

ROC-001 system integrates robotics, AI vision, sensors, conveyors, IIoT, and AI voice assistance, managed through PLCs for precise control, Android application, Software Development training and SCADA for real-time monitoring. It provides a comprehensive platform for advanced automation, voice-activated system control, and Industry 4.0 applications.

FEATURES

- PLC
- HMI
- Industrial Actuator
- Industrial Sensor
- SCADA
- IIOT
- Artificial Intelligence
- Machine Vision
- Software Development
- Android Application
- Cloud Computing



LEARNING OBJECTIVES

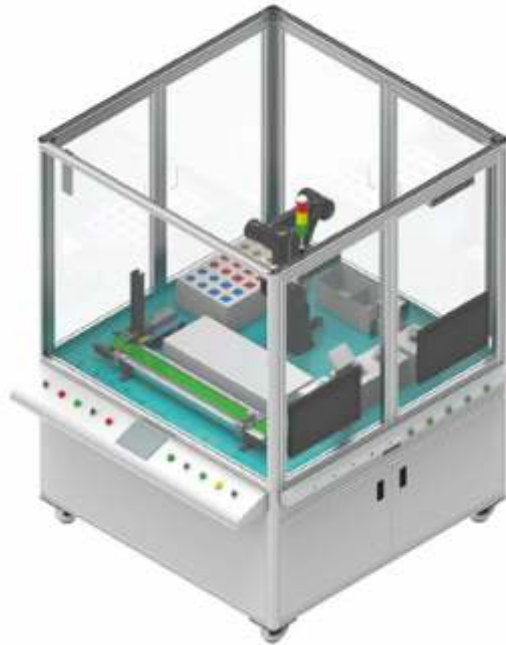
- Set Up & Program Mechatronic Equipment.
- Set Up & Program Industrial Robot.
- Set Up & Program AI Vision System.
- Set Up & Program conveyor to transport Equipment.
- Set Up & Program PLC.
- Understand Safety Feature (Emergency Stop, Sensor).
- Set Up & Program Electrical Actuators Integration.
- IIoT enables real-time monitoring, data collection.
- Understand and implement SCADA systems to monitor and control industrial robots.

APPLICATION

- Visual Sorting: Sort parts by shape and colour using machine vision cameras.
- Defect Detection: Identify and reject defective parts through AI visual inspection.
- Material Segregation: Separate metal and non-metal parts using sensors.
- Weight Segregation: Classify parts based on weight for uniform processing.
- Palletising: Automatically place sorted parts onto pallets.
- Number Detection: Detect and segregate parts based on numerical identifiers.
- Path Following: To guide parts along a predefined path based on shape or features.

Note: Specifications are subject to change.

Scope of Supply:-



Note: The Above image is for reference purposes

Sr No.	Specifications	QTY
1	Industrial Robot: SCARA Reach: 500/600mm Payload – 6 Kg Repeatability: 0.05mm	1
2	Teach Table	1
3	Robot Cell Fencing	1
4	Table Station - Path Following <ul style="list-style-type: none"> • Line • 2D Shape 	1
5	Table Station - Conveyor Station <ul style="list-style-type: none"> • Linear Modular Conveyor – 1 qty • Component Feeder – 1 qty • Photo Electric Sensors - 2 qty • Components – 10 qty 	1
6	AI VISION CAMERA	1

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Sr No.	Specifications	QTY
7	Table Station - VISION BASED SORTING <ul style="list-style-type: none"> • For shapes • For Colour • Defect & Anomaly Detection • Optical Character Recognition 	1
8	Table Station - WEIGHT BASED SORTING <ul style="list-style-type: none"> • Load Cell – 1 Qty • Load Cell Controller/Display – 1 Qty 	1
9	Table Station - METAL / NON-METAL SORTING <ul style="list-style-type: none"> • Inductive Sensor – 1 Qty • Capacitive Sensor – 1 Qty 	1
10	Table Station - PALLETIZATION <ul style="list-style-type: none"> • For shapes • For Color • Defect & Anomaly Detection • Optical Character Recognition • Weight • Metal/Non-Metal 	1
11	Vacuum Gripper	1
12	Two Finger Pneumatic Gripper	1
13	PLC Trainer Kit PLC: Delta	1
14	Main PLC Panel PLC: Delta	1
15	IIOT Based HMI 7 inch	1
16	Operator Box	1
17	Computer Desktop PC – Desktop	1
18	Display Monitors	2
19	Tower Lamp	1
20	Softwares <ul style="list-style-type: none"> • Dynamic Robot Console Software • Voice Assistant Software • Android Application • SCADA • Epson Robot Simulation Software: 10 QTY 	1

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Features:

1. PLC
2. HMI
3. Industrial Actuator
4. Industrial Sensor
5. SCADA
6. IIOT
7. Artificial Intelligence
8. Machine Vision
9. Software Development
10. Android Application

Learning Objective:

1. Set Up & Program Mechatronic Equipment. Set Up & Program Industrial Robot.
2. Set Up & Program AI Vision System.
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Applications:

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