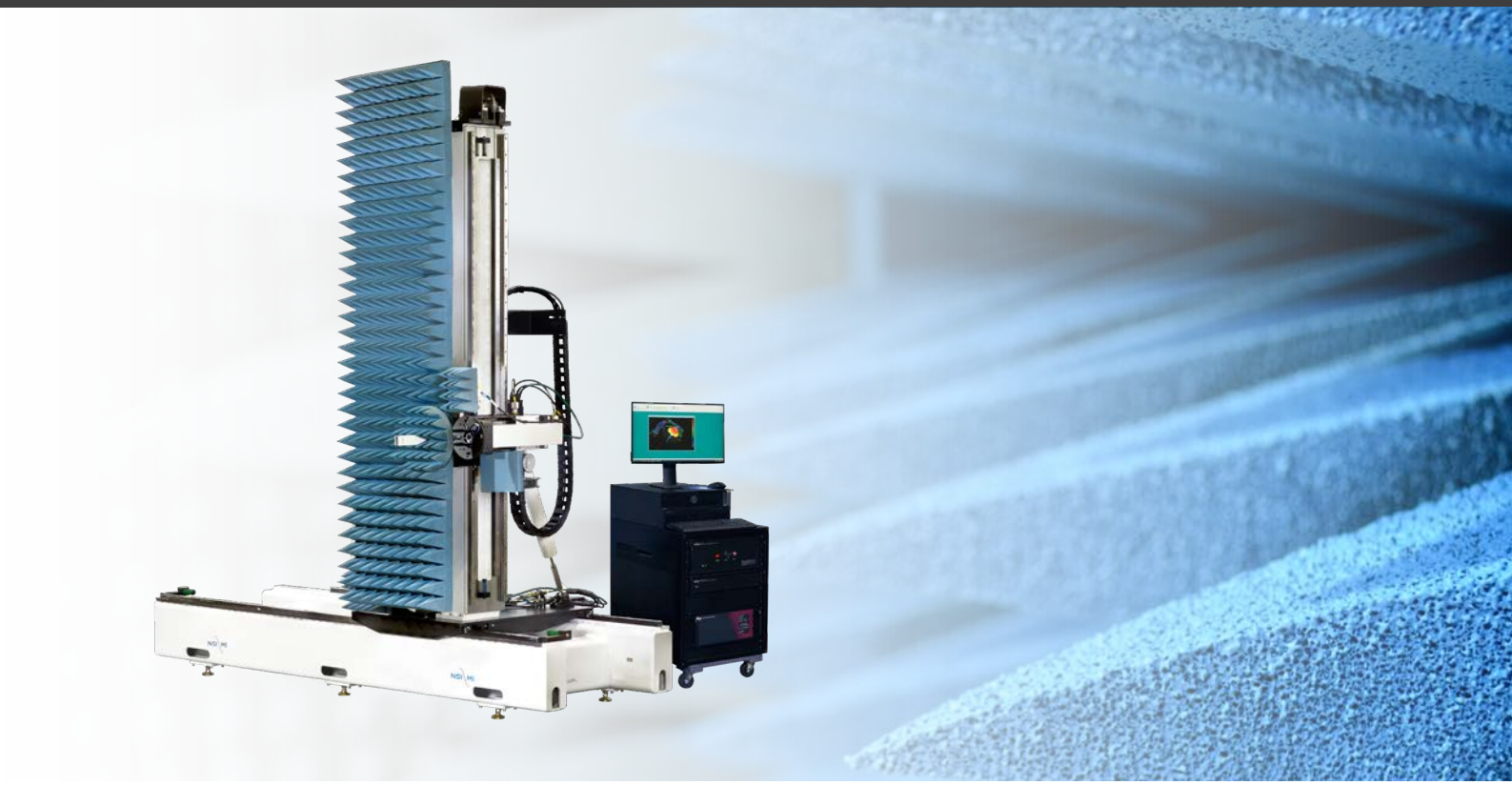
Pre-Configured Planar Near-Field Measurement System

PNF-XYV-1.8x1.8



DESCRIPTION

The PNF-XYV-1.8x1.8 is a pre-configured four axis planar near-field measurement system ideal for measuring medium and high gain antennas (>15 dBi) with apertures up to 1.65 m (65 in.) from 0.75 GHz to mmWave. The system is constructed of high strength steel and can support probe payloads of up to 19 kg (42 lb). This robust design is easy to align, set up and operate, and has a comprehensive set of options and accessories to accommodate a broad variety of test article geometries and installations.

