2018

NSI MI

Test with Confidence™

NSI-MI Technologies

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info@nsi-mi.com | www.nsi-mi.com

AEROSPACE

Commercial Radome and Radar Measurement: 737, 747, 757, 767, 777, 787, A300, A320, A330, A340, A350, A380, G-650, and more...
In-Flight Antennas
Weather Radar

AUTOMOTIVE

Test Satellite, Data, Radio
Full Scale Measurement
GPS & Safety Systems

DEFENSE

Military Nose and Cigar Shaped Radomes, Array Performance: F-15, F-16, F-18, F-22, F-35, F117, B1, B2, JSTARS, AH64 APACHE, RAH66 Comanche, AWACS, C-17, C130, E2C, V-22, and more...
Radar Cross Section
Target Simulation
Radar Test & Alignment

RESEARCH

Government Developed Programs
Standards and Compliance Labs
Industry R&D Facilities

SATELLITE

Satcom Antenna and Radome Certification
Ground Station Products
Integrated System Test

ACADEMIA

Applied Technology
Development
Research

WIRELESS

Free Space Characterization
Base Station Antenna Test
Active Antenna Test

WORLDWIDE FOOTPRINT

Offices throughout United States and Europe
Global coverage of fully trained representatives
See our full listing of partners at www.nsi-mi.com

ENGINEERING

Mechanical, Electrical, Software Engineers
Systems & Project Engineers
Mechanical and Electrical Systems Assembly & Test

TEST SERVICES

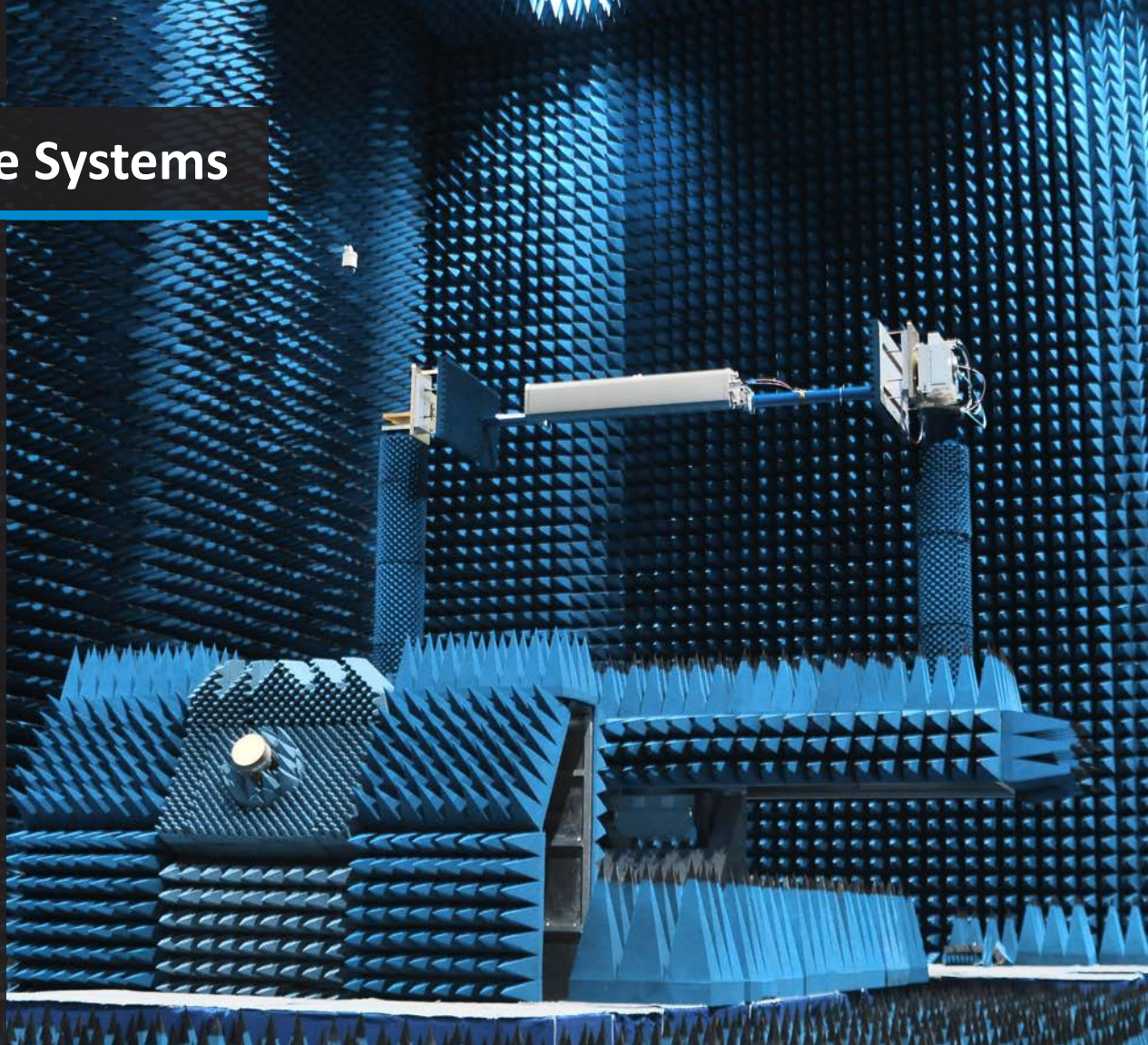
Six (6) Fully Equipped In-House Test Facilities
Compact Range, Near-Field & Far-Field Configurations
Antenna, Radome and RCS Testing

