

## Advanced Mechatronics & Automation Training Kits







### ADVANCED MECHATRONICS & AUTOMATION TRAINING KITS

Advanced Mechatronics & Automation Training Kits is designed to assist industry and educators in quickly setting up Mechatronics & Automation Lab, with the intention of producing well trained candidate who will fully understand the challenges and requirements of the Mechatronics & Automation system, from design to development and POC (Proof of Concept) to MVP (Minimum Viable Product).

#### FEATURES

- IoT Smart innovation labs Kits designed to support most of the university lab experiments
- IoT Smart innovation labs Kits integrates hands-on industry relevant experiences & real-world applications in IoT design, development & testing.
- Number of real time problem-based assignments can be created on IoT
- Smart innovation labs Kits for hands-on learning.
- Kits enables most of the modern industry drives, PLC, HMI, SCADA, IO Module, Edge computing modules and Data Loggers.
- Kits Enables as testbed for validating custom IoT program and IO.
- Kits support most of the standard industrial protocol like MODBUS RTU, MODBUS TCP, OPC UA, OPC DA, OPC HDA, OPC AE, Profinet, CAN, JSON and MQTT.
- Kits Support most of the communication media like, Wired, WiFi, Bluetooth, BLE, RF MESH, 4G / LTE and LoRA.
- Kits enabled with TAGXCAN Gateway to enable communication with PLC, SCADA, HMI, IO & computing modules. TAGXCAN Gateway Capable of communicating with multiple different Protocol.
- Kits enabled With On premise InsightsX Platform to configure & experiencing Industrial use cases.

- Kits enables as testbed for evaluating existing environment to cyber security treats.
- IoT Smart innovation labs Kit interface with many instrumentation kits, including those for Pressure, Vibration, Temperature, Humidity, Ph, GAS flow, Water flow and Energy parameter.
- Smart innovation IoT lab enables features of remote access for programming, monitoring and debugging.
- Smart innovation IoT lab kits comes with Edge computing development kits to validating the custom program & converting idea to quick POC.
- Educators and System Integrators can quickly validate their products or solutions by using IoT lab kits.







