**SYSTEM CONFIGURATIONS**

**POINT 1** Software functions

- **Real-time and highly accurate 3D measurement by stereo camera**
  (+/- 0.7mm and 600 – 800 mm depth at 700mm distance.)

- **Random pattern projection by high luminosity LED**
  Accurate positions and posture recognition by acquiring surface data of an object. Less susceptible to small fluctuations in outside light conditions. Stable 3D image detection.

- **High speed (30 fps) and high accuracy image processing**
  Production through-put is improved by reduction in wait time and missed workpieces.

- **With larger depth, more workpieces can be included per one box**

---

**POINT 2** Package consists of stereo camera, PC software and LED lighting

- **EASY INTRODUCTION OF BIN-PICKING AUTOMATION SYSTEM**

  - **Package consists of stereo camera, PC software and LED lighting**
  - **Robot vision recognition package Vision3D**
  - **System configurations**
  - **Initial setting**
  - **Model registration**
  - **Model search**
  - **Picking operation**
3D VISION BIN-PICKING PACKAGE

Package consists of stereo camera, PC software and LED lighting
Quick and easy bin-picking of multiple workpieces with 3D camera
Real-time, fast (30fps) and highly accurate 3D measurement (image capturing, image processing, parallax calculation)
Random pattern projection by high luminosity LED, stereo camera
Surface data is obtained and 3D image is detected.
Less susceptible to small fluctuations of outside light conditions. Accuracies in position and posture recognition is improved.
With larger depth, more workpieces can be included per box. Waiting time and missed workpieces are minimized and production throughput is improved.
Easy model registration (no CAD data required).

Multiple models (different shapes of workpieces to be handled) can be registered.
Even in a process where changes in workpieces and supply boxes are often, setting up can be done quickly at the site (on the factory floor)
Easy calibration (registration of robot and camera coordinates)
Easy set-up procedures for robot and camera coordinates and their orientation.
Box position registration and interference avoidance function
By registering the box dimensions, pick operations are carried out without interference.
Checking for arm working envelope
Robot’s working envelope is monitored and if a workpiece is out of reach, it is skipped.
Easy-to-use PC software
Each icon clearly represents each function that it invokes. Easy set-up is done simply by following the icons in their order.

This product is used in combination with vertical articulated robot TVL, TVM and TV series (with controller TSL and TS series, respectively.)

Preliminary feasibility test can be carried out, with provision of sample workpieces.

Shibaura Machine's Robot Vision Recognition Package TSVision3D
Easy introduction, maintenance and set-up change-over for bin-picking automation systems

Shibaura Machine’s Robot Vision Recognition Package TSVision3D

Easy-to-use software

- Easy-to-use operation scheme, with operation contents accessed from easy-to-understand icons in the main display
  Easy set-up by following the icons in their order.

- Easy-to-use software
  Easy-to-use operation scheme, with operation contents accessed from easy-to-understand icons in the main display
  Easy set-up by following the icons in their order.

- Shibaura Machine’s Robot Vision Recognition Package TSVision3D
  Easy introduction, maintenance and set-up change-over for bin-picking automation systems
  
  - Package consists of stereo camera, PC software and LED lighting
    Quick and easy bin-picking of multiple workpieces with 3D camera
  
  - Real-time, fast (30fps) and highly accurate 3D measurement (image capturing, image processing, parallax calculation)

  - Random pattern projection by high luminosity LED, stereo camera
    Surface data is obtained and 3D image is detected.
    Less susceptible to small fluctuations of outside light conditions. Accuracies in position and posture recognition is improved.
    With larger depth, more workpieces can be included per box. Waiting time and missed workpieces are minimized and production throughput is improved.
    Easy model registration (no CAD data required).

  - Multiple models (different shapes of workpieces to be handled) can be registered.
    Even in a process where changes in workpieces and supply boxes are often, setting up can be done quickly at the site (on the factory floor)
  
  - Easy calibration (registration of robot and camera coordinates)
    Easy set-up procedures for robot and camera coordinates and their orientation.
  
  - Box position registration and interference avoidance function
    By registering the box dimensions, pick operations are carried out without interference.
  
  - Checking for arm working envelope
    Robot’s working envelope is monitored and if a workpiece is out of reach, it is skipped.
  
  - Easy-to-use PC software
    Each icon clearly represents each function that it invokes. Easy set-up is done simply by following the icons in their order from left to right.

This product is used in combination with vertical articulated robot TVL, TVM and TV series (with controller TSL and TS series, respectively.)

Preliminary feasibility test can be carried out, with provision of sample workpieces.

SHIBAURA MACHINE CO., LTD.

TM ROBOTICS (EUROPE) LTD.
Unit 2, Bridge Gate Centre, Martindfield, Welwyn Garden City, Herts AL7 1JG, UK
TEL:[44]-(0)1707-290370 Mail:sales@tmrobotics.co.uk
www.shibaura-machine.co.jp
www.tmrobotics.co.uk
www.tmrobotics.com

Distributor

* Contents included in this catalog are subject to change without prior notice to reflect improvements.

Printed in Japan