Antenna Measurement System
Features and Specifications

DAMS 5000
DC to 6 GHz Frequency Range

System Features

Wide Frequency Ranges

Capable of measuring frequencies ranging from DC to 6 GHz.

Dual-Axis Movement

360° continuous or sweeping horizontal movement with up to ± 45° vertical tilt.

High Resolution

Capable of .125° steps azimuth and .10° steps elevation.

Weight Capacity

Able to carry a payload of up to 20 lbs.

Precision Rotary Joint

The rotary joint is constructed from carbon-based material suited for noiseless measurements of up to 6 GHz.

Deluxe Measurement Software

Comes with DAMS Measurement Studio, featuring special plots and functions.

Complete Warranty

Comes complete with our 1-year warranty covering all parts, labor and technical support.

Calibrated SMA Cables

System includes two 10' low-loss precision SMA measurement cables.

Precision Drive Train

Equipped with a precision stepper motor, and Kevlar® belt transmission.

Advanced Measurement Calculator

Enables users to performs detailed and complex mathematical computations.

Positioner Specifications

Platform Operating Specifications

Frequency Ranges: DC to 6 GHz

Platform Movement: Horizontal 1.8 degree precision stepper motor with low-noise belts

Up to .125° azimuth resolution

360° continuous azimuth range

± 45° elevation range at .10° per step

Vertical precision hybrid linear actuator

Platform Max Speed: 30 R.P.M. azimuth

120° per minute elevation

Platform Mounting: Velbon® tripod with fluid pan head

Standard 1/4-20 tripod threads (horizontal or vertical)

Platform Operating Specifications *(continued)*

Platform Composition: 85% acrylic / Delrin® construction for limited reflection

Weight Capacity: 10 lbs. maximum at level position (or 20 lbs. with thrust plate; capacity decreases with angle)

Drivetrain: Azimuth: stepper motor with belt transmission

Elevation: stepper hybrid non-captive lead screw

Cable Interface: Low-loss cables with SMA connectors

Ultra-precision, ultra-low noise rotary joint with SMA (female)

Special Options: Acrylic or aluminum thrust plate (additional cost may apply)

Digital level for precise setup

Ultra-high resolution option

Positioning laser for long range alignment

Vertical alignment tool

± 90° pivot for spherical measurements

DAMS Software Studio Pro

Advanced processing module

Up to 3-year warranty on parts and labor

Technical support

Controller Operating Specifications

Control Methods: DAMS Antenna Measurement Software (or any software with serial
                        communication*) *(* requires Platform Development Kit)*

Interface: Hybrid USB/serial

Input Power: 24V 1.6A switched power supply

Analyzer Interface: GPIB controller card (not included)

Physical Properties

Width: 12″ (30.5 cm) without tripod

Height: 5″ (12.5 cm) *without* vertical movement assembly or tripod
                        35″ (35.6 cm) minimum
                        72″ (182.88 cm) *with* vertical movement assembly and tripod

Weight: 3 lbs. (*without* tripod and vertical assembly)
                        7 lbs. (*with* tripod and vertical assembly)

Positioner Composition: Acrylic 87%
                        Stainless steel 5%
                        Aluminum 5%
                        Misc. plastics/metals 3%

Tripod Composition: Aluminum and plastic

Environmental Specifications

Operating Temp: 0º C to 45º C (32º F to 104º F) (with no condensation)

Transport Temp: -40º C to 60º C (-40º F to 140º F) (no condensation within 72 hours)

Overview of Software Features

Multi-Trace Plots (Polar/Amplitude)

- Compare multiple antennas
- Dual marker function
- Selectable linear or log (dB)
- Instant delta dB/angle marker readout
- Selectable scale
- Export option

3D and Spherical Plots

- Full 3D interface
- Map data onto a sphere
- Plot data at any frequency
- Multiple overlay and display features
- Support for power meters, voltmeters, spectrum analyzers and VNA/PNA's
- Continuous rotation or swept measurements
- Export data with variable formatting
- Measure up to 1600 frequency points per increment
- Variable speed
- Move to max signal position
- Vertical/horizontal scan measurements
- CW/CCW antenna rotation

Other Features

- Calibrated horn table import
- Path loss calculator
- Complete data manipulation
- Multiple storage registers for convenience
- Link commander (link simulator)
- Complex data calculator

Optional Extras

- Antenna Network & Measurement Simulator