

-150 SSI SYNTHETIC STIMULUS INSTRUMENT



The -150 SSI is the next generation SSI (Synthetic Stimulus Instrument). The -150 SSI is a phase-coherent, wide-band Direct-Digital Synthesizer (DDS), which provides 500MHz of instantaneous bandwidth, enabling threat generation of today's most complex emitters. The two modes of operation enable the capability to generate 2 MPPS in radar mode or 20 simultaneous communication emitters per -150 SSI, creating a dense, complex, realistic environment for test and evaluation.

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► PUSHING PAST POSSIBLE

-150 SSI

SYNTHETIC STIMULUS INSTRUMENT

The -150 SSI has been designed with industry leading noise reduction and spurious free dynamic range (SFDR) with over 70 dBc of SFDR. The -150 SSI frequency range encompasses 0.5MHz-40GHz, making it the most capable DDS source on the market. The -150 SSI is backward compatible to existing A²PATS[®] installations with minor retrofit kits, using the same, 4-card foot-print and interfacing with the existing backplane, but providing a vastly greater capability.

SPECIFICATIONS

PULSE DENSITY

Up to 2MPPS or
20 simultaneous
communications
emitters

PHASE RESOLUTION/ ACCURACY

0.022°/1.7° RMS

NOISE FLOOR

-90 dBm/MHz (No
signal present)

BANDWIDTH

500 MHz

PULSE REPETITION INTERVAL

512 NS TO 1.0S/20
PS +/- 1.0 NS

PULSE WIDTH RANGE

24 ns to 1.0 s/20 ps +/-
1.0 ns

TESTING

Direct inject or
radiated testing

CHIRP RANGE

500 MHz - 40GHz

FREQUENCY RESOLUTION / ACCURACY

0.1 Hz

OPERATING FREQUENCY RANGE

500KHZ - 40GHZ

SPURS & HARMONICS

-70dBc (max)

RF SOURCE

Up to 8 SSIs per port

KEY BENEFITS & FEATURES

- > 500MHz of instantaneous bandwidth
- > Multi-signal capability:
 - Radar Mode: 4 simultaneous CW plus pulsed emitters in a 500MHz bandwidth
 - COMMS Mode: 20 simultaneous COMMS emitters
- > Ultra-wide frequency range .5 MHz to 40 GHz
- > Superior Spectral fidelity
- > Accommodates all A²PATS system features
- > Backward compatible to existing A²PATS installations
- > Commercially available with implementing software for industry and military applications

