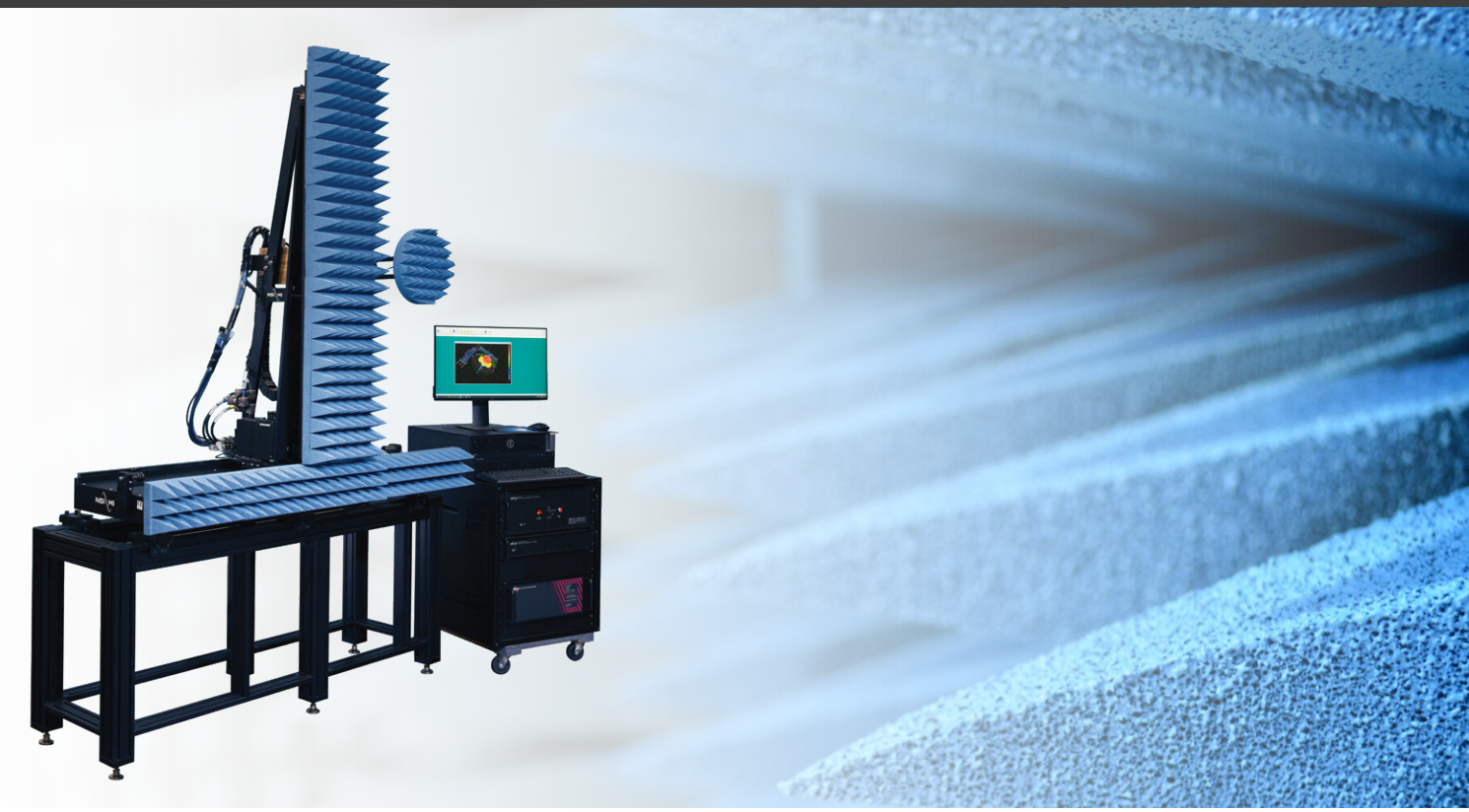
Pre-Configured Planar Near-Field Measurement System

PNF-XYV-0.9x0.9



DESCRIPTION

The PNF-XYV-0.9x0.9 is a pre-configured four axes planar near-field measurement system ideal for measuring medium and high gain antennas (> 15 dBi) with apertures up to 0.75 m (30 in.) from 2.6 GHz to mmWave. The system is constructed of high strength aluminum and can support probe payloads of up to 6 kg (13 lb). This simple design is easy to assemble and align, accurate, and can be quickly dismantled for relocation or storage.

FEATURES

- **2.6 GHz to mmWave**
- **Well suited for higher gain antennas (> 15 dBi)**
- **Stationary AUT**
- **Automatic scan setup**
- **High speed bi-directional scanning**
- **Powerful plotting and antenna analysis software**
- **Far-field, holographic and near-field patterns**

TYPICAL APPLICATIONS

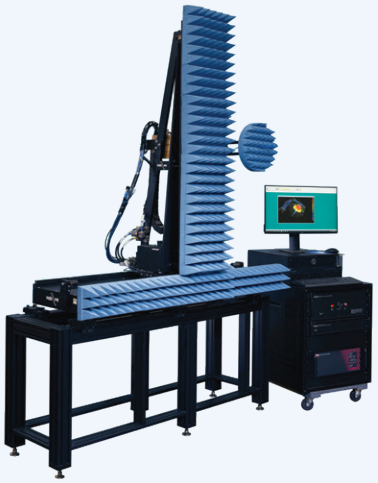
- **Point-to-point communication antennas**
- **Phased-Arrays**
- **Reflector antennas**
- **Radar antennas**

