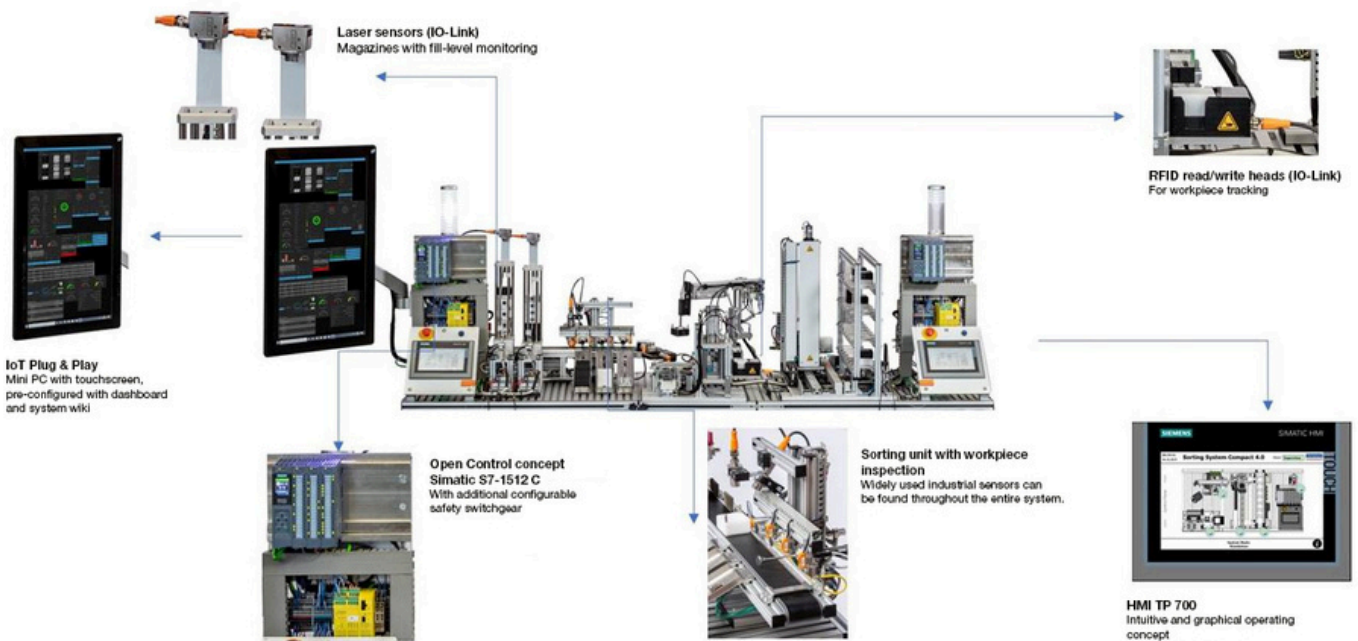# INDUSTRY 4.0

"REDEFINING EFFICIENCY WITH SMART AUTOMATION"

PRODUCT OVERVIEW AND KEY FEATURES

The Industry 4.0 Kit is a cutting-edge solution designed to integrate advanced automation, IoT, and AI-driven processes into industrial workflows. With the ability to automate sorting, assembly, inspection, and monitoring, it offers unparalleled flexibility and efficiency. This kit empowers industries to embrace smart manufacturing while ensuring compliance with safety and quality standards.

Laser sensors (IO-Link)
Magazines with fill-level monitoring

RFID read/write heads (IO-Link)
For workpiece tracking

IoT Plug & Play
Mini PC with touchscreen,
pre-configured with dashboard
and system wiki

Open Control concept
Simatic S7-1512 C
With additional configurable
safety switchgear

Sorting unit with workpiece
inspection
Widely used industrial sensors can
be found throughout the entire system.