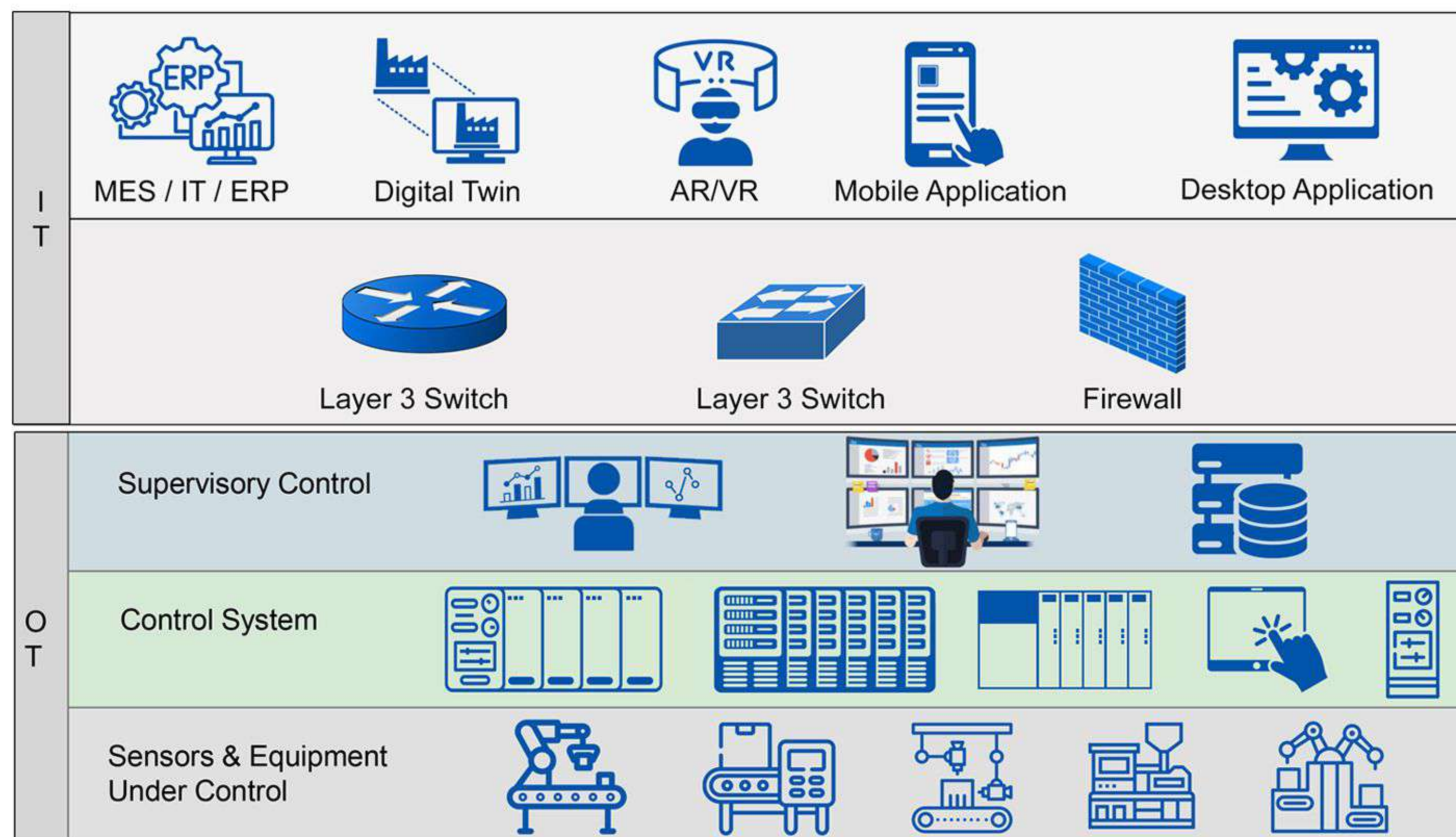
### UPGRADE YOUR FACILITY WITH ADVANCED MECHATRONICS & AUTOMATION TRAINING KITS

- Facilities will encourage students to pursue Research & Development activities on the latest technologies IoT, Robotics & Automation, Wireless Sensor Network & Network Security.
- Vision is to enable the institution to be a front runner in imparting a deep understanding of IoT devices and systems, enabling students to take up emerging career opportunities and entrepreneurship.
- To build industry capable talent, start-up's, innovation community and entrepreneurial ecosystem for IoT.
- Enable smooth integration of IoT Curriculum to existing flow of academic operation.
- Converting Ideas into products & solutions.

### ADVANCED MECHATRONICS & AUTOMATION TRAINING KITS INCLUDES

#### 1) Industrial IO Edge Gateway and Computing Modules

- 5x sets of industrial data logger.
- 5x sets Industrial IO Module.
- 5x Open source programmable Cloud PLC.
- 1x MODBUS TCP /RTU Fingerprint authentication system.
- 5x Panel mount production / Pulse Counter.
- 2x Modbus Enabled energy Meter with CT Coil and 16 amps Sockets.
- 2x SMPS 10 amps.
- 1x 22 inch LCD display.
- 1x HMI supporting Winnc and EXOR run time environment.
- 1x 3 band ANDON Light.
- 8x Digital Output Indicator for custom programming purpose.
- 8x Digital Input for custom programming purpose.
- 16x Terminal blocks.
- 4x 0-10V & 4-20 mA transmitter for custom programming purpose.
- 1 set Siemens / Mitsubishi / Delta PLC's and its IO sets for custom Programming
- 1 set of different communication Module (WiFi, Bluetooth, LoRa & CAN Module)
- 2x WiFi access point.
- 2x Relay cards.
- 3 Axis stepper motor control with drivers.
- 2x Solenoid Piston with valve control mechanics.
- 2x Cloud PLC - Open source computing IO Module.
- 2x Proximity Sensor & Rotary Encoder Sensor.