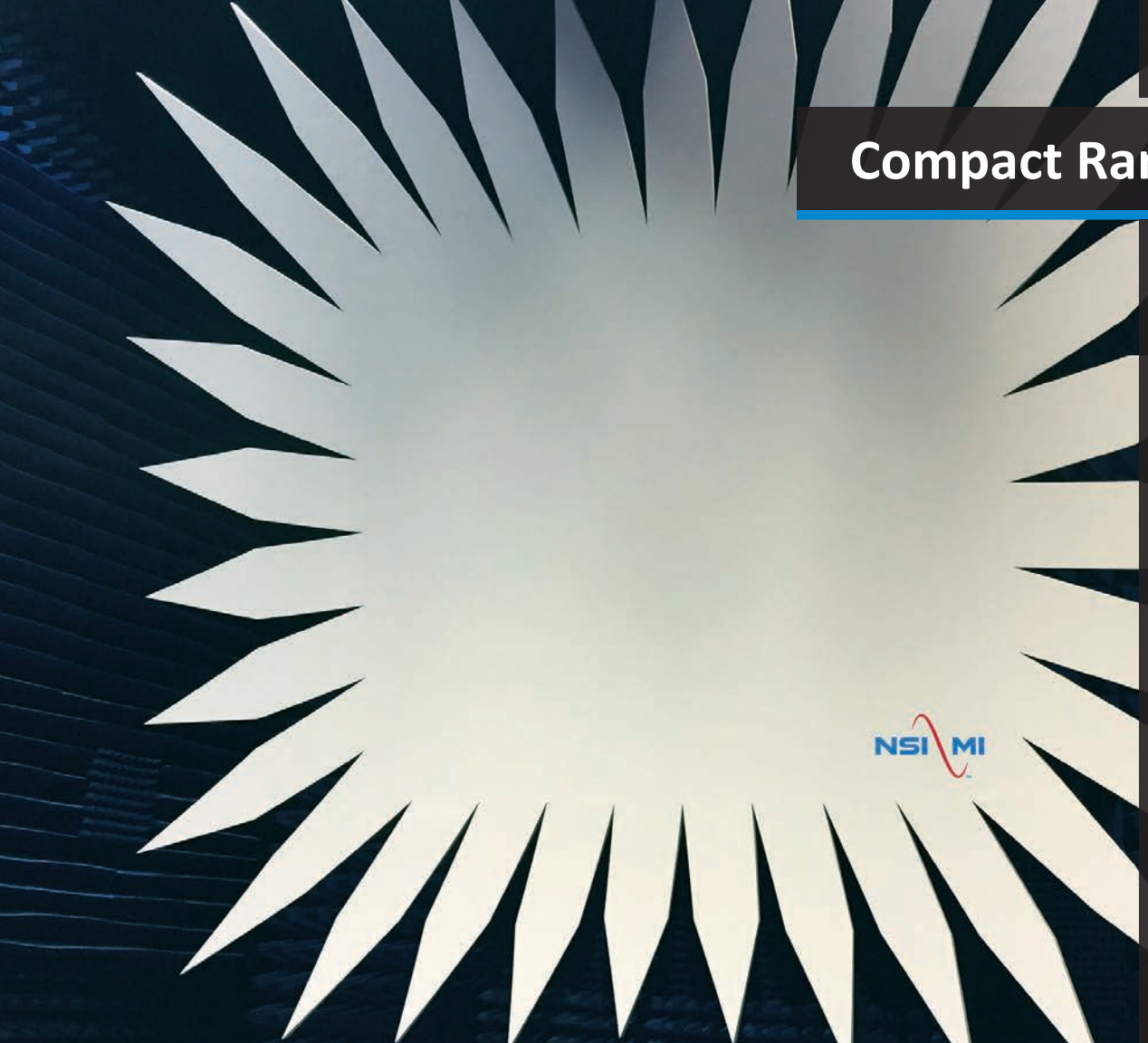
CERTIFICATIONS/ ACCREDITATIONS

ISO 9001:2008 Accredited
A2LA Accredited
DDTC Registered

Compact Range Systems

Compact Antenna Test Ranges (CATR) are ideal for testing a wide variety of RF equipment and antennas measuring amplitude and phase patterns from L-band to mmWave bands. Compact Range Systems offer users the advantages of an indoor far-field configuration, with the convenience of environmental and security control. The ability to control temperature, eliminate wind deflections, avoid the elements as well as reduce maintenance costs are all advantages of this product.





