

UNO6

Precision Positioner System for Antenna Measurements



FEATURES

Mono-Mast Design for Large Device-Under-Test

For spherical (roll-azimuth) or single-arm (azimuth-elevation) precision antenna tests.
Suitable for antennas up to 15 kg (33 lb).
Adjustable mast offset 0 - 45 cm (18") from center.

High-Quality Design

Heavy-duty instrument turntable, high-torque motors, and precision gears.
Glassfiber and polymer plastic AUT/DUT mast construction.
Autonomous closed-loop motor control system for positioning accuracy.

INTRODUCTION

UNO6 is designed for professional over-the-air (OTA) antenna measurements. With its spherical roll design, it provides the broadest clear field of view possible.

Paired with a roll-enabled antenna mast, the UNO6 SPHERICAL KIT allows spherical measurements and eliminates blocking of the radiation path.

In addition to the spherical measurement setup, the UNO6 can be used as stand-alone azimuth-elevation positioner.



HARDWARE

The UNO6 positioner is crafted with high-quality components to ensure continuous and dependable performance. Components are selected for precision even under maximum load with all motors operating in closed-loop feedback through digital encoders to maintain measurement quality.

The instrument-grade azimuth turntable offers both high precision and high torque, to ensure high performance in the most demanding applications.

The mast design combines a fiberglass mast with CNC-machined parts to offer maximum strength and precision. Polyoxymethylene (POM/Acetal/Delrin™), and Polyethylene terephthalate (PET) is used throughout the design to offer low dielectric constant to limit stray reflections.

The mast combines a closed-loop motor with quality single-stage gears for high precision, low backlash and high holding torque. The belt drive system uses 9mm high-torque timing belts, a significant upgrade from the ordinary 6 mm type.

The UNO6 is equipped with a USB-connected controller utilizing a serial-over-USB interface and controlled by a Python reference application code. This offers an easy approach to use it as-is, with minor modifications, or to develop own applications.