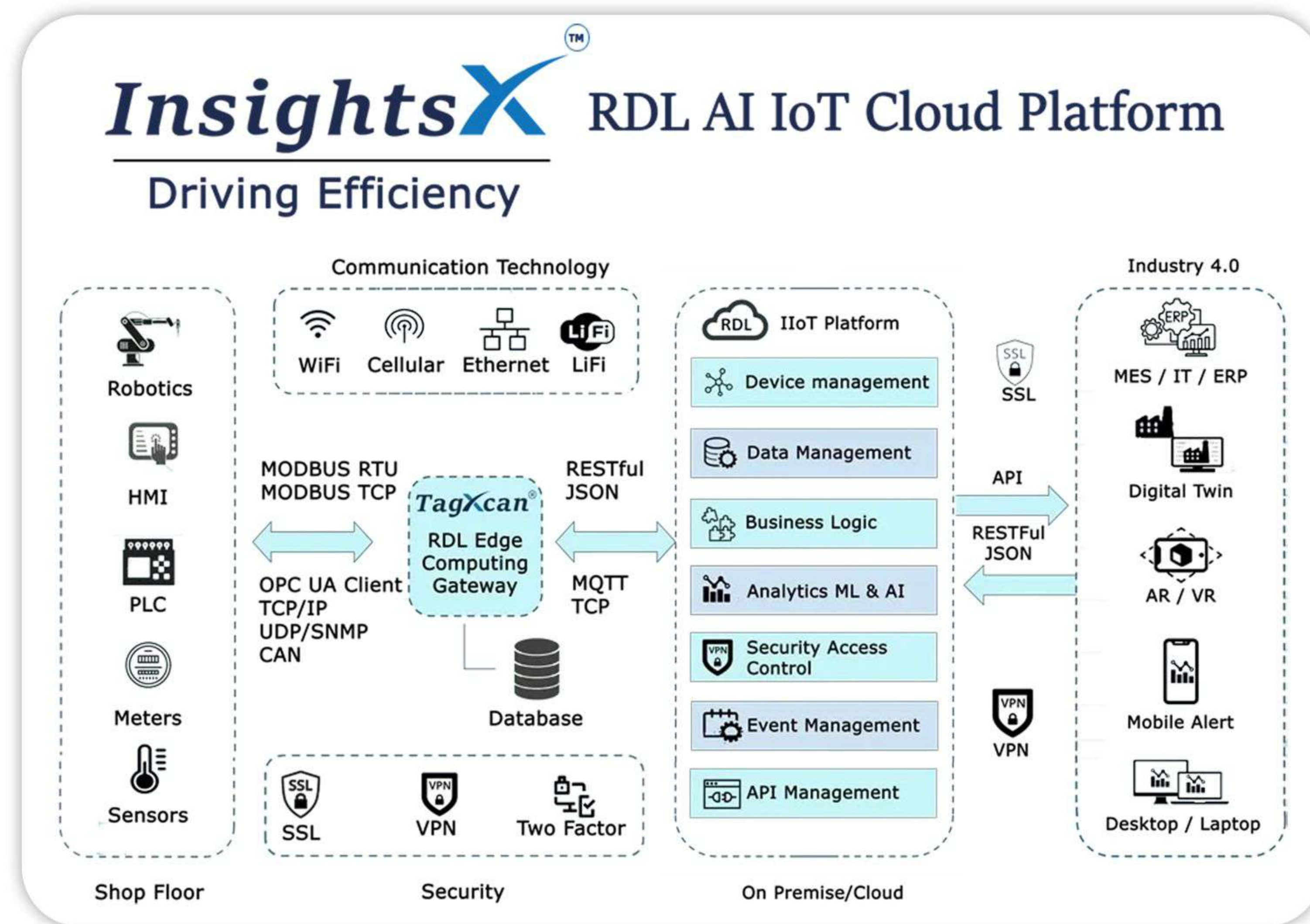
