

## DAMS Antenna Measurement System Features and Specifications



**DAMS 7100**  
DC to 40 GHz Frequency Range

**USED4TEST**

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# System Features

## Wide Frequency Ranges

Capable of measuring frequencies ranging from DC to 40 GHz.

## Dual-Axis Movement

360° azimuth range with up to  $\pm 90^\circ$  of elevation tilt.

## High Resolution

Capable of .10° steps azimuth and .10° 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 40 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 cables with 2.92mm "K" connectors certified to 40 GHz.

## 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 40 GHz
Platform Movement:	Up to .10° 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:	High accuracy resolver
Platform Max Speed:	30 R.P.M. azimuth 120° per minute elevation
Platform Mounting:	24" aluminum thrust plate with 150 lbs. of payload capacity Extra heavy-duty tripod
Weight Capacity:	150 lbs. maximum @ level position (capacity decreases with angle)
Cable Interface:	Ultra high-quality cable with "K" connectors Ultra-precision, low-noise rotary joint with "K" 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