UNO6 SPHERICAL KIT

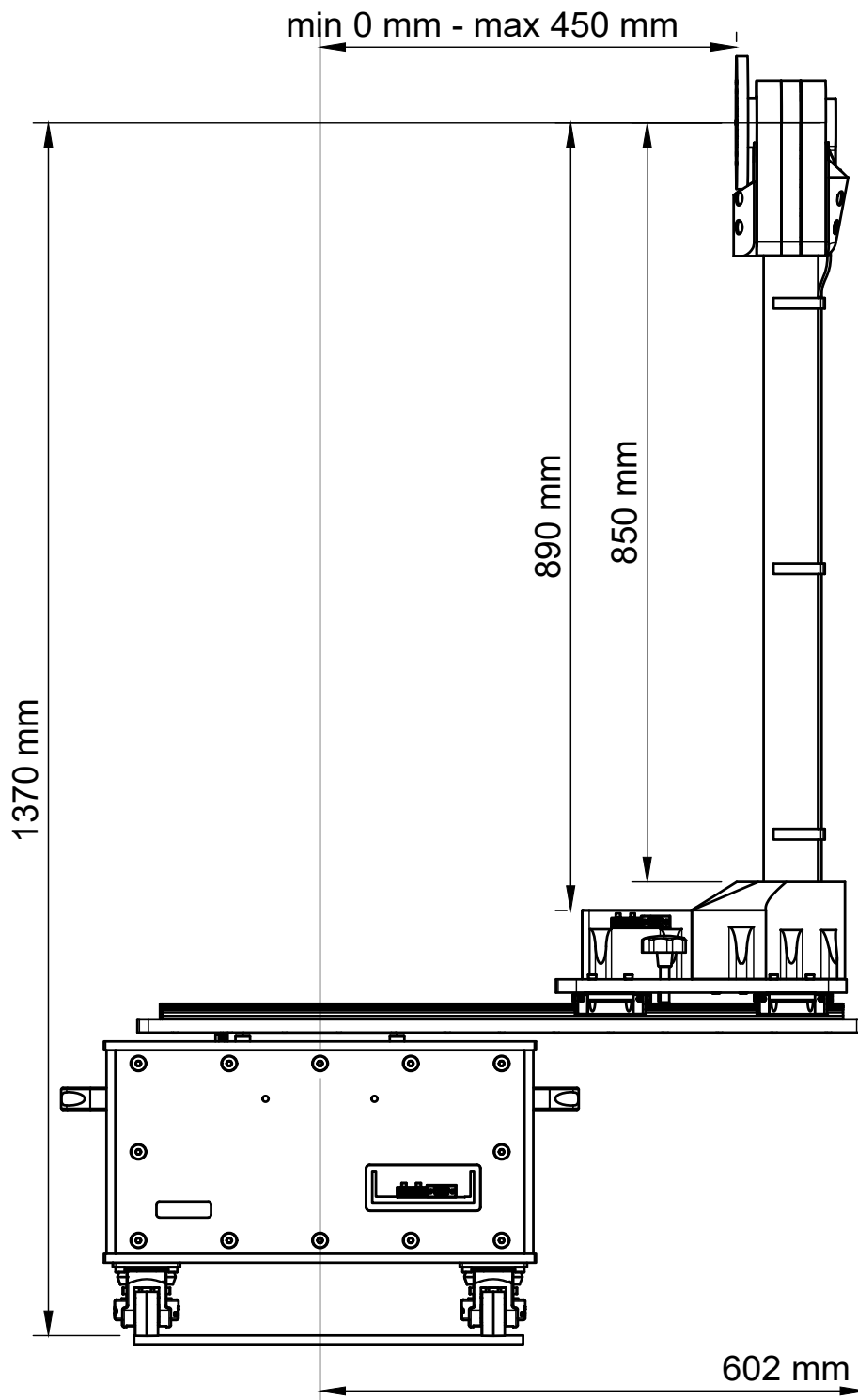


The UNO6 SPHERICAL KIT offers a full solution for your spherical measurement needs. This kit includes the UNO6 2-axis roll-azimuth positioner, a matching 1-axis roll antenna mast, control cables, a fanless 100-240 Volt power supply, an intelligent multi-axis controller, reference Python application code for seamless integration.

The kit can further be fitted with an optional absorber package.