HMI TP 700
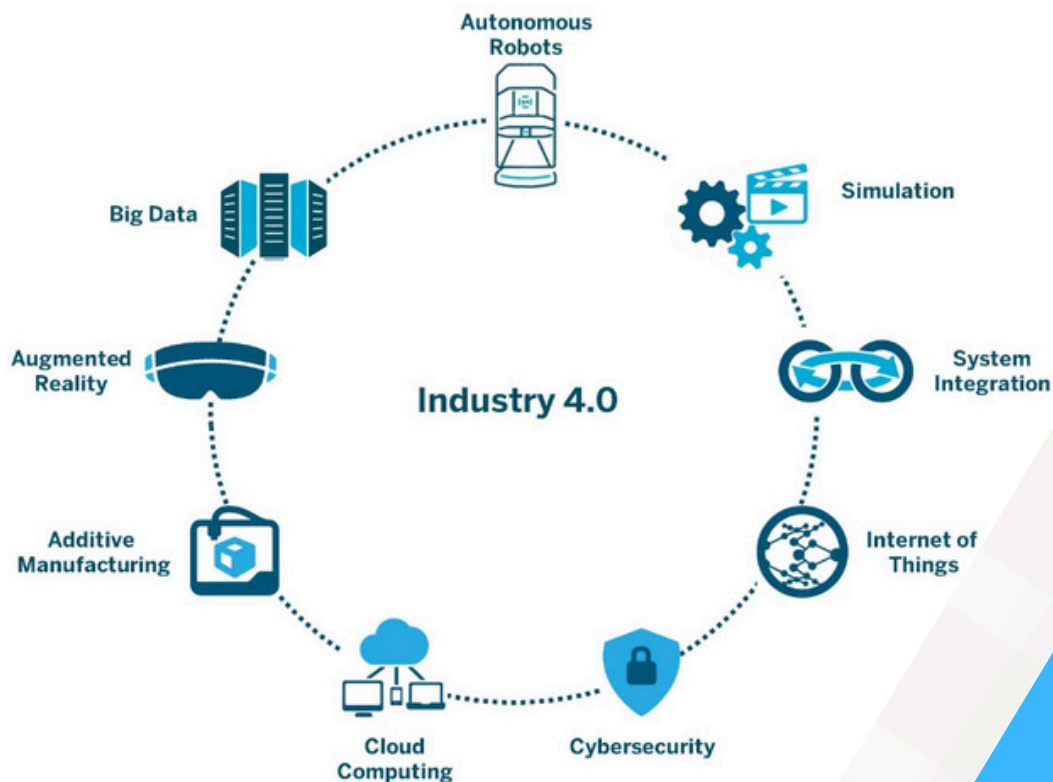Intuitive and graphical operating
concept

FEATURES'

- Automated Sorting Stations: Detect and categorize components based on color, shape, gradient, and more.
- Assembly and Inspection Stations: Streamline the production process with precise assembly and safety inspection.
- IoT Integration: Monitor and control systems remotely for improved efficiency and reduced downtime.
- Human-Machine Interface (HMI): Provides real-time data and intuitive monitoring capabilities.
- Flexible Programming: Tailored software support for various industrial tasks and processes.
- Scalability: Easily adapt to different production scales and requirements.

UNIQUE FEATURES OF THE KIT

- AI-Driven Sorting Algorithms: Enhanced accuracy in identifying and categorizing components.

- Dynamic Workflow Adaptation: Quickly adjust to changing production needs without major reconfigurations.

- Real-Time Alerts: Immediate notifications for anomalies or maintenance needs

- Energy Efficiency: Smart sensors and IoT reduce waste and optimize energy consumption.

- Cloud Connectivity: Access data and control systems from anywhere in the world.

