



Provides test and evaluation, and subject matter expertise on assemblies, subassemblies, and components of Electro-Optic/Infrared (EO/IR) and hyperspectral sensors; biometric sensors and systems; laser designators, pointers, and rangefinders; and radar systems and subsystems for the U.S. Army and other customers within DoD and outside DoD. All of these areas are augmented with extensive modeling and simulation tools.

Capabilities and Services

Radar Antennas Testing

- Patterns and parameters
 - Amplitude, phase, beamwidth, sidelobe levels, null depths, radiation patterns, directivity, polarization, gain, and other parameters
- Antenna metrology
- Radome testing
- Noise figure measurements
- Boresight measurement and alignment
- Phase noise measurements

Millimeter Wave / Microwave Components Testing

- Testing for waveguides, cables, couplers, filters, etc.
 - Insertion loss, VSWR, impedance, VP and other components
- Dielectric property measurements (permittivity, permeability, and other measurements)
- Full environmental and dynamics testing

Sensor and Laser Testing

- EO/IR sensor characterization
 - Field of view, resolution, noise, boresight, target location error, and other parameters
- Laser beam parameter characterization
 - Pulse energy, pulse width, PRF code, pulse-to-pulse time stability, missing pulses, beam divergence, boresight error
- Testing of FLIR, DVO & Day TV, laser, biometric, and hyperspectral sensor systems and subsystems at temperature extremes
- Biometric device characterization
- Calculate probabilities of detection, recognition, & identification (DRI) from lab or field data
- Interoperability testing
- Precision focusing ,distortion mapping, non-uniformity measurement and correction
- Seeker/radiometer calibration
- Target paint reflectivity measurements

Laser Field Testing

- Laser spot motion for stationary and moving targets
 - Jitter, boresight error, spot wander (auto tracker performance)
- Data submitted as inputs to LDWSS Monte Carlo simulation for Hellfire PH
- Measure laser irradiance and project to seeker positions
- LOBST: Field Capable Laser beam parameter characterization

Facilities and Other Capabilities

Radar Indoor Range

- 12' by 12' planar/cylindrical near-field range
- Controlled climatic / electromagnetic environment
- Maximum antenna size: Up to 8' diameter
- Antenna fixture: AZ / EL/ Roll movement
- Frequency range: 1-40 GHz
- Absorber reflectivity: -50 dB at 2 ~ 40 GHz
- NSI 2000 Antenna Data Acquisition and Analysis Software provides near-field patterns, far-field patterns, 3D plots, holography, and other related data

Laser and Sensor Test Sites and Other Capabilities

- Lab tests with optical tables, collimating mirrors, and highly precise point source generators
- Field test ranges at several Redstone Test Areas
- Field tests at Yuma Proving Ground through co-operative agreement
- Field tests at other sites: WSMR, Dugway, Eglin
- Mobile field test vans and equipment can safari and test almost any place in the U.S. Perception Tests: Custom software and methodology that uses human analyst to directly measure probability of detection and recognition
- ALIMS indoor laser laboratory
- LOBST: mobile outdoor laser parameter testing
- CACTIS board for laser spot testing in field

