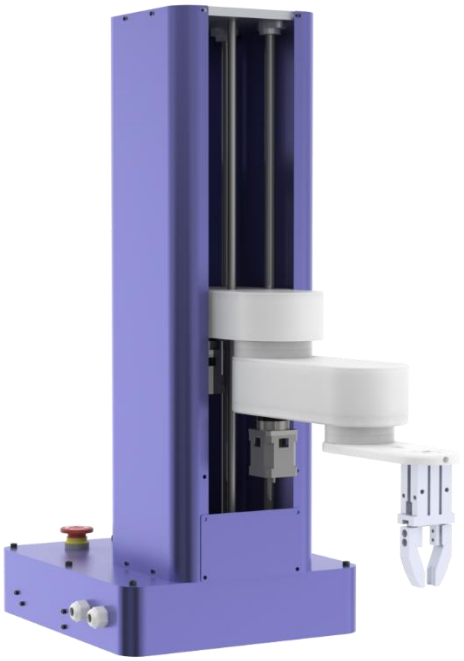


Specifications

July 2021

Robotic Arm

Alpha 3D - 3 Axis Robotic Arm (PRR)

The Alpha Manipulators are one of the world's few kind of educational robots that are specially engineered for providing a best class educational experience. Alpha builds a great learning platform for students and helps in learning its control parameters through Robot Operating System (ROS). Alphas are flexible for on board installation in mobile robots and can also be indigenously installed in various flat platforms. These robots help the users in learning navigation trajectories for various applications such as machine tending, packaging, palletizing etc., The users can make use of these robots for getting trained before starting with industrial robots and software platforms. It has been designed for R&D Laboratories, Higher education and training.

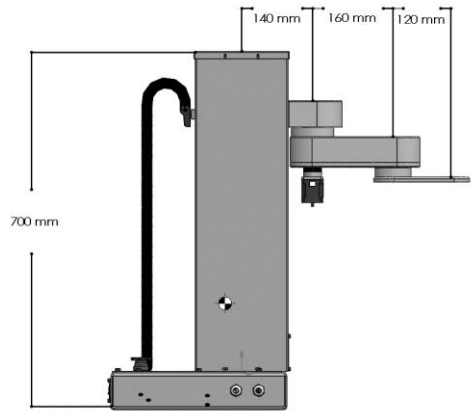
TECHNICAL SPECIFICATIONS

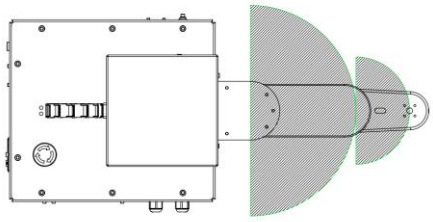
Weight	15 Kg
Payload	200 g
Reach	380 mm
Repeatability	+/- 1 mm
Power supply	220V AC
Communication	USB + Wi-Fi
Interface/Programming	Linux (ROS)
Power consumption	120 W
Materials	Sheet metal + ABS Plastic (3D Printed)
Ports	4 USB + 1 HDMI
Grippers	Separately sold

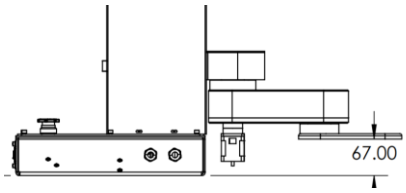
Capabilities and Features

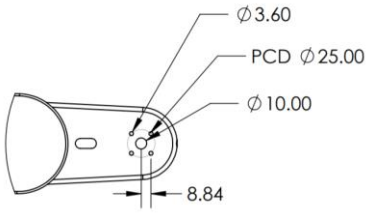
1. Performs forward and inverse kinematics with analytical and numerical solvers.
2. Performs trajectory and motion planning with the help of ROS
3. Performs for pick and place operations.
4. Performs HIL and SIL in Gazebo, RViz with flexible embedded hardware architectures.
5. Performs visual servoing techniques for pick and place, tracking, trajectory planning etc.,
6. Model based learning approach for writing imitations using IK Solvers.
7. Learn transformations between robot and world frame.
8. Experience hands on approach from low level hardware stacks to higher level APIs.
9. Adaptable to various ML, DL Techniques.
10. Open & Closed loop control
11. Customized user interface for open loop control.
12. Adaptable to vision systems

Dimensions









Position for Gripper attachment

Prepared by RobotoAI Technologies,

Coimbatore 641028,
Tamilnadu,
India.

Email Us: contactus@robotoai.com
Website: www.robotoai.com