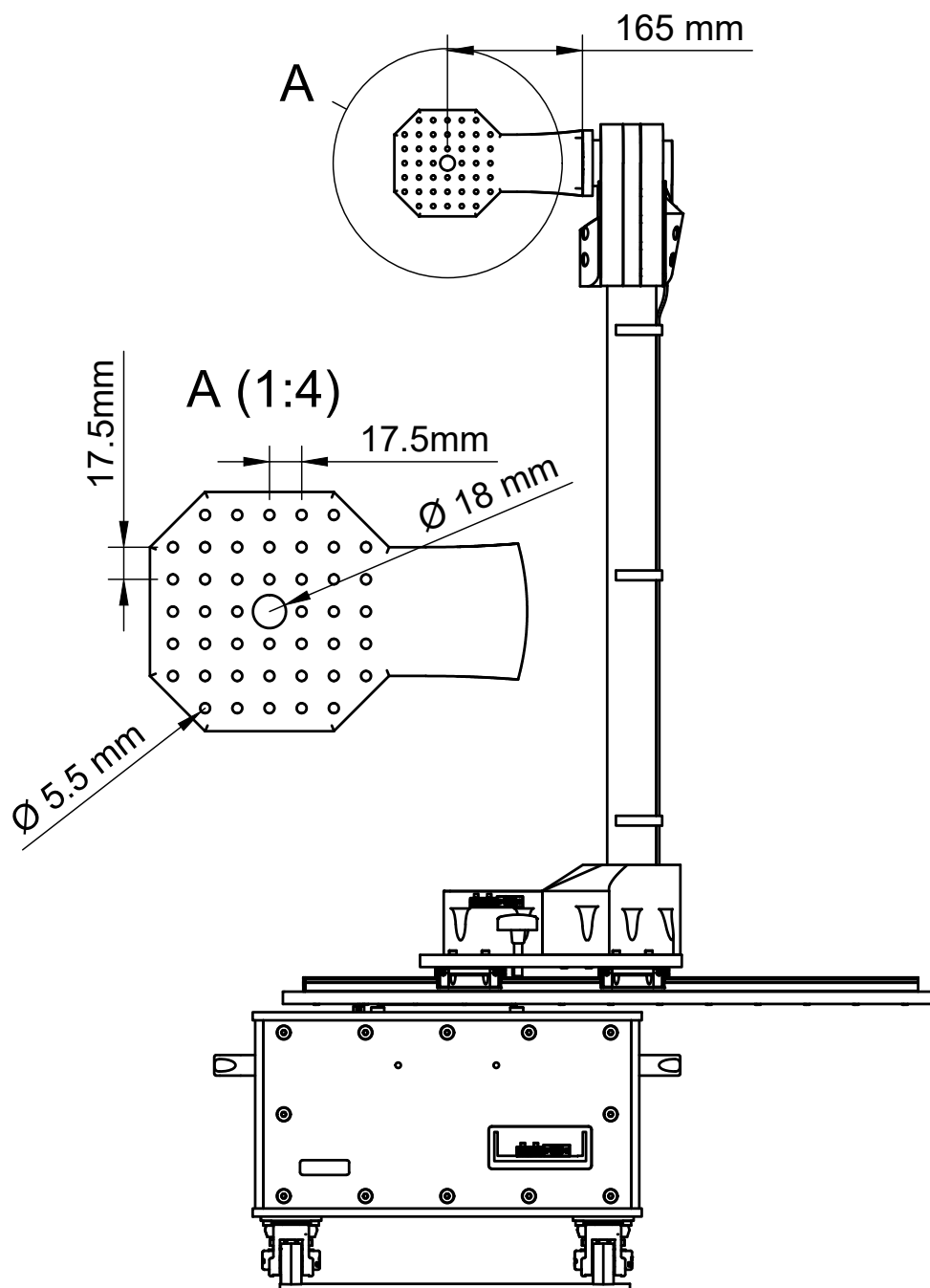
UNO6 DRAWING

SIDE VIEW



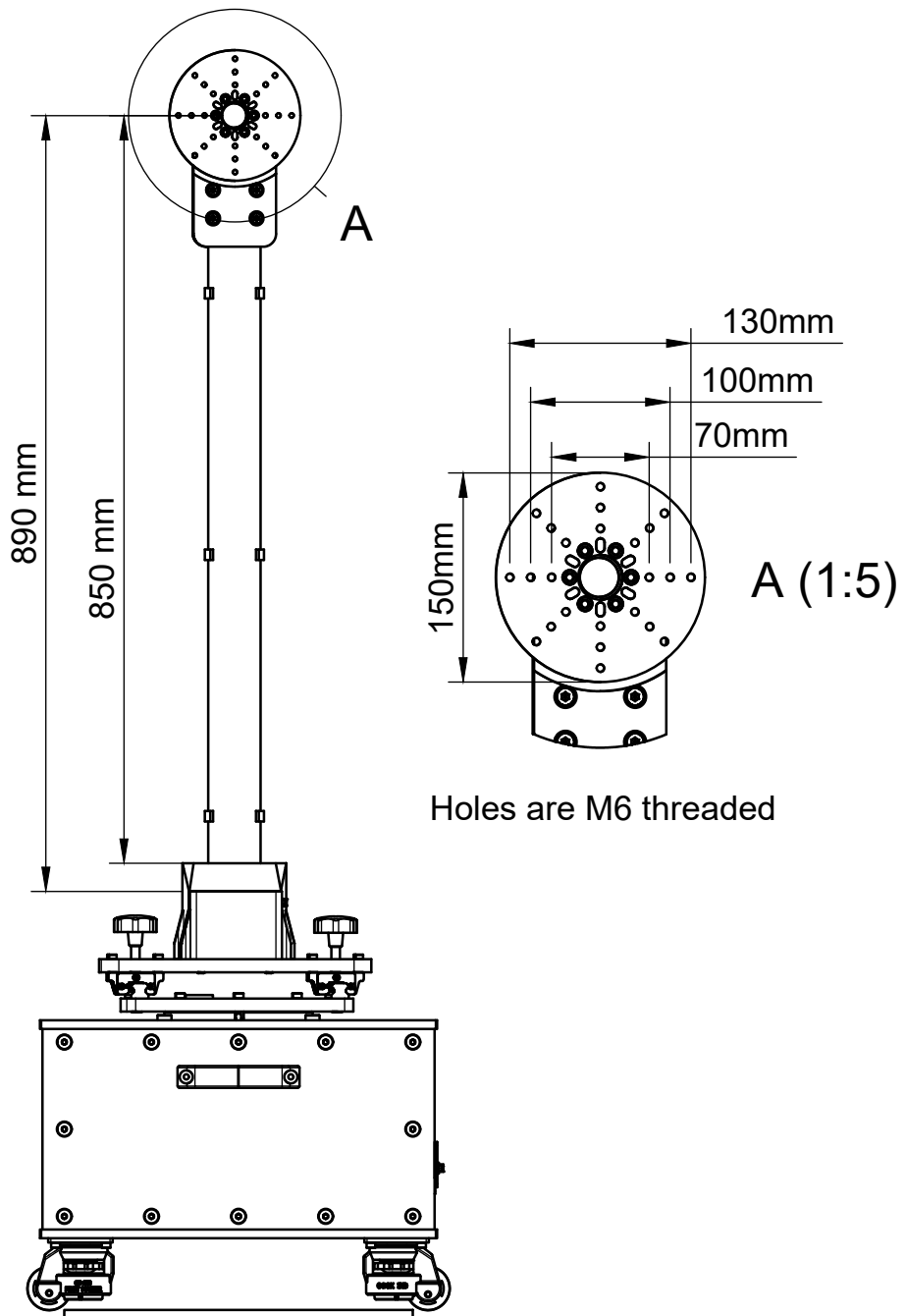
UNO6 DRAWING

SIDE VIEW (WITH ELEVATION ARM)