CAPABILITIES

The PNF-XYV-0.9x0.9 supports AMETEK NSI-MI, Keysight, and Rohde & Schwarz RF receivers and is capable of measuring amplitude and phase patterns from S-band 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 - Belt Driven X and Y with Probe Z and Pol Stages	PNF-XYV-0.9x0.9
Scan Area	0.9 x 0.9 m (3 x 3 ft)	
Probe Capacity	6 kg (13 lb)	
Planarity	0.075 mm (0.003 in.) RMS 0.025 mm (0.001 in.) RMS with on-site re-cal	
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: 0.05 mm (0.002 in.) Z: 0.025 mm (0.001 in.) Pol: 0.0125°	
Scan Speed X,Y	X, Y: 0.38 m/s (15 in./sec)	
Position Controller	ELE-IMC (Intelligent Measurement Controller)	
Motor Cables	Quick-connect 9.1 m (30 ft)	
PC Workstation	Computer with LCD Monitor	
Power	500W, 100–240 VAC switchable, 50/60 Hz	
Software	NSI2000	
Absorber	12.7 cm (5 in.) pyramidal	
Frequency Range	2.6–110 GHz	
RF System		
Scanner RF Cables	20, 40, or 50 GHz, 3.6 m (12 ft) X/Y Cabletrack	
Rotary Joint	26.5, 40, or 50 GHz (Pol)	
Range RF Cables	20, 40, or 50 GHz 6.1 m (20 ft) to Scanner Base and AUT	
RF Receiver	AMETEK NSI-MI VFA, Keysight PNA, Rohde & Schwarz ZVA	
Weights and Dimensions (Scanner Only)		
Installed Envelope W x L x H	1.6 x 0.8 x 1.5 m (65 x 30 x 60 in.)	
Installed Weight	94 kg (207 lb)	
Crated Dimensions W x L x H	2 crates up to 1.7 x 0.7 x 0.7 m (66 x 28 x 28 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
- AMETEK 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-0.9x0.9

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 AMETEK NSI-MI experts
- Interface kits to easily integrate a wide variety of common RF equipment, antennas and test devices

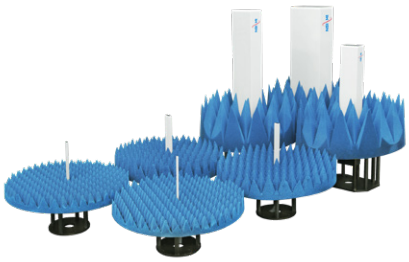
RF Options

- 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™



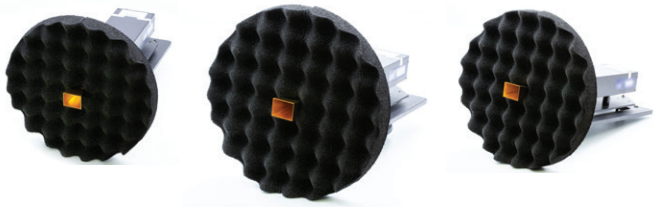
Waveguide Probes

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

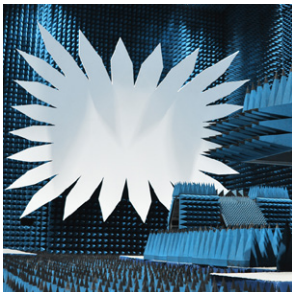
System Accessories

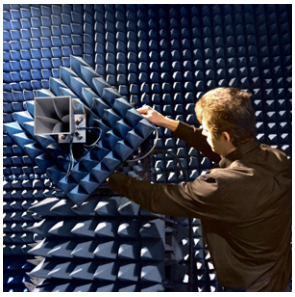
- Scanner Stand
- AUT Stand

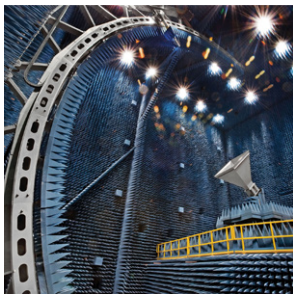
Site Services

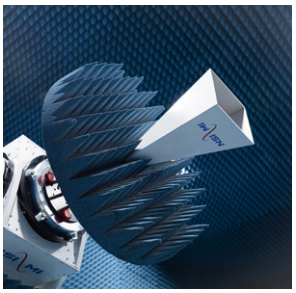
- Site Z-Planarity Enhancement - 0.025 mm (0.001 in.) RMS with on-site re-cal
- Installation
- Training

Scanner Stand









Test with Confidence

LOCATIONS

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AMETEK NSI-MI Technologies introduced the world to microwave antenna measurement systems and is the preferred global supplier of antenna, radar cross section, and radome measurement solutions. Today, our innovative products, systems, and services lead the industry in setting new standards for tomorrow's performance. From world-class in-house testing facilities to delivering industry-leading turnkey systems, we provide the highest quality measurement products on the market.

Our full range of standard products and custom-designed systems are backed by our longstanding commitment to precision-engineered accuracy, reliability, and lasting performance. We provide the right solution for every RF measurement need and our worldwide network of service professionals are always available to offer support.

For more information on ordering AMETEK 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 CERTIFIED

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