FEATURES

- **0.75 GHz to mmWave Testing**
- **1.8 x 1.8 m Scan Area with Z and Pol**
- **0.25 m Z and 360° Pol**
- **Automatic Scan Setup**
- **Powerful Plotting and Antenna Analysis Software**
- **Far-field, Holographic and Near-field Patterns**

TYPICAL APPLICATIONS

- **Point to Point Communication Antennas**
- **Phased-Arrays**
- **Reflector Antennas**
- **Radar Antennas**

CAPABILITIES

The PNF-XYV-1.8x1.8 supports NSI-MI, Keysight, and Rohde & Schwarz RF receivers and is capable of measuring amplitude and phase patterns from UHF to mmWave. The system includes a software workstation preloaded with NSI2000 Antenna Measurement Software and Windows® and provides automatic setup of scans based on measurement parameters and desired output. Measured data can be processed for far-field or holographic patterns yielding complete characterization of the antenna's performance. A single data set provides information on antenna gain, side lobe structure, beam pointing and cross polarization.

SPECIFICATIONS

Positioning System		Model
Positioner	Vertical Planar – Rack and pinion X and Y with MEC-Z-0.25 and MEC-AZ-0.1 Z and Pol Stages	PNF-XYV-1.8x1.8
Scan Area	1.8 x 1.8 m (6 x 6 ft) with 0.25 m (10 in.) Z	
Probe Capacity	19 kg (42 lb) (WR975 OEWG)	
Planarity	0.05 mm (0.002 in.) RMS	
Repeatability	X, Y: 0.05 mm (0.002 in.) RMS Z: 0.025 mm (0.001 in.) RMS Pol: 0.03° RMS	
Resolution	X, Y: 0.025 mm (0.001 in.) Z: 0.025 mm (0.001 in.) Pol: 0.0125°	
Scan Speed X,Y	X: 0.25 m/s (10 in./sec) Y: 0.38 m/s (15 in./sec)	
Position Controller	ELE-IMC (Intelligent Measurement Controller)	
Motor Cables	Quick-connect 12.2 m (40 ft)	
PC Workstation	Computer with LCD Monitor	
Power	500W, 100–240 VAC switchable, 50/60 Hz	
Software	NSI2000	
Absorber	20.3 cm (8 in.) pyramidal	
Frequency Range	0.75–110 GHz	
RF System		
Scanner RF Cables	20, 40, or 50 GHz, 9.1 m (30 ft) X/Y Cabletrack	
Rotary Joint	26.5, 40, or 50 GHz (Pol)	
Range RF Cables	20, 40, or 50 GHz 9.1 m (30 ft) to Scanner Base and AUT	
RF Receiver	NSI-MI VFA, Keysight PNA, Rohde & Schwarz ZVA	
Weights and Dimensions (Scanner Only)		
Installed Envelope W x L x H	3.1 x 1.8 x 3.3 m (122 x 70 x 130 in.)	
Installed Weight	1250 kg (2750 lb)	
Crated Dimensions W x L x H	2 crates up to 2.0 x 3.0 x 1.5 m (78 x 118 x 60 in.) 1 D container 1.5 x 1.1 x 1.0 m (58 x 42 x 38 in.)	

BASELINE SYSTEM

Each NSI-MI Pre-Configured System includes the following:

- Positioning Subsystem including Mechanical Scanner with Absorber Kit and Motion Control System
- State-of-the-art RF Subsystem
- Mounting Hardware Installation Kit
- Full Standard System Interface and Operations Documentation
- Interface Kits to easily integrate a wide variety of common RF equipment, antennas and test devices
- NSI-MI or customer supplied RF receiver connection

Positioning Subsystem

» Multi-axis Mechanical Positioner
» Absorber Kit
» Motion Controller
» Control and Motor Cabling
» Cable Management
» NSI2000 Software
» PC

