

## Antenna Measurement Systems - x000 Series

### Features and Specifications



**DAMS 5000** - DC to 6 GHz

**DAMS 6000** - DC to 18 GHz

**DAMS 7000** - DC to 40 GHz

# System Features

## Wide Frequency Ranges

Capable of measuring ranges from DC to 6 GHz (*DAMS 5000*), DC to 18 GHz (*DAMS 6000*) or DC to 40 GHz (*DAMS 7000*).

## Dual-Axis Movement

360° continuous or sweeping horizontal movement with up to  $\pm 45^\circ$  vertical tilt.

## High Resolution

Capable of  $.125^\circ$  steps azimuth and  $.10^\circ$  steps elevation (*DAMS 5000*), or up to  $.0625^\circ$  steps azimuth and  $.10^\circ$  steps elevation (*DAMS 6000/7000*).

## Weight Capacity

Able to carry payloads of up to 20 lbs.

## Precision Rotary Joint

The rotary joint is constructed from a special carbon based material that allows noiseless measurements up to 6 GHz (*DAMS 5000*), 18 GHz (*DAMS 6000*) or 40 GHz (*DAMS 7000*).

## Deluxe Measurement Software

All systems come complete with DAMS Measurement Studio which features various special plots and functions (*DAMS Measurement Studio Pro included with DAMS 6000/7000*).

## Spherical Plot Module

Map measured antenna data over a sphere or an ideal isotropic sphere (*DAMS 6000/7000 only*).

## Complete Warranty

Our 1-year warranty covers all parts, labor and technical support (*3-year on DAMS 6000/7000*).

## Included RF Cables

All systems include two 10' calibrated measurement cables. Precision low-loss SMA cables (*DAMS 5000*), precision ultra-low-loss SMA cables certified to 18 GHz (*DAMS 6000*) or precision low-loss cables with 2.92mm "K" connectors certified to 40 GHz (*DAMS 7000*).

## Includes All Accessories

This is the complete measurement solution and includes everything besides the VNA and computer (*DAMS 6000/7000 only*).

## Precision Drive Train

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

## Advanced Measurement Calculator

Performs detailed and complex computations.

# Positioner Specifications

## Platform Operating Specifications

Frequency Ranges:	DC to 6 GHz ( <i>DAMS 5000</i> ) DC to 18 GHz ( <i>DAMS 6000</i> ) DC to 40 GHz ( <i>DAMS 7000</i> )
Platform Movement:	Horizontal 1.8 degree precision stepper motor with low-noise belts Up to .125° azimuth resolution ( <i>DAMS 5000</i> ) Up to .0625° azimuth resolution ( <i>DAMS 6000/7000</i> ) 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)
Weight Capacity:	20 lbs. maximum @ level position (capacity decreases with angle)
Drivetrain:	Azimuth: stepper motor with belt transmission Elevation: stepper hybrid non-captive lead screw
Cable Interface:	Ultra-high quality cable with SMA connectors (all "K" connectors on model 7000) Ultra-precision, ultra-low noise rotary joint with SMA (female)
Special Options(*):	Acrylic thrust plate ( <i>additional cost for aluminum</i> ) Digital level for precise setup
(*) = included with DAMS 6000/7000 models	Ultra-high resolution option Positioning laser for long range alignment Vertical alignment tool DAMS Software Studio Pro Advanced processing module Technical support ( <i>all systems</i> )
Warranty:	1-year on parts and labor ( <i>DAMS 5000</i> ) 3-year on parts and labor ( <i>DAMS 6000/7000</i> )

## Controller Operating Specifications

Control Methods:	DAMS Antenna Measurement Software Customer written 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) turntable only Min: 35" (88.9 cm) with vertical movement assembly and tripod Max: 72" (182.88 cm) with vertical movement assembly and tripod
Weight:	5 lbs. (2.2 kg) ( <i>without</i> tripod and vertical assembly) 9 lbs. (4.1 kg) ( <i>with</i> 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:	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