Industry 4.0

Autonomous Robots · Simulation · System Integration · Internet of Things · Cybersecurity · Cloud Computing · Additive Manufacturing · Augmented Reality · Big Data

SENSORS & THEIR LEARNING OBJECTIVES

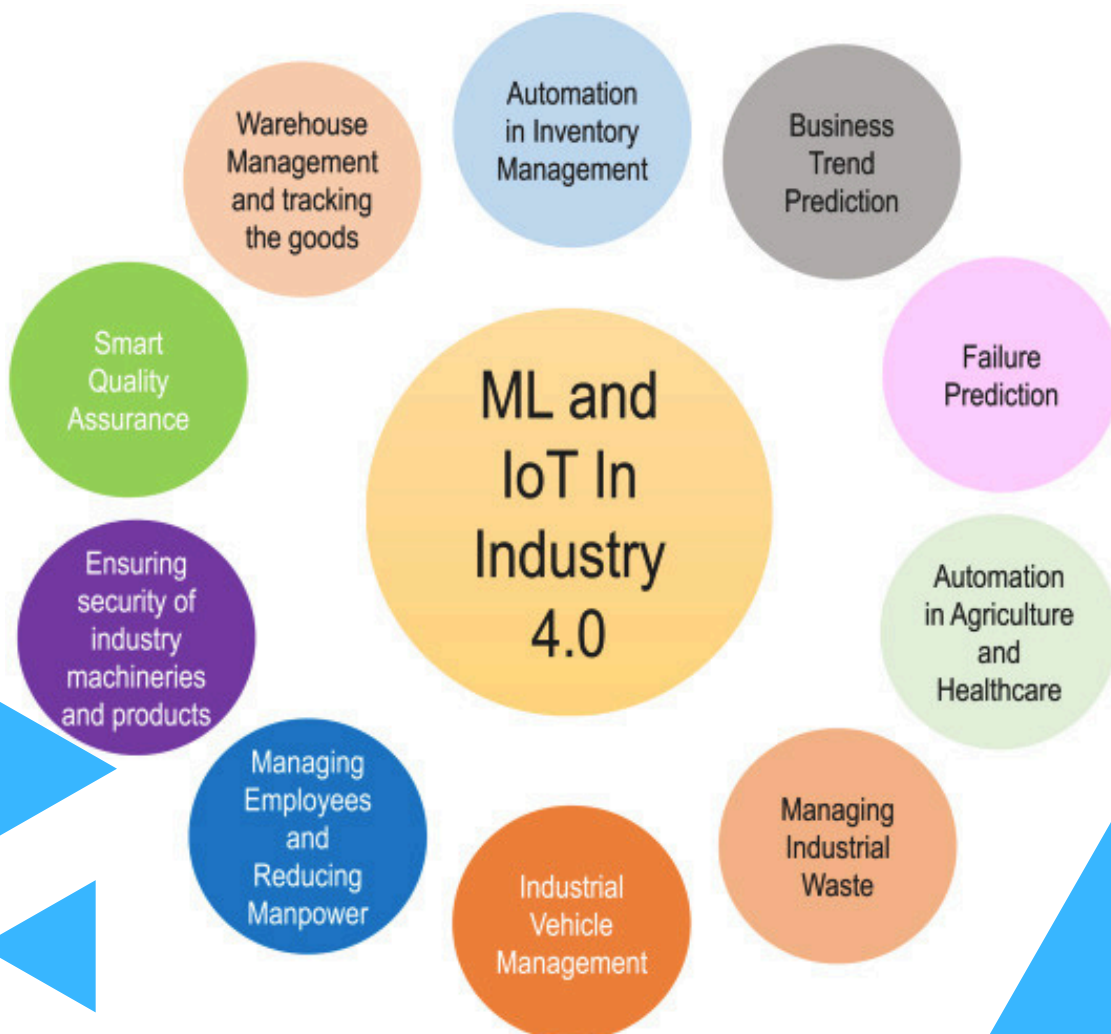| Sensor	Function	Learning Objective
Color Sensor	Detects and differentiates colors	Understanding color-based sorting algorithms.
Proximity Sensor	Detects object presence/distance	Learning object detection and spatial awareness.
Gradient Sensor	Analyzes surface gradients	Understanding texture and angle differentiation.
Load Cell (Force Sensor)	Measures applied force	Understanding weight-based sorting and stress analysis.
Temperature Sensor	Monitors system temperature	Learning thermal management in industrial processes.
Vision Camera	Captures visual data	Applying AI for object recognition and inspection tasks.