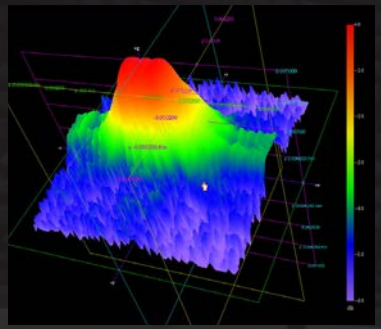
Compact Range Reflectors

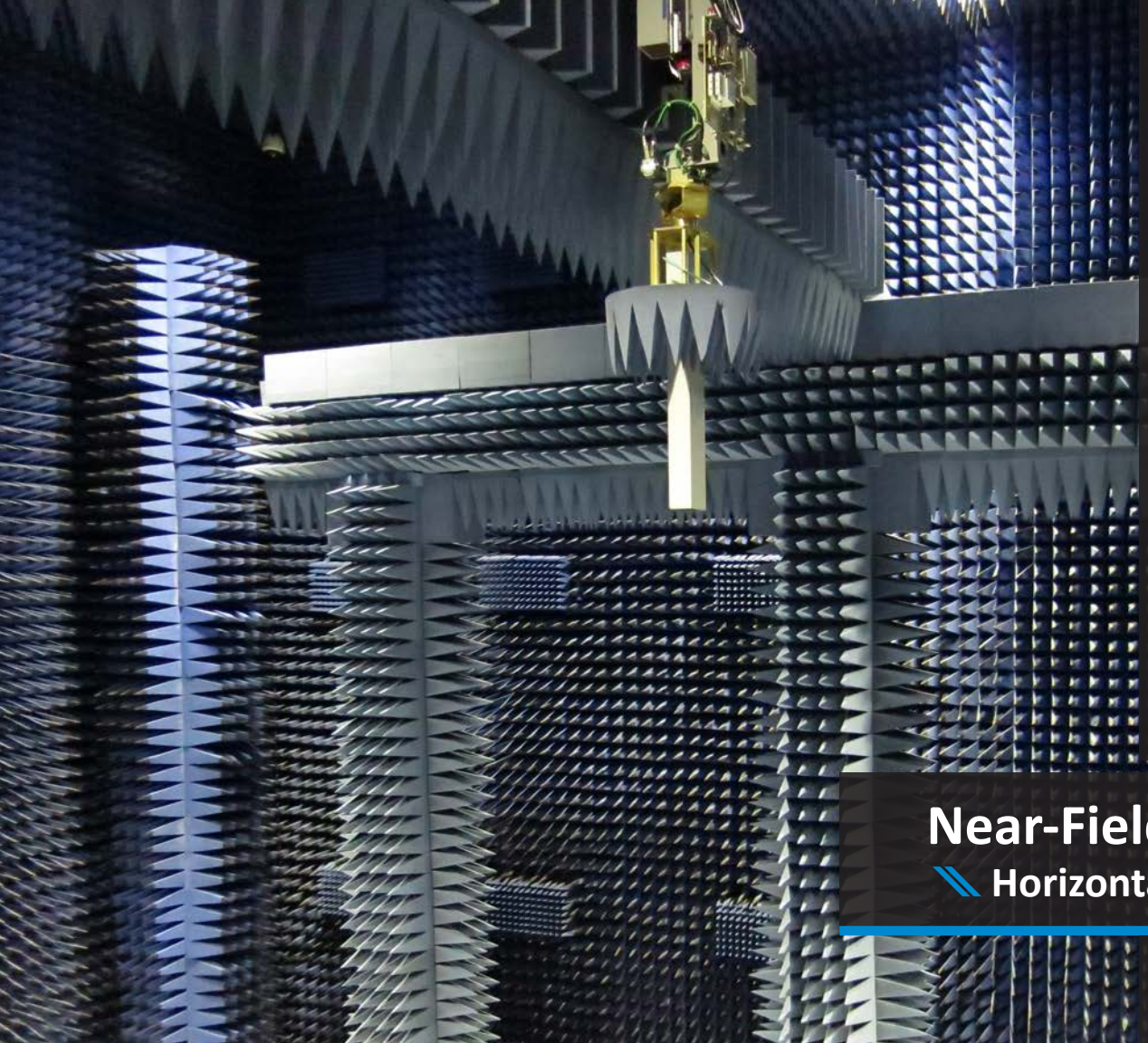
NSI-MI Technologies has sold more Compact Range Reflector-Based Systems than all other companies combined. Each compact range reflector is made to exacting standards for optimum illumination and uniformity. The reflector's main body is the structural back bone of the composite assembly and provides the structural integrity to reduce weight. All reflectors have a life expectancy exceeding 20 years.

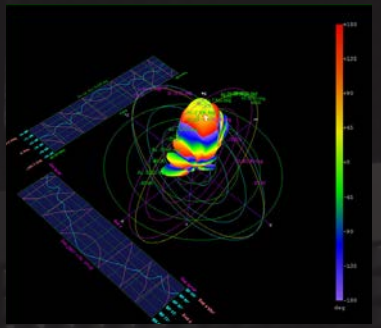
Near-Field Systems

Vertical Planar Near-Field

NSI-MI's Vertical Planar Near-Field Systems range in size from portable table-top XY Positioners, ideal for measuring high frequencies for small aperture antennas, to very large precision XY Positioners, used for testing satellite and radar antennas.







Horizontal Planar Near-Field Systems incorporate a next generation precision closed loop servo drive system and a highly engineered structure. These systems are ideal for large aperture antennas, larger arrays and reflector antennas that require a zenith orientation for testing.

