

# SMART DESKTOP



**3D INFOTECH**  
UNIVERSAL METROLOGY  
AUTOMATION®

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## UMA Smart Desktop

Robotic Inspection

The Universal Metrology Automation® (UMA) **Smart Desktop** is used for inspection of small parts in factories that are looking to remove the bottleneck of quality control in production processes. Made to run inspections with just a single click, the **Smart Desktop** can support a variety of 3D scanners and 2D cameras carried by a safe collaborative robot.



### Two Versions

Robotic and Tower

Built-in controller and network switch

Pre-built 48v connectors for any compatible scanner

### Wide Device Support

Support of 2D cameras and 3D scanners.

Inspect difficult surface finishes including shiny or black.

### Portability

All-in-one system provides ultimate flexibility on your desktop.

### Motorized Rotary

Industrial grade 200mm rotary table with fixture plate.

### Accessability

Emergency Stops

Power Input Range:

85-230 VAC, 50/60 Hz

# UMA Smart Desktop

## RUGGEDIZED DESKTOP DESIGN

With two versions and including everything you need (robot, sensor, rotary table, and an optional workstation), the **Smart Desktop** is the perfect inspection device. The compact design allows you to place this system freely to different locations within your factory, no need for forklift or re-installation, just plug & play.

### Wide Support of 2D and 3D Sensors

Both **Smart Desktop** models are compatible with a wide variety of 3D scanners and 2D sensors. They can be equipped to become an optical CMM or a visual inspection station.



### Included Software

#### Streamline software

- Robot teaching
- Scanner configuration
- Rotary motion control
- Parts list management
- User access controls
- Bar code reader support
- Built-in scripting

#### PolyWorks|Inspector

- CAD import with embedded tolerances
- Dimensional analysis
- Smart GD&T
- Reporting
- Macro scripting
- Statistical Process Control

### Rotary Table Specifications

- 36 kg (~80 lbs) payload
- 200 mm (7.8 in) diameter
- Rotary fixture plate
- M6 threaded holes
- Variable speeds
- Proprietary 3D Infotech firmware
- Fully compatible with Aruna Motion URCap



## STREAMLINE, THE HEART OF UMA

Streamline software is included with every **UMA Smart Desktop**. It enables rapid deployment of metrology automation projects by providing a simple workflow and user interface for setting up inspection templates quickly. Once measurement results have been processed, reports and other traceable data can be seamlessly delivered to enterprise data management systems. When combined with InnovMetric's PolyWorks software, users can monitor and study their production process with the built in SPC tools.



Streamline software provides a clean integration between the Universal Robots' cobot, the selected 2D or 3D sensor, and PolyWorks to automate the data analysis and reporting. 3D Infotech is able to deliver an affordable, flexible, mobile and easy-to-use automated inspection solution capable of both global and local measurements.



## UMA EXTENDED SYSTEMS

When a **Smart Desktop** is not enough for your project, Streamline supports additional modules that extend the features and hardware supported.



- ▶ Multiple 3D sensors (arrays or different technologies and field of view)
- ▶ Multiple motion control devices (rotary tables, linear rails, grippers)
- ▶ Machine Vision and Photogrammetry
- ▶ Enterprise Database Integration (ERP, QMS, PLM)
- ▶ PLC Integration
- ▶ Adaptive Manufacturing (grinding, scribing, deburring and drilling)
- ▶ Safety Area Scanners and Laser Curtains
- ▶ Automated Calibration
- ▶ Optical CMM Probing
- ▶ Alerts and Notifications



The **Smart Desktop** has many successful deployments being used to inspect everything from consumer products, electronics assemblies, and small automotive and aerospace components. Companies that have implemented **Smart Desktops** are reporting reduced scrap rates, more repeatable process, more time savings (up to 10 times faster than current processes).