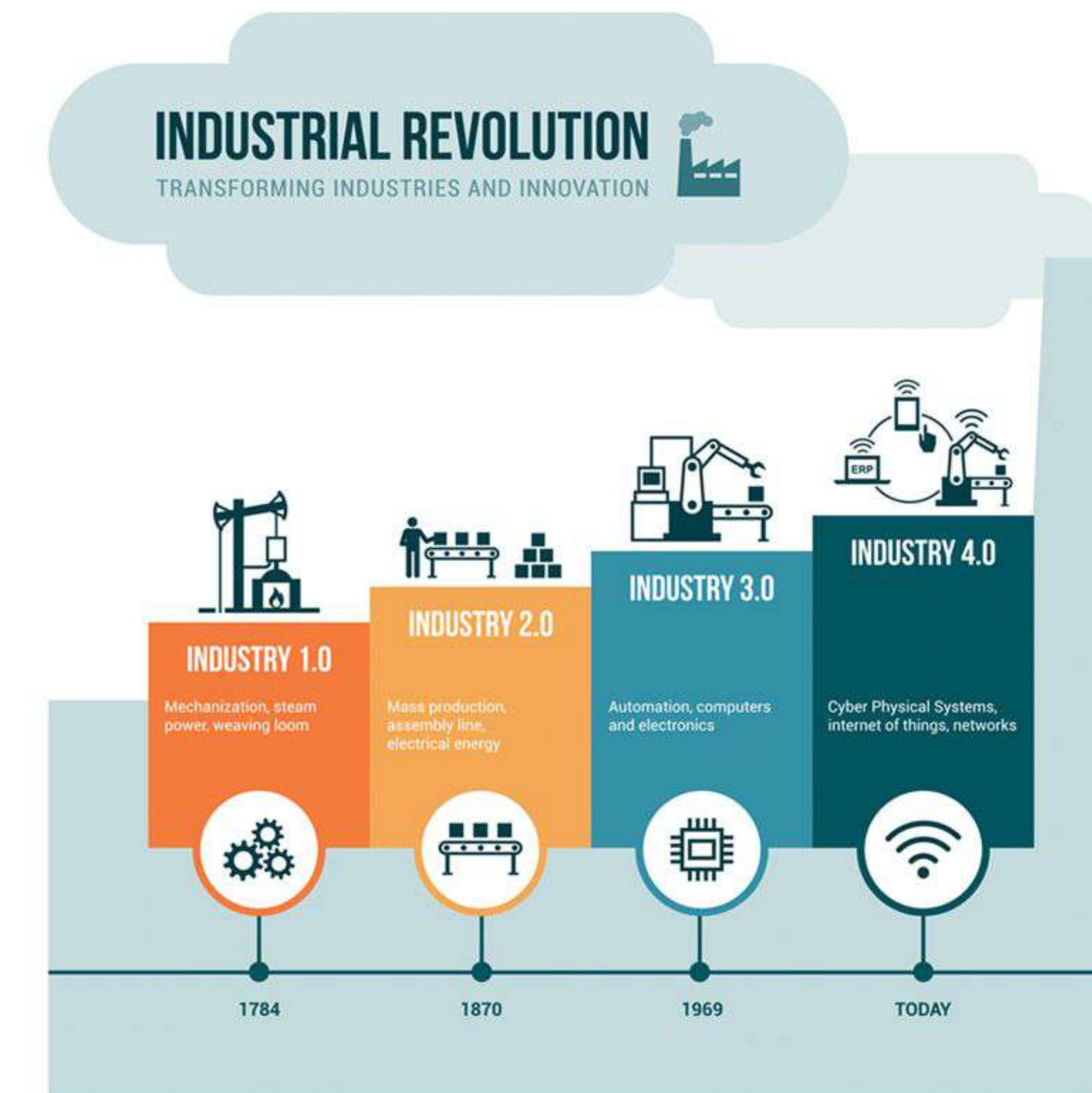






