



# Real-time manufacturing logistics management

Understanding and managing ever-changing logistics status in real time



# Quick response to changing market environment

Perfect response to changing business situations with flexible system structure and rapid software development



### Effective management of production resources

Improve utilization rate by checking production resource



#### Real-time monitoring of site conditions

Real-time monitoring of the manufacturing site, including process / robot / operation / logistics / stock status and more.



#### The best quality management

Provide the reference data in case of a defect for analyzing the causes of the quality issues



#### Multi-Device Support

Mobile device support, such as Tablet, PDA, and wireless scanner for smart factory implementation

### Smart Factory Model

### Application

(3)

### Product design

Production design
Product design

### Manufacturing execution

Work order Factory visualization

### **Quality** analysis

Variable analysis
Tracking causes

# Manufacturing safety

Healthcare Safety Support

### Distribution & procurement

Material procurement
Warehouse Logistics

### Augmented Reality

AR / VR On-Site AR

### Platform



#### **Data analysis**

Data visualization
Data collection
Data analysis

#### **Resource model**

Resource modeling
Visualization modeling

#### **Production simulation**

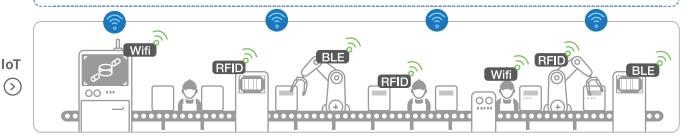
Planning simulation
Progress management

#### **Industry cloud**

Multi-factory cooperation Supply Chain Linkage

#### **Factory IoT Communication**

Event reference engine/Communication middleware



HatioLab dreams of a better world that manufacturing innovation will bring.

Beyond the traditional way of production that was operated manually, experience better service to collect and analyze field data in real time and monitor and control the entire manufacturing process.



#### Things Factory

- Smart factory building platform that can collect and share necessary information in real time such as production planning, work order, job progress, quality information
- · Providing easy and convenient user environment with web-based UI, user authority by job type, and globalization support
- Flexible product configuration, short deployment period, scalability and easy maintenance make it possible to respond to customers of various sizes









#### Factory Automation

- Implement an environment that can provide customers with the necessary information by collecting and analyzing data from various facilities, sensors, and robots in the field
- Provide highly flexible UI and ease of use compared to traditional HMI
- Support various protocols for data collection of on-site equipment, sensors, robots, etc.(Modbus, Socket, MQTT etc.)
- Ensure stability of data communication using proven middleware through many projects



#### Dashboard & Report

- Designing customer site layouts and equipment, provides a dashboard and 3D visualization environment that can collect and analyze field information in real time
- Efficient decision support with reports that are reflected in real-time
- Compose various report screens and implement reports using complex and various types of charts



# ThingsBoard Real-time Monitoring Solution

#### Any data can be easily designed and monitored in various forms.

Dashboard, KPI report, equipment / process / stock status, logistics / distribution / transportation status are designed with web standard graphic integrated modeler and real-time monitoring is possible using 2D, 3D and map based service.



### **Things**RTLS

Real-time Location System

#### Can be used in smart factories, logistics, construction, public facilities, event hall and more!

It can be applied to various fields such as indoor navigation(Picking, Put-away), work safety(Danger Zone Warning) and work guide, resource movement efficiency and utilization analysis, and augmented reality.











### **Things**Label

Barcode Label Management Solution

### Integrated solution for business label management!

Non-specialist can design/print barcode labels as easily as paint. It supports not only 80 types of barcodes such as code11, code39, EAN13 and QR, but also manages the entire label of the company.