Near-Field Systems

Horizontal Planar Near-Field

Near-Field Systems

Robotic Antenna Test Systems

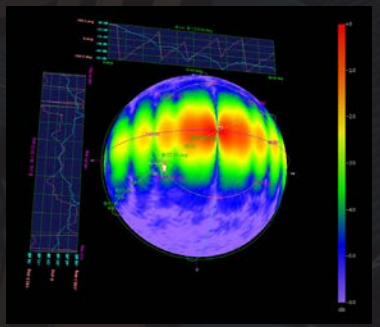
The 8-Axis Robotic Antenna Measurement System is ideal for measuring antennas up to 2.4 m x 1.2 m (8 ft x 4 ft). It is well suited to perform testing of high, medium and low gain antennas, since it offers PNF, CNF and SNF capabilities.

The system uses a 6-axis precision robotic arm that acts as Y-axis for PNF & CNF and Theta-axis for SNF acquisitions. It also incorporates a small, 19.7 in (500 mm) diameter, rotary positioner that is used as a Phi-axis for CNF and SNF acquisitions. This positioner can support AUT loads of up to 4,500 kg (10,000 lb). Lastly the Robotic Antenna Test System also uses a precision linear translation positioner that is used as an X-axis for PNF acquisition and robot repositioning.

Near-Field Systems

Spherical Near-Field

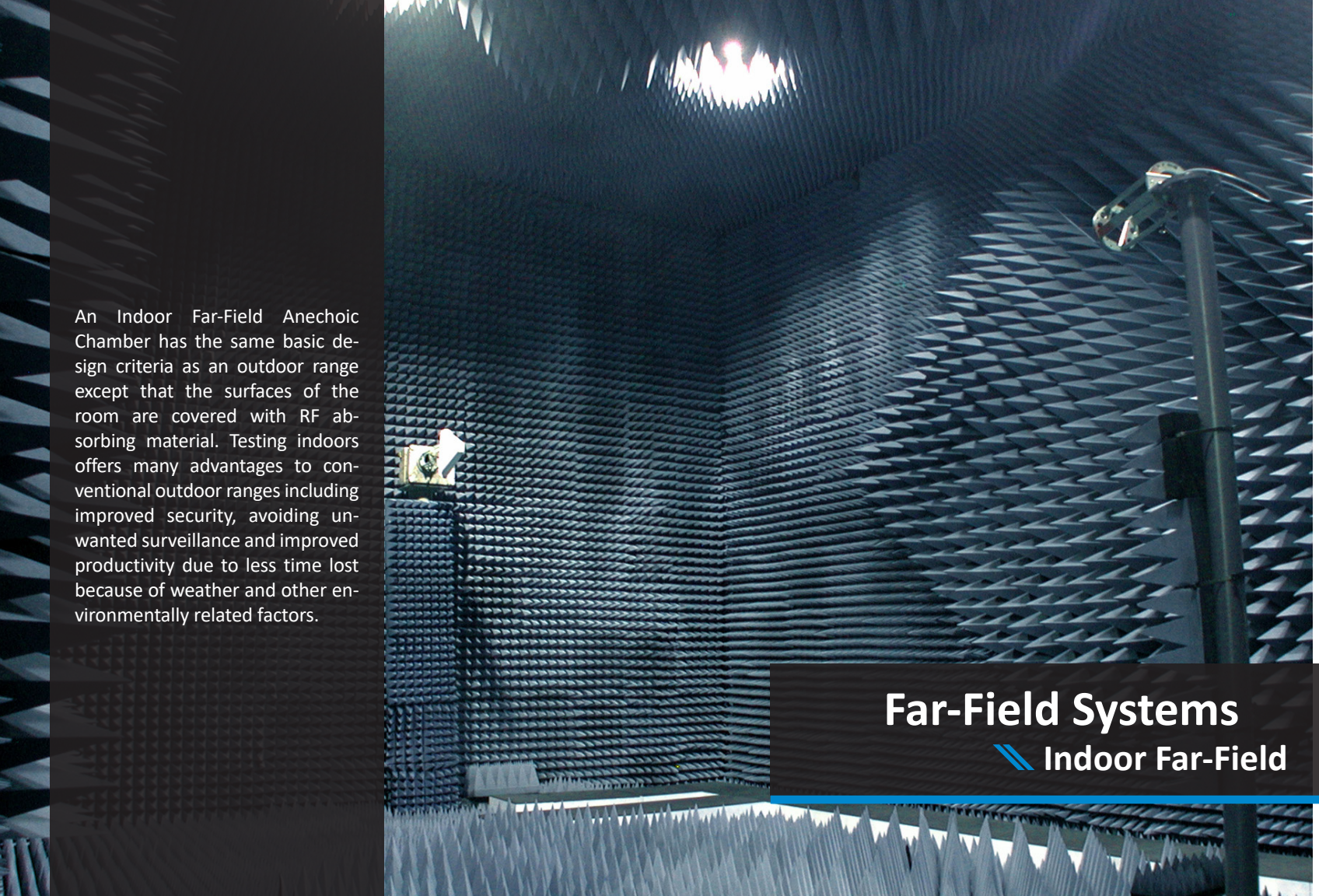
The spherical configuration provides the most comprehensive set of measurement results for characterizing an antenna. NSI-MI offers a large variety of Spherical Near-Field Antenna Measurement Systems of various sizes and configurations: Roll over Azimuth Systems, Swing Arm over Azimuth Systems, Stationary AUT Systems, and Arch over Azimuth.



