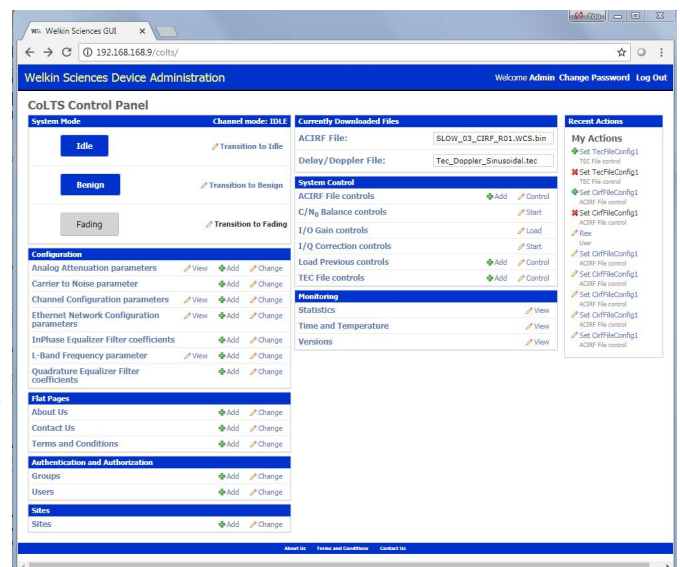
Hardware-In-The-Loop Scintillation/Fading Channel Simulator

CoLTS-LC is our latest generation of Hardware-In-The-Loop (HWIL) fading channel simulators. User-defined RF propagation effects include delay, Doppler, amplitude, noise, flat fading, and frequency-selective fading. Nuclear-induced scintillation is implemented with Defense Threat Reduction Agency (DTRA) fading channel models.



Features & Benefits

- Enables HWIL test of communication links and modems in wartime RF environments
- Flat or frequency-selective fading based upon user-provided ACIRF files
- L-band and S-band (Type N) input/output interfaces
- 125 MHz instantaneous bandwidth
- 70/140 MHz input/output interfaces (BNC)
- User-defined time-varying delay and Doppler
- One-way or two-way GEO delay
- Available with multiple independent channels
- Compliant with DTRA nuclear scintillation fading channel models
- Standard 9.5" or 19" rack-mountable, 1 RU
- Operator's Manual, Training, and Warranty



Fading & Scintillation Capabilities

Channels	Single (more channels upon request)	Input Power	-23 dBm nominal
Interface Frequency	Tunable from 950MHz to 2150MHz (L-band) Tunable from 2GHz to 2.85GHz (S-Band) Tunable from 50MHz to 180MHz (70/140MHz)	Geo Delay	1-way or 2-way (optional)
Bandwidth	125MHz (tunable over L-band and S-Band)	Distributions	Rayleigh, Rician
Fading Types	Benign, Frequency-Selective, Flat	Doppler Spectrum	Gaussian, f^{-6} , f^{-4}
Modes	Benign, Scripted per ACIRF file	Doppler Range	-1 MHz to +1 MHz
Fading Range	-40 to +9 dBm	Doppler Rate	-100 kHz/sec to +100 kHz/sec
TEC Dynamics	Delay, Doppler	Delay Rate	1 usec/sec
Minimum Decorrelation Time (τ_0)	0.1 msec minimum	Minimum Frequency Selective Bandwidth	100 kHz
Realization Size	2 GB	Update Period	1/10 of minimum τ_0



1 RU half 19" rack-mount
8.2"W x 16"D x 1.7"H
< 10 lbs

For further information on our products, email request to info@welkinsciences.com.



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