

DAMS Antenna Measurement System Features and Specifications



DAMS 5100
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° azimuth range with up to $\pm 90^\circ$ of elevation tilt.

High Resolution

Capable of .25° steps azimuth and .25° steps elevation.

Weight Capacity

Able to carry payloads of up to 150 lbs.

Precision Rotary Joint

The rotary joint is constructed from a special carbon based material that allows noiseless measurements up to 6 GHz.

Spherical Plot Module

Map measured antenna data over a sphere or an ideal isotropic sphere.

Deluxe Measurement Software

All systems come complete with DAMS Measurement Studio Pro, which features various special plots and functions.

Complete Warranty

Our 3-year warranty covers all parts, labor and technical support.

Included RF Cables

All systems include two 10' calibrated precision low-loss SMA measurement cables.

Includes All Accessories

This is the complete measurement solution and includes everything besides the VNA and computer.

Precision Drive Train

Equipped with steel gear and worm, with ball and tapered roller bearings.

Advanced Measurement Calculator

Performs detailed and complex computations.

Positioner Specifications

Platform Operating Specifications

Frequency Ranges:	DC to 6 GHz
Platform Movement:	Up to .25° azimuth resolution 360° continuous azimuth range ± 90° elevation range at 0.1° per step Precision DC Servo motor
Drivetrain:	Heavy-duty steel gear drive-train Steel gear and worm, with ball and tapered roller bearings
Positioner Feedback:	Precision potentiometer
Platform Max Speed:	30 R.P.M. azimuth 120° per minute elevation
Platform Mounting:	24" aluminum thrust plate with 150 lbs. payload capacity Extra heavy-duty tripod
Weight Capacity:	150 lbs. maximum @ level position (capacity decreases with angle)
Cable Interface:	Ultra high-quality cable with SMA connectors Ultra-precision, low-noise rotary joint with SMA connectors
Included Options:	Digital level for precise setup Positioning laser for long range alignment DAMS Software Studio Pro Advanced processing module 3-year warranty on parts and labor Technical support

Controller Operating Specifications

Control Methods:	DAMS Antenna Measurement Software (or any software with serial communication which requires the Platform Development Kit)
Interface:	USB 1.1 (<i>RS232 available upon request</i>)
Input Power:	24vDC 5.0A
Analyzer Interface:	GPIB controller card (not included)

Physical Properties

Dimensions w/o Tripod:	12" wide (30.5 cm) 12" deep (30.5 cm) 14" tall (35.5 cm)
Height:	5" (12.5 cm) WITHOUT vertical movement assembly or tripod 35" (35.6 cm) MIN, 72" (182.88 cm) w/ vertical movement assembly and tripod
Weight:	45 lbs. (20.4 kg) (<i>without</i> tripod and vertical assembly) 68 lbs. (30.8 kg) (<i>with</i> tripod and vertical assembly)
Positioner Composition:	85% Aluminum 10% Stainless steel 5% Misc. plastics/metals
Tripod Composition:	Aluminum and plastic

Environmental Specifications

Operating Temp:	0° C to 45° C (32° F to 104° F) (with no condensation)
Transport Temp:	-40° C to 60° C (-40° F to 140° 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