Far-Field Systems

Outdoor Far-Field

In an Outdoor Far-Field Range configuration, the test antenna is installed on the test positioner located on a tower, roof or platform outside the instrumentation control room. The receiver front end (Local Oscillator) is usually located at the base of the test positioner, with the mixer connected directly to the test antenna port. This configuration requires only a single RF path through the positioner, greatly simplifying system design. Use of the remote front end also minimizes local oscillator power loss to the mixer and maximum system sensitivity.



Far-Field Systems

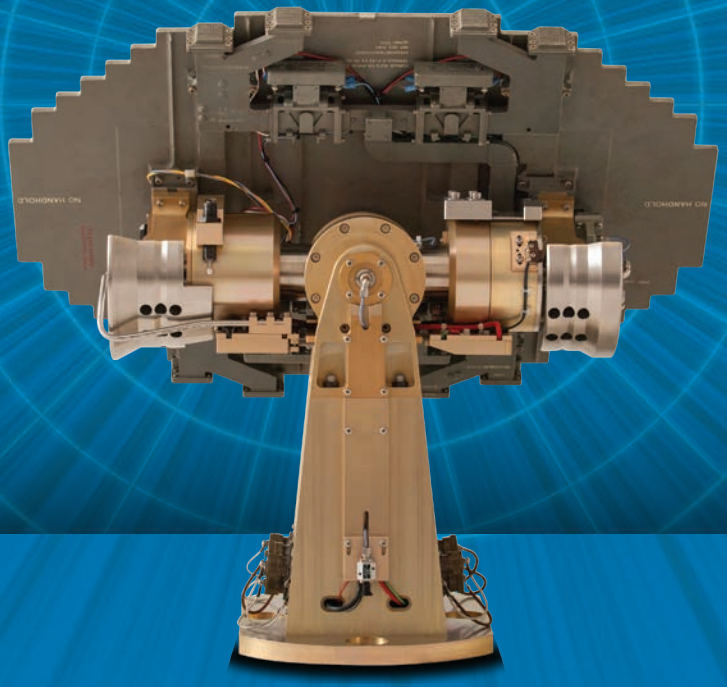
Indoor Far-Field

An Indoor Far-Field Anechoic Chamber has the same basic design criteria as an outdoor range except that the surfaces of the room are covered with RF absorbing material. Testing indoors offers many advantages to conventional outdoor ranges including improved security, avoiding unwanted surveillance and improved productivity due to less time lost because of weather and other environmentally related factors.

Target Simulation Systems

NSI-MI Technologies designs and manufactures specialized Motion Simulation Systems to precisely simulate the movement of physical entities for use in virtual reality trainers and testers and for physical testing needs. We specialize in the areas of Aerospace and Defense; enabling simulation for missiles, decoys and more.

Pointing and Tracking Systems



Pointing and Tracking Systems are designed to control the line of sight of an ever increasing array of sensors, weapons and other payloads of all sizes used in Scientific, Military and Commercial endeavors.

NSI-MI has developed state-of-the-art technologies for the exact alignment of the lines of sights utilizing a combination of mechanical, optics plus control electronics and software algorithms.