PNF-XYV-1.8x1.8

RF Subsystem

» Scanner and Range RF Cables
» Rotary Joints
» RF Components and Devices (as needed)
» Software Device Drivers
» Data Acquisition, Processing and Plotting Software

RF Components and Devices

Site Deliverables

» Product Guide and Interface Control Documents
» Hardware, System and Software Manuals
» Anchoring Kit
» Shipping Crates

Shipping Crates and Anchoring Kits

OPTIONS AND ACCESSORIES

Our Pre-Configured Systems are designed to operate with a wide range of popular accessories and support services to meet budget and test needs. These include:

- Full range of Probes and Standard Gain Horns
- Additional software to enhance productivity
- AUT supports, stands and other accessories
- On-site installation, training and verification by NSI-MI experts
- Interface Kits to easily integrate a wide variety of common RF equipment, antennas and test devices

RF Options

» RF Frequency Options: 20, 40, 50 GHz
» RF Receiver Options: NSI-MI or Customer Supplied

Antenna Accessories

» Waveguide Probe Assemblies
» Standard Gain Horn Assemblies
» Broadband Probes Assemblies

Vector Field Analyzer™

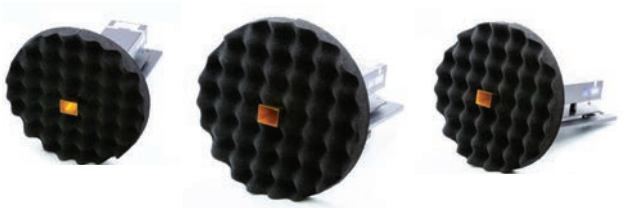
Waveguide Probes

mmWave RF Upgrade Options

» mmWave Band: 50–75 GHz module and Probe-SGH set
» mmWave Band: 60–90 GHz module and Probe-SGH set
» mmWave Band: 75–110 GHz module and Probe-SGH set

Software Add-ons

» Additional NSI2000 License
» Professional Upgrade
» MTI



mmWave RF Upgrade

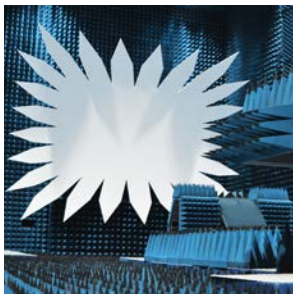
System Accessories

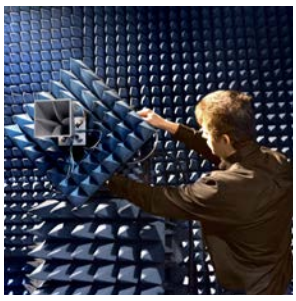
» AUT Stand

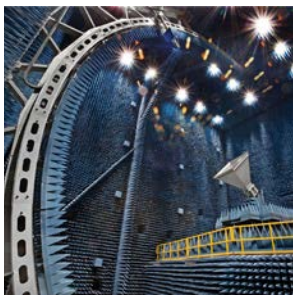
Site Services

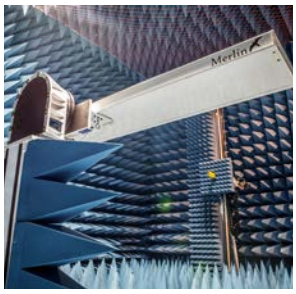
» Site Z-Planarity Enhancement
» Installation
» Training

AUT Stand









Test With Confidence

NSI-MI Technologies is the preferred global supplier of antenna, RF and microwave testing equipment. From world class in-house testing facilities to delivering industry leading turnkey systems, we have the right solution for you.

Our commitment is to providing the best solution for making fast, accurate and reliable measurements. We provide a solid investment, designed for lasting performance and low maintenance. We offer test systems that enhance productivity through ease of use, minimizing test time and optimizing data display, as well as, provide a long-term solution to furnish expert guidance and best-in-class tools. A worldwide network of service and support staff that can respond to any problem within hours, keeping range downtime to a minimum.

For more information on ordering NSI-MI Technologies' products, applications or services please contact your nearest NSI-MI office. Our complete sales team information is available at: www.nsi-mi.com/contact-us

ISO 9001:2015 Accreditation

The International Organization for Standardization (ISO) has verified that NSI-MI Technologies meets the requirements of the ISO 9001:2015 standard.

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