### 2) Software & Utilities

- Testing and Utility Software - 1 Licence
- PLC / SCADA Software Licence



### 3) Instrumentation Sensors

- Fuel Level Sensor Kit with Tank Setup
- Oil Level Sensor Kit with Tank Setup
- Ph Level Sensor Kit with Tank Setup
- Temperature Sensor (PT100 / K / J Type Kit)
- Vibration Sensor Kit (Motor with Other Assembly)
- Gas Flow Sensor Kit
- Water Flow Sensor Kit
- Pressure Sensor Kit
- Weighing Scale Sensor
- Proximity Sensor





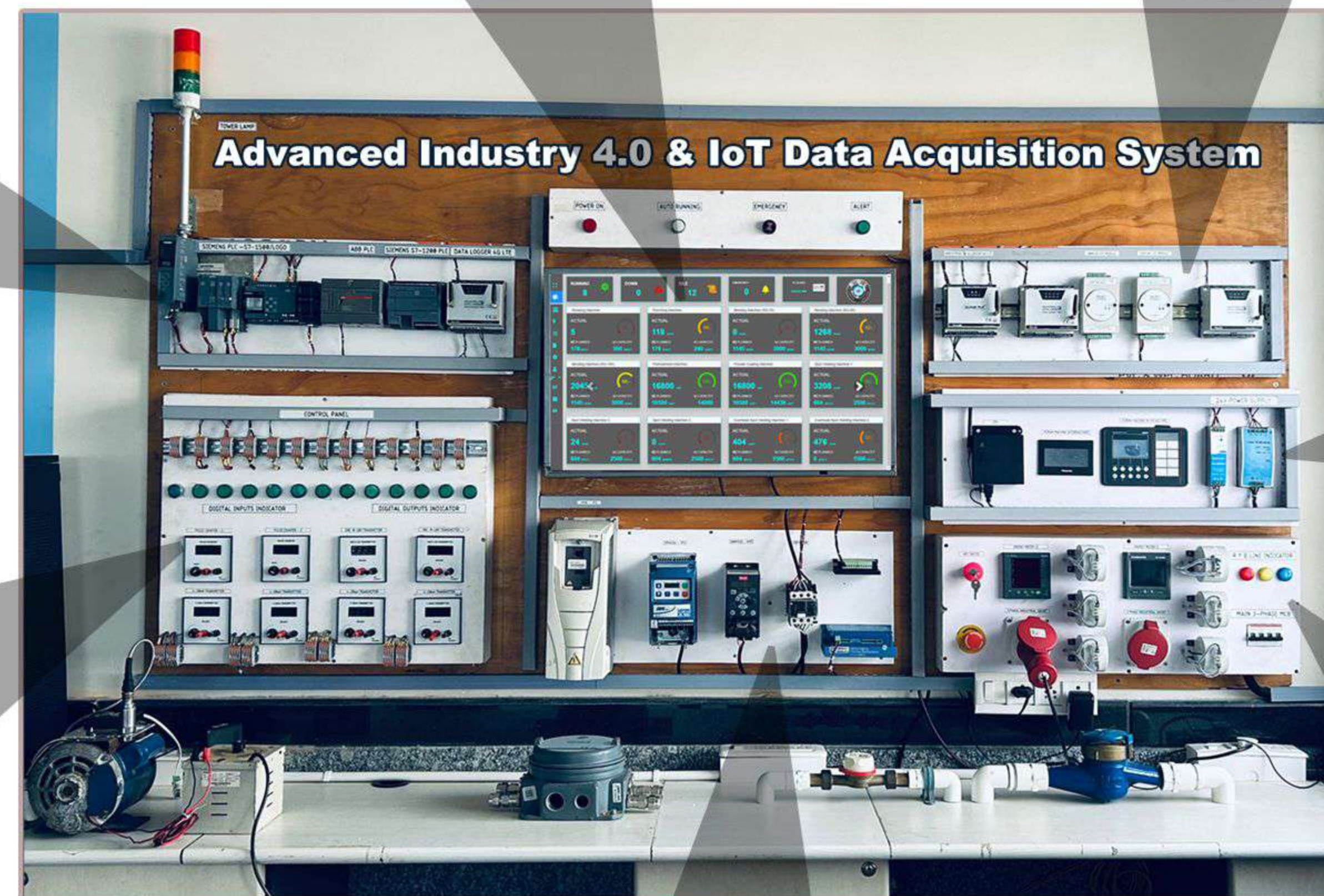
LED Display



IO & Computing Modules Panel



PLC Panel



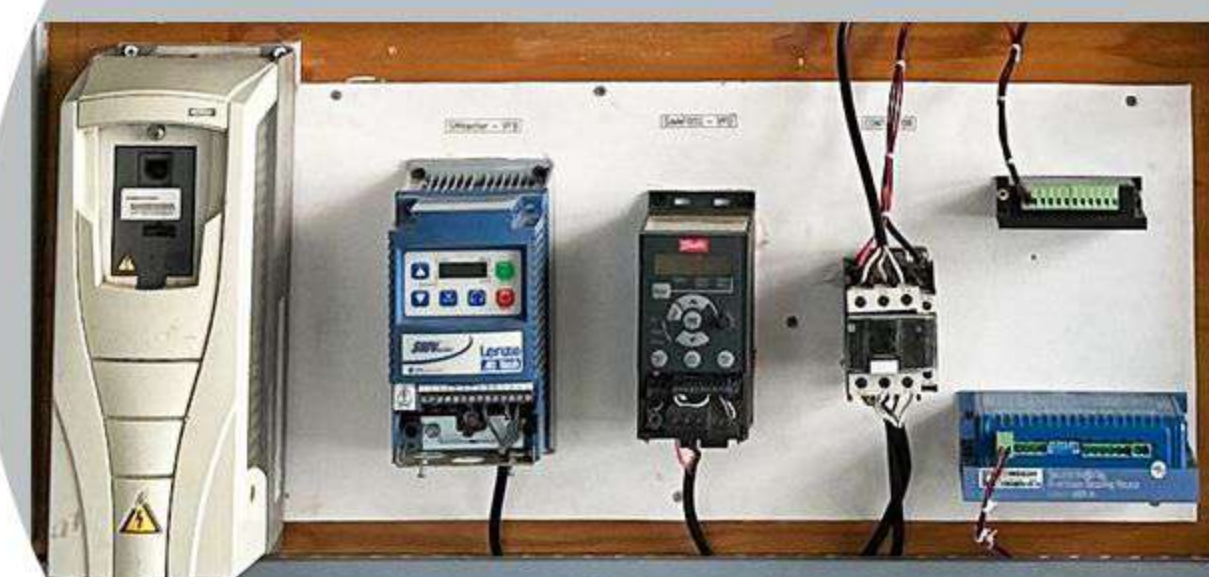
Advanced Industry 4.0 & IoT Data Acquisition System