COMPONENTS & THEIR SPECIFICATION

Base Components

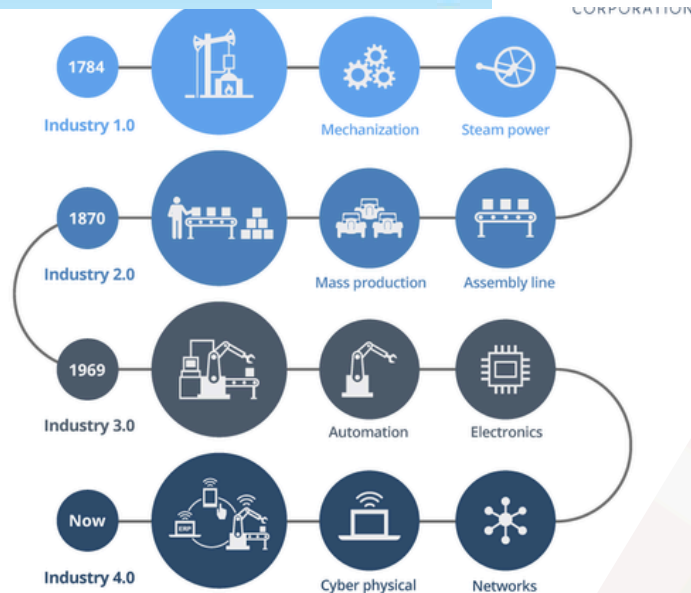| Component	Specification
Sorting Module	High-speed sorting mechanism.
Assembly Station	Precision assembly tools.
IoT Controller	Wi-Fi/Bluetooth connectivity.
HMI Screen	10-inch touch display.
Sensors (Various Types)	High sensitivity and accuracy.
Power Supply Unit	24V DC with surge protection.
Vision System	HD camera with AI support.

LEARNING MODULES

Module 1: Introduction to Industry 4.0 Concepts.

Module 2: Programming Sorting Algorithms.

Module 3: Implementing IoT for Monitoring and Control.

Module 4: Using HMI for Real-Time Data Analysis.

Module 5: Practical Applications of Sensors.

Module 6: Troubleshooting and Maintenance of Systems.

ADDITIONAL FEATURES

- **Simulations: Test processes in virtual environments before deployment.**
- **Data Analytics Tools: Gain insights into production performance and trends.**
- **Remote Support: Assistance from experts for installation and operation.**
- **Integration Ready: Compatible with existing systems and standards.**

INDUSTRY 4.0

1784	Industry 1.0	Mechanization	Steam power
1870	Industry 2.0	Mass production	Assembly line
1969	Industry 3.0	Automation	Electronics
Now	Industry 4.0	Cyber physical	Networks

WHY CHOOSE THIS KIT?

- Comprehensive Learning: Covers all critical aspects of Industry 4.0.
- Practical Applications: Hands-on experience with real-world industrial processes.
- Customizable: Tailored solutions for specific industrial requirements.
- Affordable: Cost-effective solution for Industry 4.0 training and implementation.
- Expert Support: Backed by industry experts for seamless adoption.

Empower Your Future with Hands-On Mastery of Modern Industry 4.0 Technologies!

CONTACT US

Above Blue dart office, Dattanagar, Katraj - Ambegaon Road, Swami Samarth Lane Number 3, near Chate School, Pune, Maharashtra 411046
www.automaxrobotics.com
dbjadhav@automaxrobotics.com

AUTOMAX
— ROBOTICS PVT. LTD. —