

Antenna Measurement Systems - x100 Series

Features and Specifications



DAMS 5100 - DC to 6 GHz

DAMS 6100 - DC to 18 GHz

DAMS 7100 - DC to 40 GHz

System Features

Wide Frequency Ranges

Capable of measuring ranges from DC to 6 GHz (*DAMS 5100*), DC to 18 GHz (*DAMS 6100*) or DC to 40 GHz (*DAMS 7100*).

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 (*DAMS 5100*), or up to .10° steps azimuth and .10° steps elevation (*DAMS 6100/7100*).

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 (*DAMS 5100*), 18 GHz (*DAMS 6100*) or 40 GHz (*DAMS 7100*).

Deluxe Measurement Software

All systems come complete with DAMS Measurement Studio Pro which features spherical plot module, efficiency, and other advanced processing modules.

Spherical Plot Module

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

Complete Warranty

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

Included RF Cables

All systems include two 10' calibrated measurement cables. Precision low-loss SMA cables (*DAMS 5100*), precision ultra-low-loss SMA cables certified to 18 GHz (*DAMS 6100*) or precision low-loss cables with 2.92mm "K" connectors certified to 40 GHz (*DAMS 7100*).

Includes All Accessories

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

Precision Drive Train

Steel gear and worm, with ball and tapered roller bearings.

Advanced Measurement Calculator

Performs detailed and complex computations.

Positioner Specifications

Platform Operating Specifications

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|----------------------|--|
| Frequency Ranges: | DC to 6 GHz (<i>DAMS 5100</i>) DC to 18 GHz (<i>DAMS 6100</i>) DC to 40 GHz (<i>DAMS 7100</i>) |
| Platform Movement: | Up to .25° azimuth resolution (<i>DAMS 5100</i>) Up to .10° azimuth resolution (<i>DAMS 6100/7100</i>) 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 (<i>DAMS 5100</i>) High accuracy resolver (<i>DAMS 6100/7100</i>) |
| 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 SMA connectors Ultra-precision, low-noise rotary joint with SMA connectors (<i>"K" connectors on DAMS 7100</i>) |
| 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

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|---------------------|---|
| 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

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| 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

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| 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