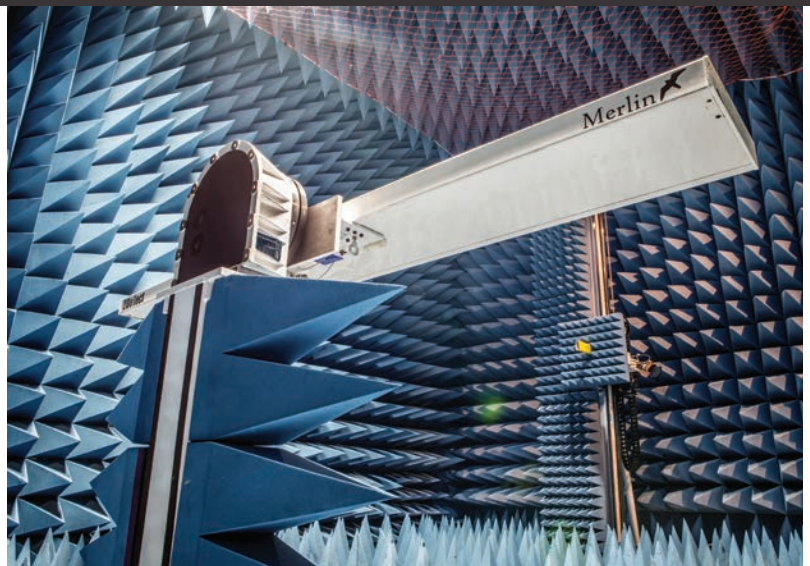
Test Services

A2LA ACCREDITED
LAB CERTIFICATE # 3869.01

ISO 9001: 2008 NSI MI ACCREDITED

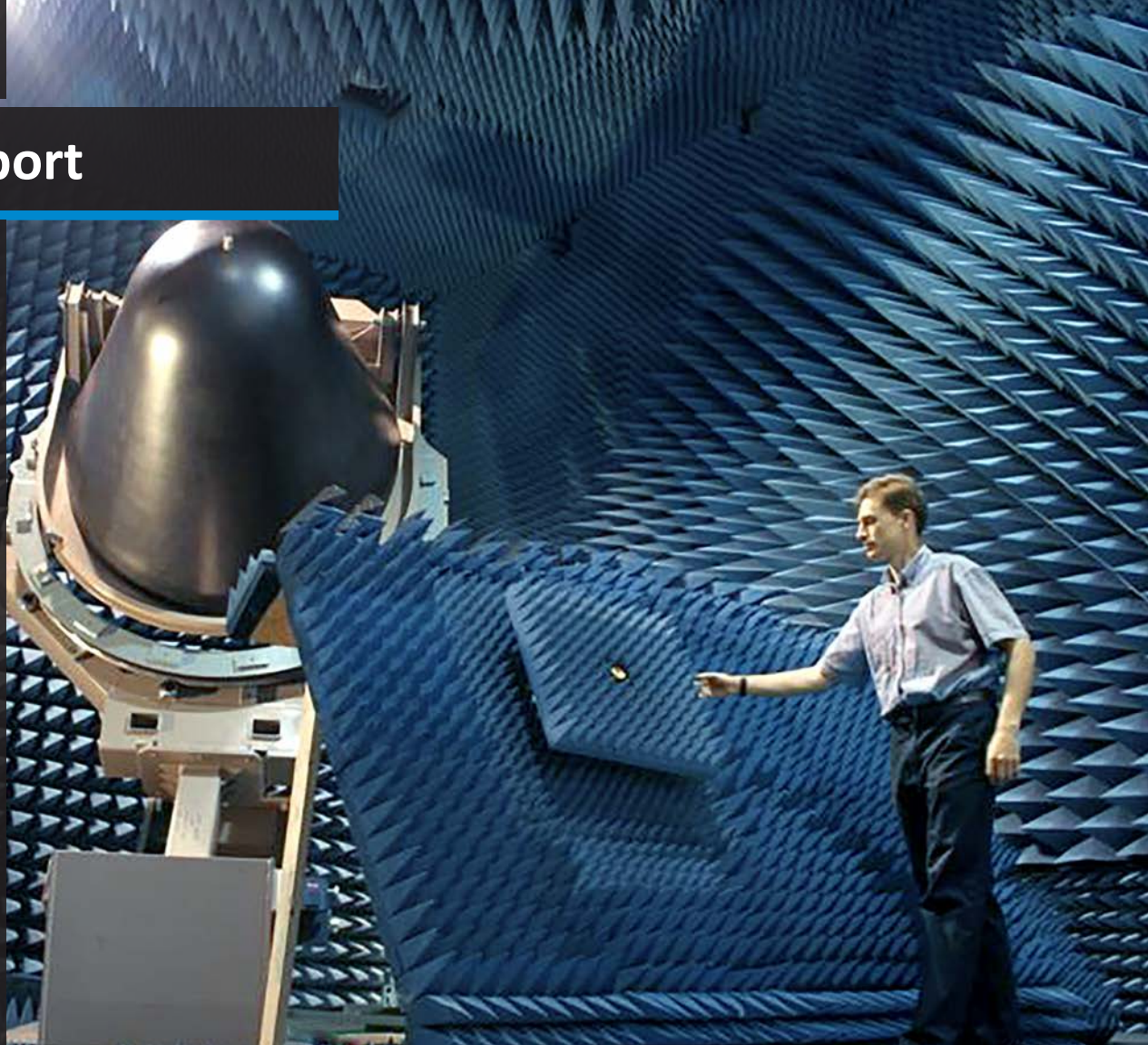
NIST

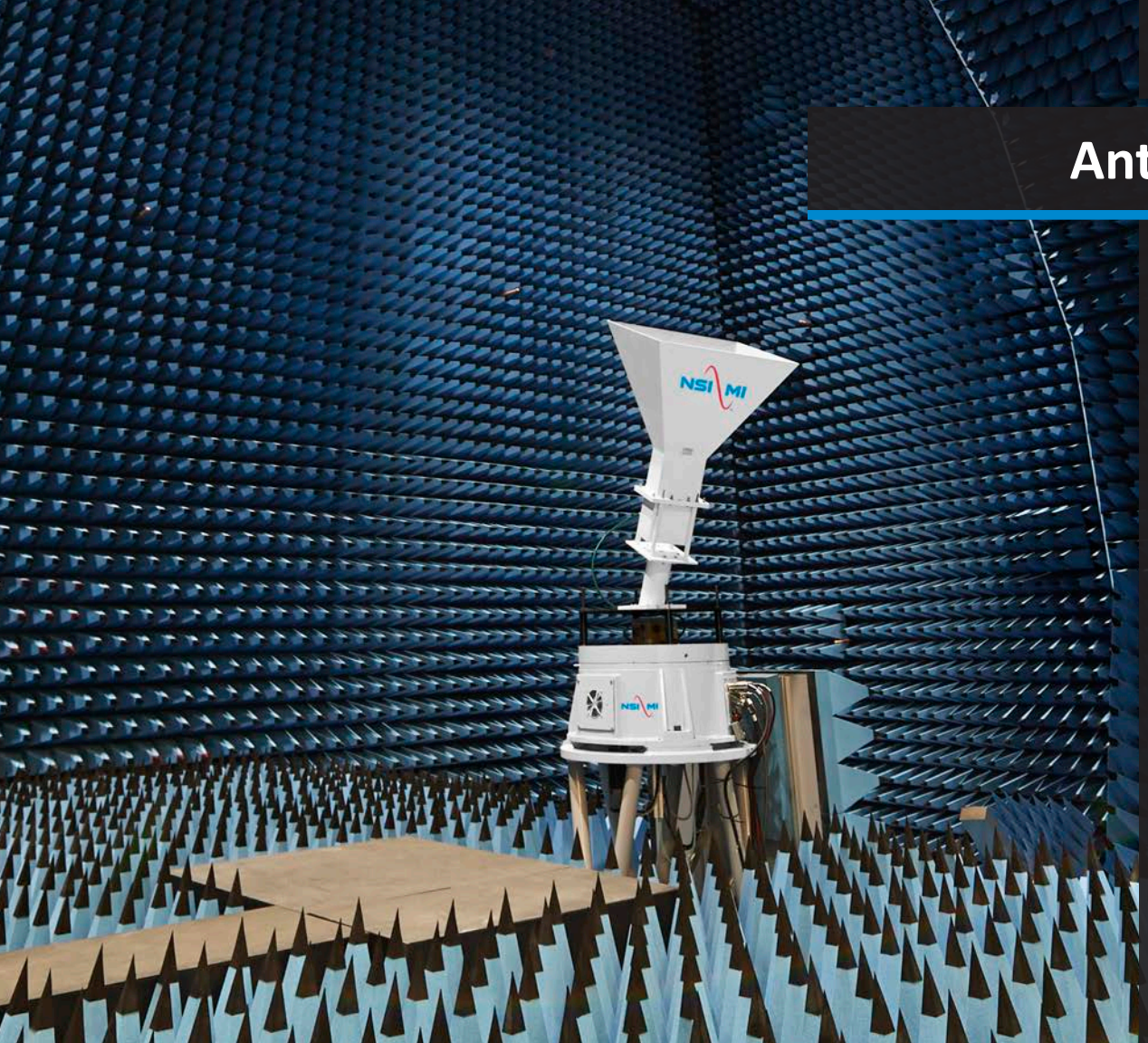
NSI-MI Technologies offers its world class Test Facilities for use to industry, government and academic clients. NSI-MI's industry leading equipment and instruments are available to support your specific requirements. Our measurement facilities, combined with our expert staff of engineers, can tackle any unique test needs with precision and accuracy. Our facilities are A2LA accredited and our equipment is calibrated with NIST traceability providing you with the assurance that we can accurately and consistently characterize your antennas, radomes and other devices.



Customer Support

NSI-MI Technologies' Customer Support services leverage years of engineering knowledge and experience in antenna, radome, and RCS measurements. There are a multitude of ways to access these services in order to make incremental improvements to your range efficiency. Whether you are seeking short-term or more permanent support, NSI-MI has the service to address your needs.





Antenna Products

NSI-MI Technologies has an extensive history in the development of innovative antennas for precision antenna test and measurement applications, as well as other wireless applications. NSI-MI antennas are designed and manufactured in our factory by our talented staff of antenna design engineers with decades of experience. Our antenna products and services fulfill the needs of numerous markets, including the Defense, Aerospace, Automotive, Satellite Communications, and Wireless Industries.

Mechanical Products

NSI-MI Technologies' mechanical expertise has enabled us to design and manufacture complex structures, including single-axis and multi-axis positioning products. Our Mechanical Products are used in various test and measurement, pointing/tracking, and other general purpose single/multiple payload positioning applications.

Azimuth Positioners

Azimuth over Elevation over Azimuth Positioners

Feed Positioners

Horizontal Slides

XY Positioners

Electronic Products

NSI-MI Technologies' Electronic Products are designed for fast and accurate data acquisition and reporting. NSI-MI has the application knowledge, expertise RF and Electronic Products to configure RF Subsystems that are compatible with a wide variety of instruments, software, positioners, optics and antennas.

