Smart Insight – The Easy Way to Monitor Your Machines
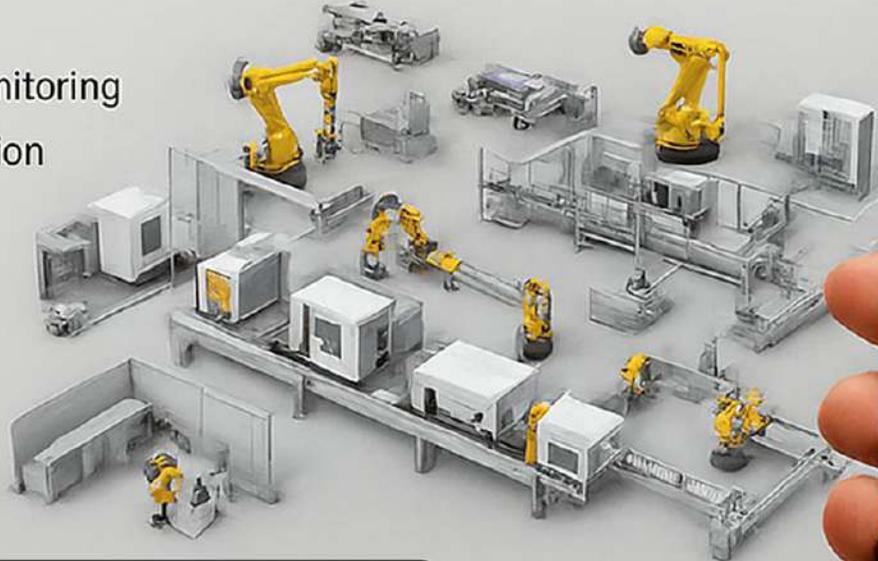
Smart Insight is a cloud-based IoT platform that connects CNC machines, robots, and industrial equipment to monitor production, performance, and machine health in real time. It helps manufacturers improve OEE, detect inefficiencies, and make data-driven decisions. Designed for ease of integration, Smart Insight supports OPC-UA, MQTT, and Modbus connectivity for seamless factory digitization.

Smart Insight benefits:

- Improve productivity with real-time monitoring
- Detect inefficiencies in machine utilization
- Reduce downtime with instant alerts
- Automate report generation
- Cloud backup for programs and data
- Easy integration with existing systems

Smart Insight

RUNNING

Status	Running
OEE	85%

Easy Connectivity:

- Simple network-based connectivity for CNCs, robots, and PLCs.
- Supports data access and transfer across factory equipment.
- Enables integration of third-party equipments.
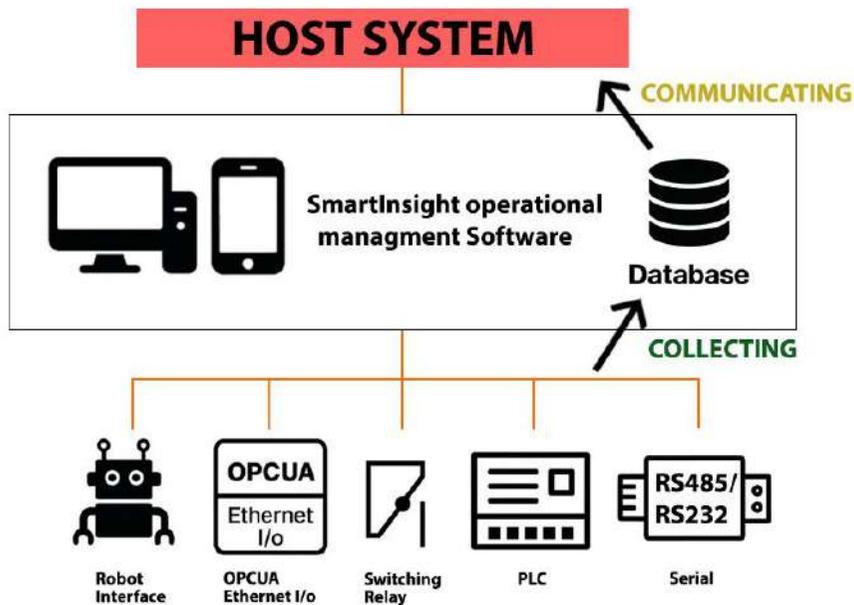- Supports with MQTT , RS485 & RS232

Quick setup and configuration:

- Quick setup with scalable architecture.
- Direct machine-to-device data collection for mobile app.
- Enterprise version aggregates all machines via web for full visibility.