## KEY FEATURES ▼

- ▶ **Speed** - 10 times faster compared to CMMs, arms and scanners.
- ▶ **Two versions** - Robotic and Tower depending on the requirements.
- ▶ **Easy to use** - No need for a robot programmer specialist.
- ▶ **Portability** - Ruggedized desktop design allows easy placement.
- ▶ **Rapid deployment** - Go live in days instead of months.
- ▶ **Greatest value** - Highest productivity and lowest cost compared to any other automated metrology system.
- ▶ **Built on standards** - Components are readily available, supported and can be replaced.
- ▶ **Hybrid Metrology** - Streamline supports the combination of 2D vision, 3D scanning, and contact probing devices.
- ▶ **Bi-directional control** - Logic inputs and outputs to monitor and trigger using industry standards. Easily ties into PLC, SCADA, HMI, Interlock and other systems in the factory.

### *About 3D Infotech, Inc.*

Founded in 2005, 3D Infotech, Inc. is an award winning company that develops hardware and software tools to accelerate and simplify the quality assurance process for manufacturers in the aerospace, automotive, and consumer product industries.



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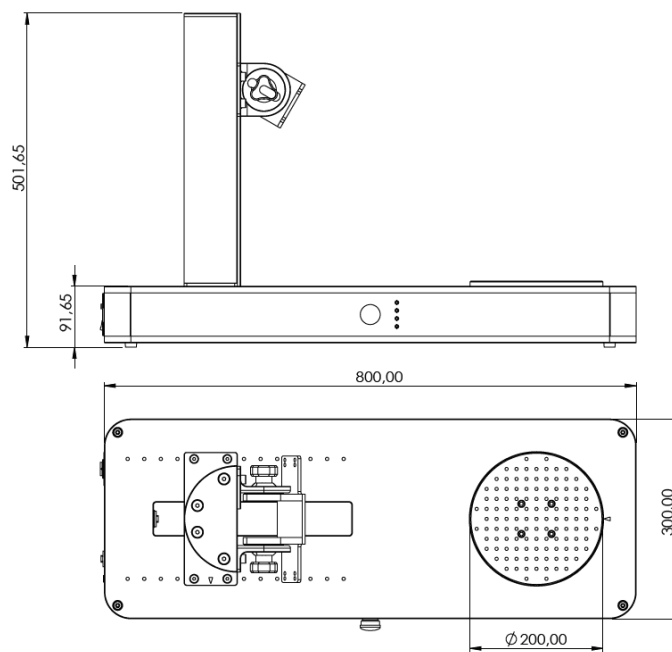
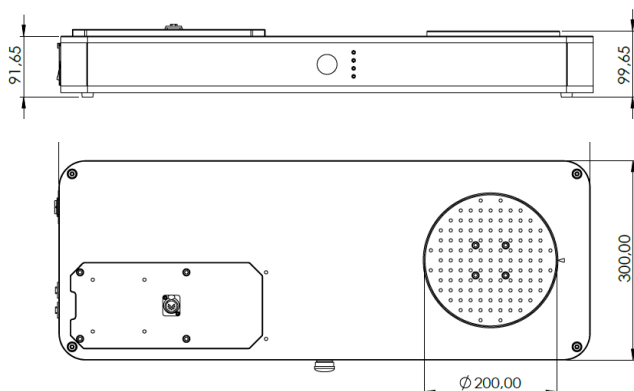
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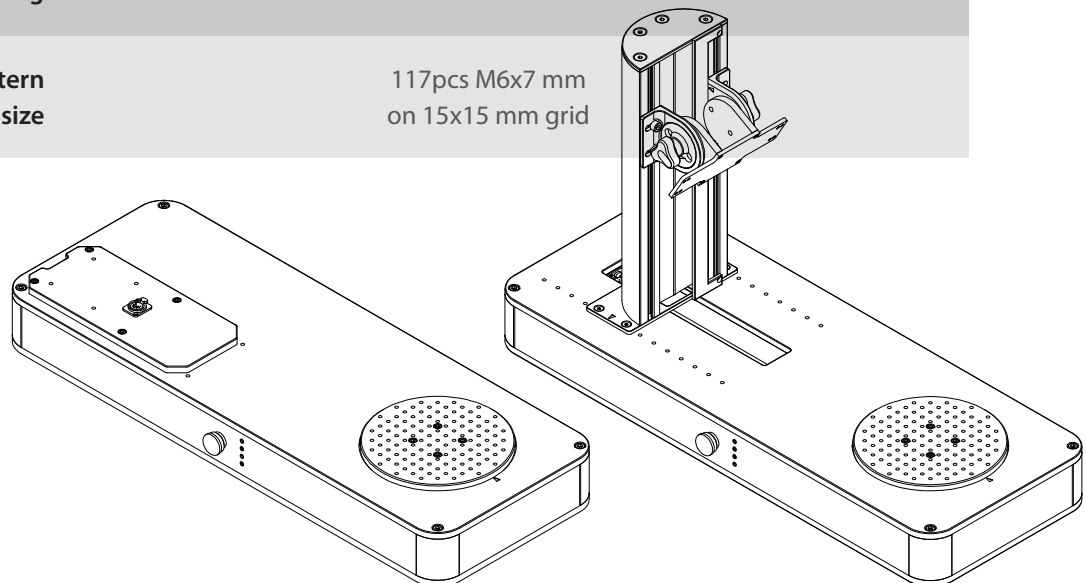
# Specifications