Receivers

Synthesized Signal Sources

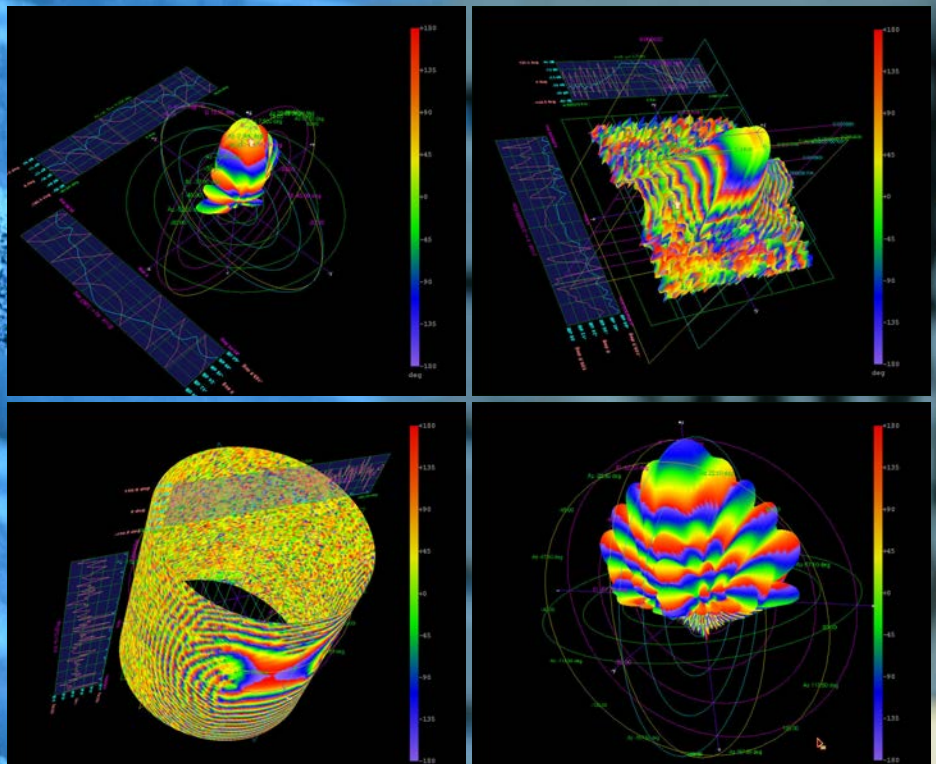
Measurement Control

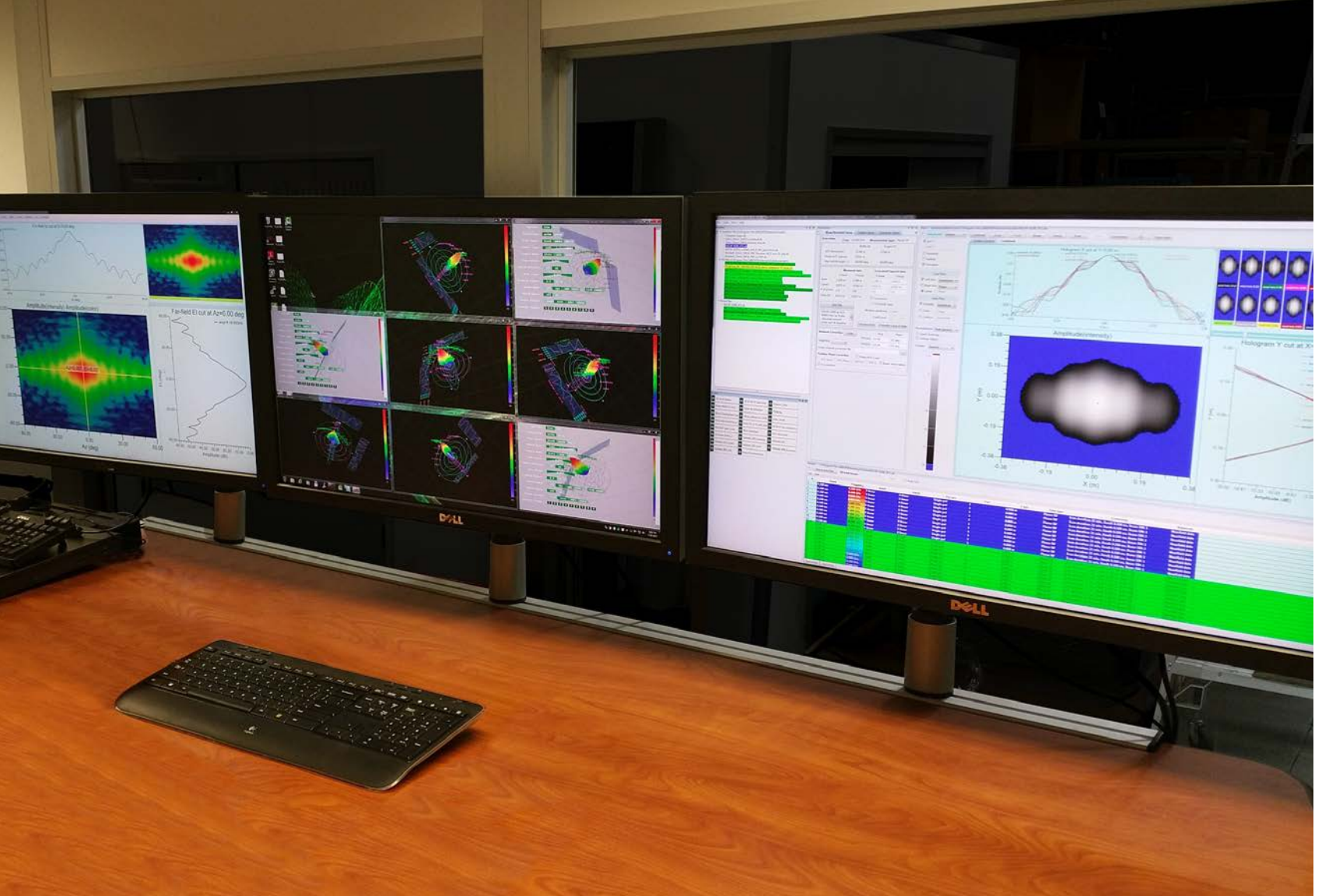
Advanced AUT Control

Range Automation

Software Products

NSI-MI provides the most sophisticated software for measuring and analyzing antenna patterns. The software is compatible with nearly all measurement equipment in the industry and is constantly updated to support new motion controllers and RF equipment. The software is dedicated to solving the unique challenges of microwave range operation and management. The intuitive user interface, extensive scripting capability and broad data management functions give power and flexibility to solve the toughest measurement challenges.





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