Performance Overview:

- Review machine operational and production results.
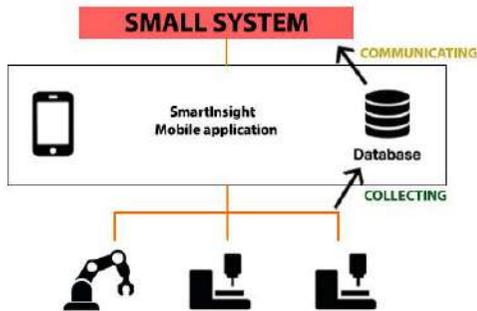- Compare actual output with production plan

Reports & Analytics:

- Automatically generated reports in schedule based.
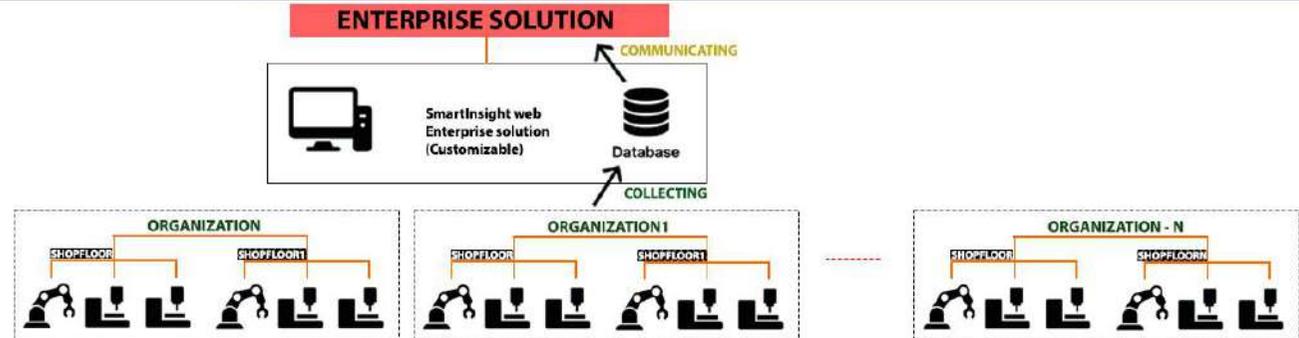- Supports detailed analysis for production optimization.

HOST SYSTEM

SmartInsight operational managment Software

Database

COMMUNICATING

COLLECTING

Robot Interface | OPCUA Ethernet I/o | Switching Relay | PLC | Serial

RS485/RS232

OPCUA Ethernet I/o

Connecting SmartInsight:

- **Connect robots using Robot Interface**

- **Connect machines without Ethernet via SmartInsight Ethernet I/O Converter**

- **Connect third-party devices switching output Relay**

- **Connect DI/DO signals directly with SmartInsight I/O Ports, PLC's**

- **Enable direct CNC connectivity via rs485/ Modbus / MQTT**

SMALL SYSTEM

SmartInsight Mobile application
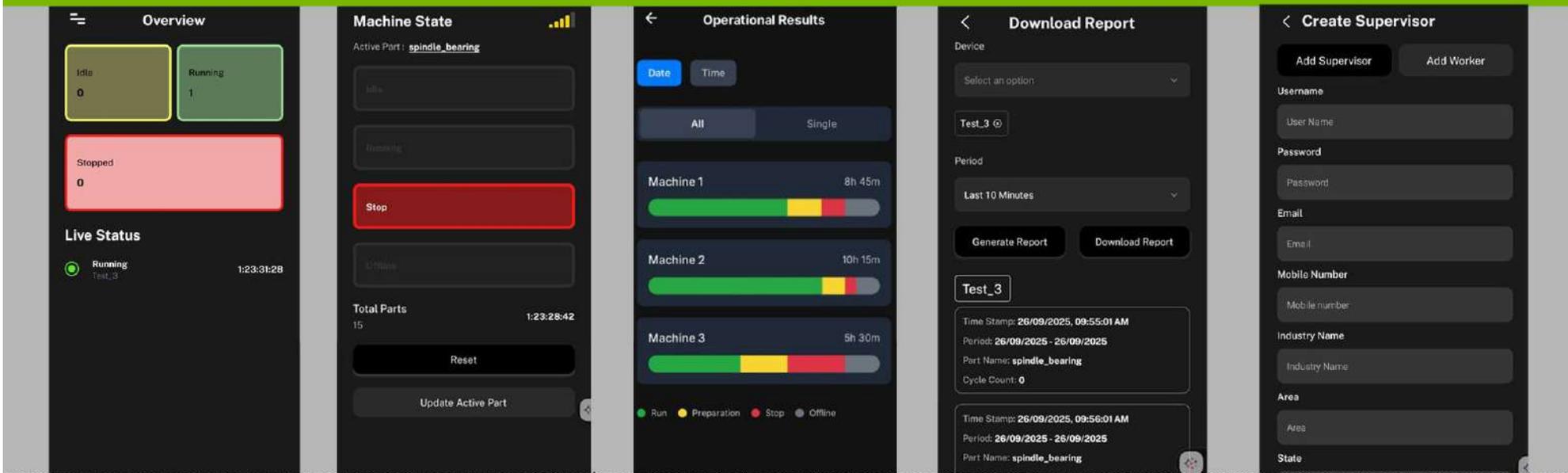
Database

