Cost effective robots backed by the EASYreach software that requires no programming!

onexiarobotics.com
A cost effective cartesian robot backed by the EASYreach software that requires no programming!

**Key Features:**
- Comes with EASYreach Software
  - Preloaded routines for:
    - Box Packing / Box Unpacking
    - Stacking / Unstacking
    - Part Transfer
    - Machine Tending
    - Laboratory Dispensing
    - Inspecting
  - No programming! Simple step by step task teaching screen to define your application
  - Easily create, store and retrieve tasks
  - Wide range of sizes to accommodate applications up to 1800 mm (70.9") of travel
  - Easy to interface with other controls, to provide READY, DONE, ALARM and other signals
- Each ONEreach System Includes:
  - 10” Touch screen operator interface mounted in a non-metallic enclosure
  - 8 input / outputs (assignable)
  - Hand controller
  - ONEreach cartesian robot, configured as specified
  - Steel NEMA 12 control enclosure, for separate mounting
  - Pneumatic filter/regulator, for separate mounting
  - All interconnecting cables and tubing

**Cartesian Robot Specification**
- X Travel: Models from 634 mm (24.9”) to 1469 mm (57.8”)
- Y Travel (optional): Models from 306 mm (12") to 1469 mm (57.8”)
- Z Travel: 150 mm (5.9”), 300 mm (11.8”), or 450 mm (17.1”)
- Theta (optional): +/- 180 degrees
- Speed (linear): 600 mm/sec (23.6 in/sec)
- Speed (rotary): 2 rev/sec
- Payload: 4.5 kg (10 lbs)
- Thrust: 185N (41.6 lbs)
- Repeatability: +/- 1.5 mm (+/- .06”)
- Acceleration: 1 G all axes
- Controller: Touchscreen with ONExia EASYreach™ software application
- Mounting: Floor mount or ceiling mount, optional floor stands available
- Safety: Emergency stop push button mounted at controller
- Guarding: Optional enclosure with safety interlocked doors are available

A cost effective table top robot backed by the EASYreach software that requires no programming!

**Key Features:**
- Comes with EASYreach Software
  - Preloaded routines for:
    - Box Packing / Box Unpacking
    - Stacking / Unstacking
    - Part Transfer
    - Machine Tending
    - Laboratory Dispensing
    - Inspecting
  - No programming! Simple step by step task teaching screen to define your application
  - Easily create, store and retrieve tasks
  - Easy to interface with other controls, to provide READY, DONE, ALARM and other signals
- Each TTR System Includes:
  - EASYreach software to run on customer supplied computer
  - 10 input / outputs (assignable)
  - Hand controller
  - ONEreach Table Top Robot
  - 3 Assignable push buttons

**Table Top Robot Specification**
- Work Area: 760 mm deep (29.9") x 690 mm wide (27.2") x 250 mm (9.8") under bridge
- X Axis Travel: 535 mm (21")
- Y Axis Travel: 480 mm (19")
- Z Axis Travel: 230 mm (9")
- Maximum Speeds: 315 mm/sec (12.4” in/sec)
- Load Capability: 45 kg (99 lbs)
- Repeatability: ±0.016 mm (0.0006")
- Weight: 82 kg (180 lbs)
- Safety: Emergency stop push button mounted on button panel
- Guarding: Optional enclosures with safety interlocked doors are available
- Connectivty: RS-232, CAN BUS, user E-stop connections, I/O, tool connections, pneumatic input

**High-Speed Version**

**TTR/HS**
- Maximum Speeds: 630 mm/sec (24.8 in/sec)
- Load Capability: 20 kg (44 lbs.)
- Repeatability: ±0.032mm (0.0013")
ONExia’s EASYreach Software is designed to make the ONEreach robotic system universally versatile and simple for the end user within their work environment. With EASYreach, anyone can change the task of the robot without programming knowledge by using a simple hand controller and the software interface.

Preloaded Routines
The EASYreach software has a variety of tasks preloaded to reduce time when teaching a new task. The preloaded routines include:

- Box Packing / Box Unpacking
- Stacking / Unstacking
- Part Transfer
- Machine Tending
- Dispensing / Laboratory Dispensing (TTR)
- Inspecting

Changeover
Over 200 tasks can be stored within the controller and can be repeated on demand making EASYreach an invaluable tool in short run and quick changeover situations.

Preloaded Routines

- Box Packing / Box Unpacking
- Stacking / Unstacking
- Part Transfer
- Machine Tending
- Dispensing / Laboratory Dispensing (TTR)
- Inspecting

5 Simple Steps of Task Teaching:

Prior to training a task the user must name and choose the type of task that the robot will be doing.

1. Begin Task Signal: If the robot is synced with another machine (ie. conveyor) a signal is sent letting it know the task has begun.
2. Pick Location: Jog to the position where the pick will take place. Multiple pick locations can be set based on an array or grid.
3. Obstacle: An optional setting based on the environment the robot is in. If an obstacle is present, waypoints can be set to avoid collision.
4. Finished Signal: If the robot is synced with another machine (ie. conveyor) a signal is sent letting it know the task is finished.
5. End Location: Set the final resting location within the work envelope for the robot to stop.

A list of the steps will be presented giving the user the ability to edit and make changes prior to running the newly trained task.

Multiple Levels of Access

Administrator
Complete access to the EASYreach Software. This user can add and remove other user logins, train new tasks and adjust I/O signals with complete parameter access.

Technician
Incorporates many of the same abilities as the administrator. This user can train new tasks as well as edit those that were previously stored. Some parameters can also be edited at this level.

Operator
Provides most basic access in EASYreach. This user can only select a task that has already been trained and set it to run.
Grippers Customized to Fit Your Applications

ONExia Robotics offers a variety of gripper accessories, grippers and gripper kits to help customize the ONEreach and ONEreach TTR to your application. We are partnered with Piab, a world class company that specializes in pneumatic and vacuum based gripper technologies.

Vacuum Gripper Kit
The Vacuum Gripper Kit provides the components necessary to create vacuum grippers for the ONEreach Robot. The kit includes 15mm square T-slot extrusion that can be saw cut to the desired lengths. The parts in the kit can be reused and re-configured as the tasks change.

The kit includes:
- Two 1-meter lengths of 15mm aluminum extrusion with T-slots*
- Four vacuum generators*
- Three sets of vacuum cups, 4 each of 10mm, 15mm and 25mm
- Solenoid valve
- Four position manifold*
- All necessary fittings, tubing, hardware, instructions, etc.*

*Additional parts may be purchased for larger or more complex assemblies

Pneumatic Parallel Jaw Grippers
The pneumatic parallel jaw gripper is a simple solution for pick and place applications.

Pneumatic Angle Jaw Grippers
Similar to gripper pictured to the right the angle jaw gripper is a simple pneumatic gripping solution.

Piab piGRAB Gripper
Piab piGRAB is a gentle gripper that simplifies engineering for bin picking solutions. Ideal applications include: vision guided bin-picking, pallet lifting, gentle handling of parts such as glass, fruits, etc.