HMI / Power Supply



IO Control Panel



VFD & Steptomtor Drives



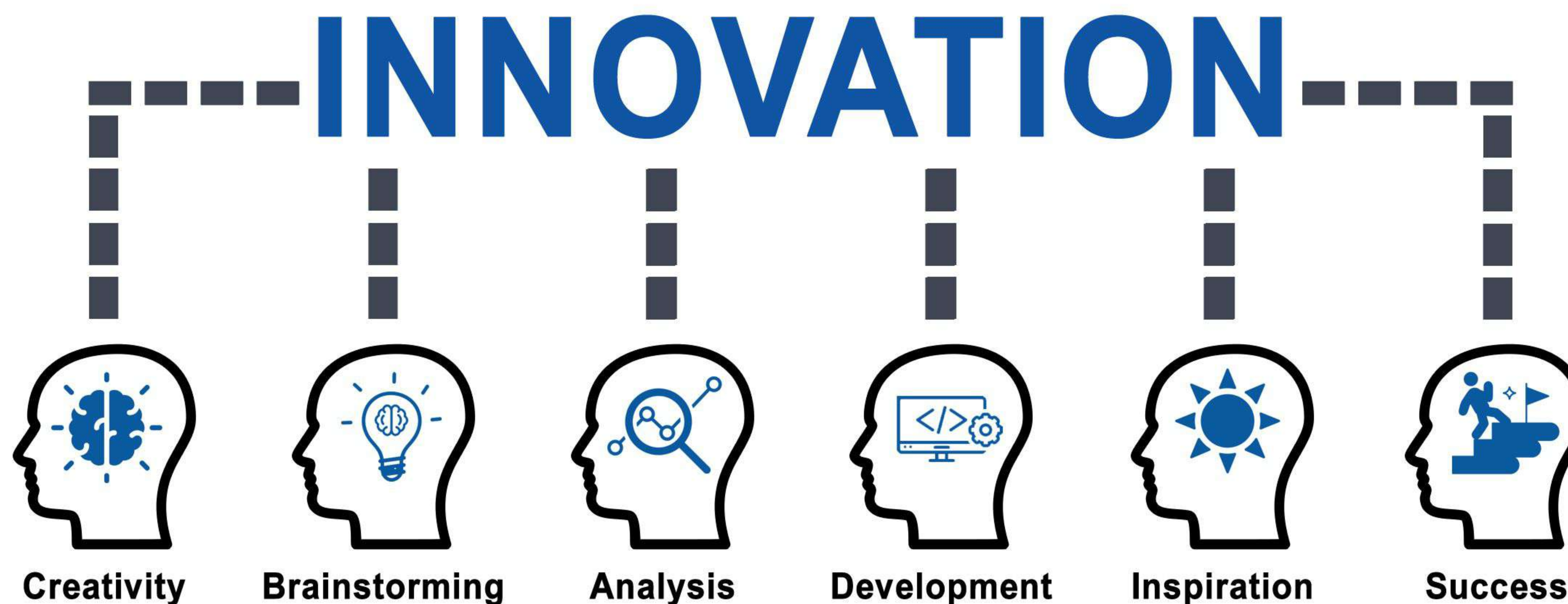
3 Phase Energy Meter with CT Coil





### GIVE A WINGS TO INNOVATIONS

-  Factory Automation & Data Analytics
-  Machine Condition Monitoring
-  Energy & Building Automation
-  Environmental Monitoring
-  IoT-Smart Hospital
-  IoT-Smart Farming
-  Wireless Sensor Network
-  Smart Transport & Supply Chain
-  Control System & Big Data
-  Smart Health
-  Smart Parking
-  Water Quality







**We Ship Worldwide**

**Our Shipping Partner**



**We Accept**



Note:

1. Unless otherwise specified, all parameters in this datasheet were measured at 25°C and 75% humidity.
2. All index testing procedures in this datasheet are based on our company's corporate standards.
3. We offer product customization, OEM and ODM Services; please contact the sales team @ sales@rdltech.in.
4. We Ship Worldwide.
5. Specifications are subject to change without prior notice.
6. For additional information on Product and to buy online @ [www.researchdesignlab.com](http://www.researchdesignlab.com)

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