COMMUNICATING

COLLECTING

Small System – Direct Job-Level Monitoring:

- For small setups or job-work level monitoring:
- Each machine is directly connected to a SmartInsight IoT Device
- Operators and supervisors can view live production status, job progress, and machine health instantly on the SmartInsight Mobile App
- No collector PC or additional hardware is required — a plug-and-play solution SmartInsight Mobile App provides complete visibility anywhere, anytime

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ENTERPRISE SOLUTION

SmartInsight web Enterprise solution (Customizable)

Database

COMMUNICATING

COLLECTING

ORGANIZATION | ORGANIZATION1 | ORGANIZATION - N

SHOPFLOOR | SHOPFLOOR1 | SHOPFLOOR | SHOPFLOOR1 | SHOPFLOOR | SHOPFLOORN

Enterprise System – Centralized Smart Shop Floor

- For large-scale factories and enterprise environments:
- All shop floor machines are equipped with SmartInsight IoT Devices or IoT-enabled CNC controllers
- Machines are directly connected to the SmartInsight Cloud /Enterprise Server
- Enterprise Web Dashboard provides a complete digital twin of your shop floor

- The Enterprise Admin can monitor and control all devices simultaneously through a unified Web Dashboard
- Real-time insights into machine performance, production analytics, and OEE across the entire plant
- Seamless integration with ERP / MES / BI systems for data-driven decision-making

Status Breakdown:
Show number of devices by state (Running, Idle, Alarm, Offline).
Device Insights: For each device, present utilization and job timings.

Machine Status:
- Real-time display of current state (Operate, Idle, Alarm, Stop).
- Total Parts Count: Running tally of all completed parts.
- Job Timing: Start time and end time of each job cycle.
- Current Part Info: Live progress and count of the part being produced.

Operational Results:
- Graphs for machine states: Operate, Alarm, Stop
- Exportable data in CSV format
- Track utilization and idle capacity

Filters:
Select multiple devices and define a custom time range.
Report Generation: Create detailed reports optimized for storage efficiency and faster access.
Storage Options: Save reports directly within the application or download them for external reporting and analysis.

Add Users:
- Organizations can create accounts for supervisors and workers.
- Hierarchy Assignment: Define roles and reporting structure within the shop floor.
- Shop Floor Mapping: Assign users to specific machines or sections for accurate tracking.

Smart Insight

Production Report

Generated on: 04/08/2025 11:36 AM
Period: 29/07/2025 - 04/08/2025
Total Devices: cnc_1, test_1

Device: cnc_1

Timestamp	Period	Part Name	Cycle Count
29/07/2025	28/07/2025 - 29/07/2025	-	726

Part Segments:

Time Stamp	Period	Part Name	Cycle Count
2025-07-28T11:26:35	28/07/2025 - 28/07/2025	pipe3	0

Smart Insight – Production Report Features
- **Multi-Device Support:** Reports can include multiple devices in a single view.
- **Time-Based Reporting:** Track production over specific periods.
- **Detailed Part Tracking:** Shows each part produced with timestamps and cycle counts.
- **Segmented Data:** Breaks down production into part-level segments for precise analysis.
- **Summary & Insights:** Provides overall production totals alongside detailed part-level data.
- **Export & Storage:** Reports can be saved or exported for further analysis.