

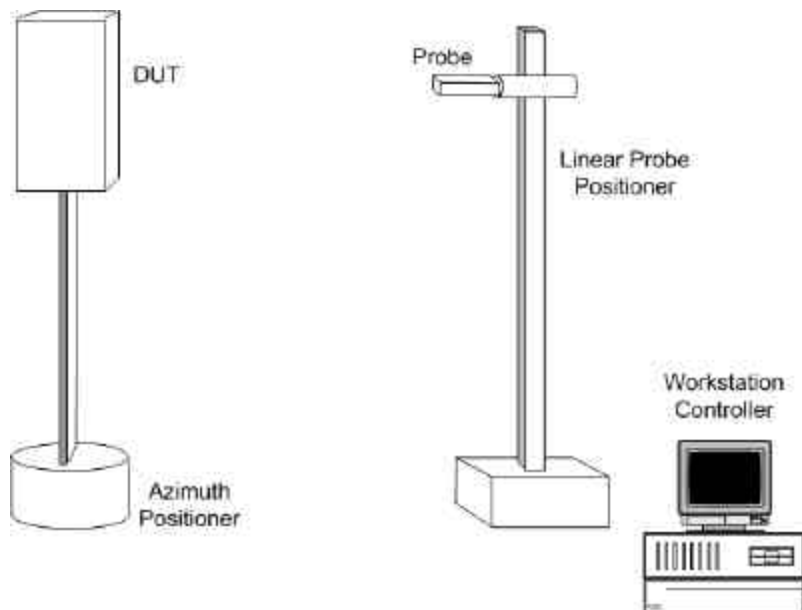
MI-3640 Cylindrical Near-field Antenna Measurement System

Key Features & Benefits

- Rapid, accurate cylindrical near-field measurements support near-field diagnostics and fast transformation to the far field for antenna pattern evaluation.
- Cylindrical surface scanner geometry is ideally suited for measuring omnidirectional and fan-beams of linear and panel arrays commonly used for Wireless base station antennas.
- Broad frequency coverage over 400 MHz to 18 GHz band handles most common measurement requirements.
- High quality RF test equipment assures accurate measurements.
- Easy-to-use software provides data collection, processing and display.
- Models available with a variety of cylindrical scanner probe travel lengths to suit specific test requirements for a broad array of applications.
- Data output includes patterns, contours, and 3-D plots of amplitude and phase offering the most discriminating analyst access to useful data presentations.
- Hardware is lightweight, compact, and portable making it simple to install and convenient to use.
- Pattern output in contour, 3-D, polar or rectangular formats offers flexible data plotting.
- Network connection provides means to easily download data for offline analysis.

Description

The MI-3640 family of cylindrical near-field measurement systems is designed for test and measurement applications in the Wireless industry. The systems provide fast, accurate near-field diagnostics and transformation to the far field for antenna pattern evaluation. The cylindrical scanner configuration is ideally suited for measuring antennas commonly found in wireless, base station applications. The MI-3640 system consists of a precision vertical scanner, azimuth positioner for device under test (DUT), near-field probe, dual-axis position controller and a workstation computer and software. The MI-3640 is easy to use, with software prompts to help operators complete setup and establish test parameter provisioning, data acquisition and data analysis. Using the system's workstation, an operator can quickly set the measurement frequency, configure the scanner, initiate a scan, and collect, process and display test data. The MI-3640 is compatible with a number of commercially available vector network analyzers. Various options are offered that extend utility of the MI-3640 systems. The options are listed on the following page.



MI-3640 Specifications:

Azimuth Rotation:

- 360 degrees

Maximum Azimuth Positioner Vertical Load:

- 1000 lbs

Probe:

- WR-430 (1.70 to 2.60 GHz) open ended waveguide with SMA transition (other probes optional)

Model	Vertical Scan Length*
MI-3640-6	6 ft
MI-3640-8	8 ft
MI-3640-10	10 ft

Absorber:

- Scanner: 12 inch pyramidal absorber
- Probe: 12 inch pyramidal absorber

Probe Mount:

- Bracket permitting vertical and horizontal mounting of probe

RF Cables:

- Flexible 10 ft length (3 m) with SMA (M-M) coaxial connectors, DC to 18 GHz (4 each)

Rotary Joint:

- DC to 18 GHz for Azimuth Positioner

RF Devices Supported:

- MI-1783, MI-1795, MI-1797, Anritsu MS4623B, Agilent 8510A/B/C, Agilent 8530A, Agilent 8753A/B/C/D/E/ES, (Contact factory for complete list.)

Operating Frequency:

- 400 MHz to 18 GHz depending upon choice of customer furnished MI receiver or vector network analyzer

Workstation and Software:

- MI-3603C computer with monitor, color printer, keyboard, and mouse, MI-3603C system control, acquisition software, and cylindrical near-field software

Power:

- 115/250 VAC, 50/60 Hz, 10 A, Single Phase

Angular Accuracy:

- 0.01 degrees

Linearity (Probe axis to DUT rotation axis):

- 0.010 inches RMS

Repeatability:

- 0.002 inches

Options:

- Standard gain antennas for calibration
- Motorized probe polarization rotation
- Motorized probe Z-axis control
- Probes for other frequencies
- MI receiver and vector network analyzer
- Sources
- Chamber