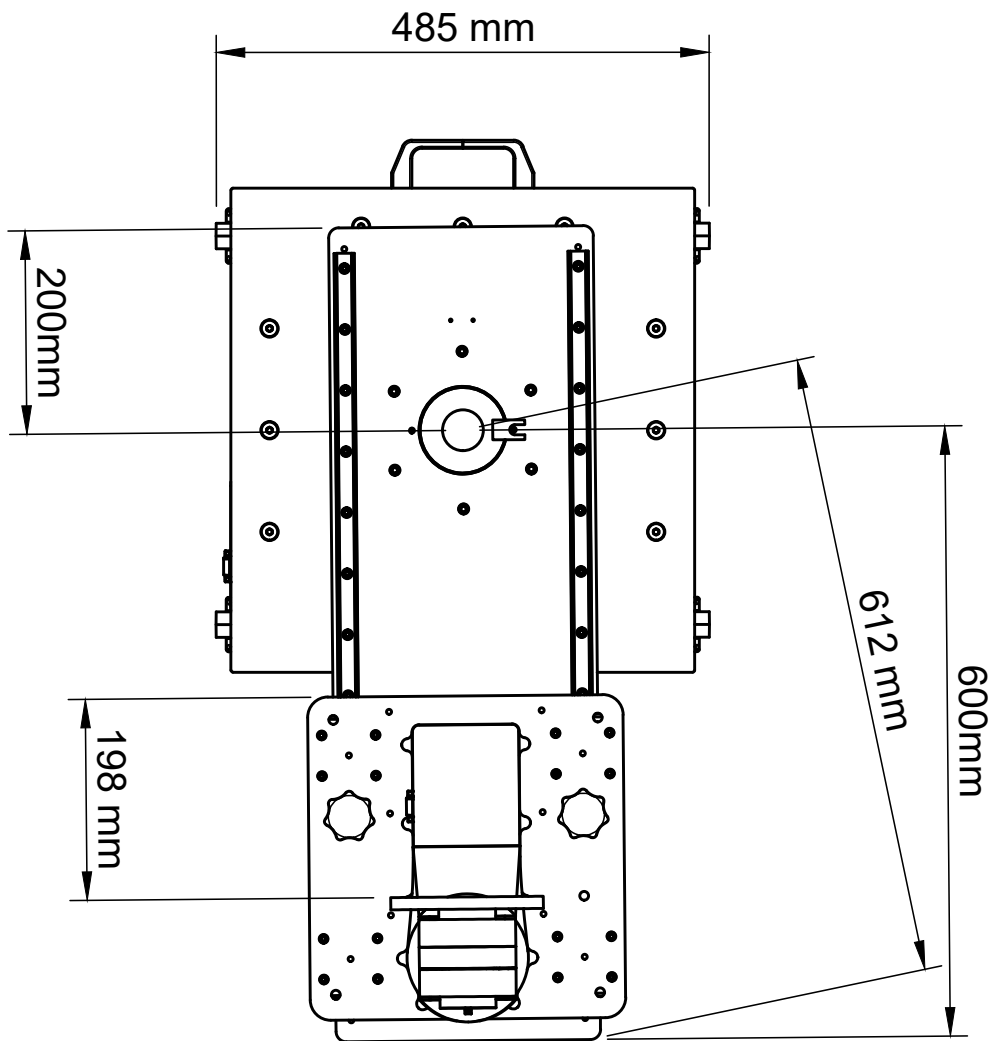
UNO6 DRAWING

FRONT VIEW



UNO6 SPHERICALKIT

TOP VIEW





UNO6 SPECIFICATIONS

AUT Dimensions	Exceeds 80 cm AUT width in spherical mount (roll-azimuth) Contact us about elevation-azimuth setup
Positioner Dimensions	W 50 x H 148 x D 85 cm (W 20" H 83" x D 33") weight 38 kg (84 lbs)
Horizontal / Azimuth Platform	Resolution 0.1° full-step (maximum holding torque) Holding torque 81.0 N-m (59.7 lb-ft) Weight capacity 55 kg (121 lbs) Maximum angular velocity > 200° per second
Roll / Elevation Mast	Resolution 0.1° full step (maximum holding torque) Holding torque 39.0 N-m (28.8 lb-ft) Weight capacity 15 kg (33 lbs) Maximum angular velocity > 200° per second 12-channel slipring (6 channels for Roll, 6-channels available) Mast and roll built from Delrin/POM, PET, FR4, and PEEK
Controller System	Multi-axis smart controller Controlled via Serial-over-USB Python control application USB 1.1 connected, Type A connector Closed-loop motor systems for both azimuth and roll
Power Supply	48 Volt, 100-240 Volt mains
Configuration Options	Custom hole patterns for roll plate Custom adapters for AUT/DUT mounting and rotary joints Absorber kit for DUO6 or DUO6 SPHERICALKIT

Contact us at info@mmwavetest.com for more information