	Smart Desktop Robotic USD-R5-80A	Smart Desktop Tower USD-T5-80A
<b>Base Dimensions (W x D x H)</b>	800 x 300 x 91 mm 31.49 x 11.81 x 3.94 inches	800x300x501 mm 31.49 x 11.81 x 19.29 inches
<b>Full Product Dimensions WxDxH</b>	800 x 300 x 520 mm 31.49 x 11.81 x 20.47 inches	800x300x501 mm 31.49 x 11.81 x 19.29 inches
<b>Shipping Dimensions (W x D x H)</b>	1000 x 500 x 145mm 39.37 x 19.68 x 5.70 inches	1000 x 500 x 235 mm 31.49 x 19.68 x 9.25 inches
<b>Weight</b>	Approx. 23 kg / 51 lbs	Approx. 28 kg / 62 lbs



# Specifications

	Smart Desktop Robotic USD-R5-80A	Smart Desktop Tower USD-T5-80A
Rotary Table Size	200 mm (7.8 in)	
Rotary Resolution	5 arc-min	
Rotary Accuracy	10 arc-min	
Rotary Repeatability	10 arc-min	
Rotary Max. Speed	90° / s	
Rotary Max. Acceleration	90°/s	
Rotary Max. Payload	36 kg / 80 lbs	
Rotary Drive	Stepper motor	
Rotary Power Transmission	Steel-infused timing belt	
Homing	Home sensor	
Fixture Plate Pattern and hole size	117pcs M6x7 mm on 15x15 mm grid	



# Specifications

	Smart Desktop Robotic USD-R5-80A	Smart Desktop Tower USD-T5-80A
<b>Power Requirement</b>	Input Range: 85-240 VAC, 50/60 Hz, Max Current: 2A @ 120 VAC	
<b>Operating Conditions</b>	5...40°C / 41...104°F temperature, 10...90% relative humidity, non-condensing	
<b>IP Rating</b>	IP20	
<b>E-Stop Classification</b>	Class-III	
<b>Connections</b>	Power IN (C13) 2x Gigabit Ethernet E-Stop IN, E-Stop OUT Scanner (48V power+ Gigabit Ethernet)	Power IN (C13) 1x Gigabit Ethernet E-Stop IN Scanner (48V power + Gigabit Ethernet)
<b>Buttons</b>	Power switch, E-Stop button	
<b>Indicator LEDs</b>	Operational, Connected, Homed, Error	
<b>Adjustments</b>	<p><b>Scanner post - rotary plate distance:</b> 275...550 mm in 25mm steps</p> <p><b>Scanner mount lift:</b> 50...350mm continuously</p> <p><b>Scanner mount angle:</b> -180...180 deg. as scanner allows</p>	<p><b>Robot Base – rotary plate distance:</b> 440...560mm in 20mm steps</p>