

SMART FACTORY & WAREHOUSE AUTOMATION SOLUTIONS

Industry 4.0 | Digital Manufacturing |
Smart Warehousing | Industrial IoT



PRODUCTION OVERVIEW

TOTAL PRODUCTION

12,450

Units

OEE

85.6%

DOWNTIME

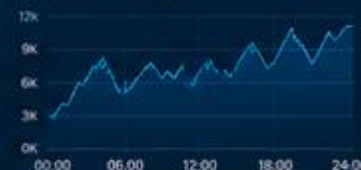
01:25:30

hh:mm:ss

QUALITY RATE

98.2%

PRODUCTION TREND



MACHINE STATUS



REAL TIME
MONITORING



ALARM
MANAGEMENT



PERFORMANCE
ANALYTICS



DATA
INSIGHTS

RFID & REAL-TIME TRACKING



ASSET
TRACKING



INVENTORY
VISIBILITY



AUTOMATIC
DATA CAPTURE



GATE
AUTOMATION



WMS / MES
INTEGRATION



ROBOTICS
AUTOMATION



REAL-TIME
DATA



IIoT
CONNECTIVITY



SMART
WAREHOUSING



ACTIONABLE
INSIGHTS



ABOUT US WHO WE ARE

Brilliant Info Systems Pvt. Ltd. is one of India's leading Industrial Automation and Digital Transformation solution providers.

We help organizations digitize manufacturing plants, warehouses, and logistics operations using cutting-edge technologies.

23
YEARS
OF EXPERIENCE

23+
Years of Excellence
Delivering Innovative Automation
Solutions Since 2001



500+
Projects
Delivered



200+
Happy
Clients



24/7
Support
Service



Pan India
Deployment
& Support



AUTOMOTIVE



TEXTILE



STEEL



PHARMACEUTICAL



FMCG



FOOD
PROCESSING



ENGINEERING



ELECTRONICS



RETAIL



LOGISTICS



3PL



CHEMICAL



CEMENT



INNOVATIVE SOLUTIONS
Driving efficiency
through innovation



END-TO-END SERVICES
From consultation to
implementation and support



CUTTING-EDGE TECHNOLOGY
Leveraging the latest technology for
maximum impact



CUSTOMER SUCCESS
Committed to delivering value
and long-term partnerships

WE SPECIALIZE IN



Warehouse
Management
Systems



Manufacturing
Execution
Systems (MES)



Factory
Automation



Pick to Light
Systems



RFID
Solutions



Industrial
IoT



AI Vision
Inspection



Digital
Twin



Load Cell
Automation



PLC/HMI
Integration



Smart
Logistics



Production
Monitoring

INDUSTRIES SERVED

OUR COMPLETE SOLUTIONS

End-to-End Automation • Digital Transformation • Industry 4.0



1 Manufacturing Execution System (MES)

- Real-time production tracking
- Work order management
- Quality & traceability
- Shop floor integration



2 Factory Automation System (FAS)

- Machine & production monitoring
- Alarm & downtime management
- Energy & utility monitoring
- Centralized dashboards



3 OEE Monitoring

- Overall equipment effectiveness
- Availability, performance & quality analysis
- Real-time OEE dashboards



4 Andon System

- Real-time alerts
- Visual management
- Operator & supervisor call
- Instant response



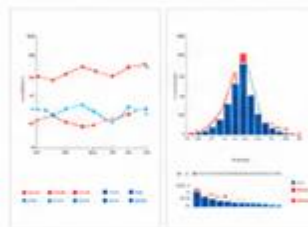
5 PLC / HMI / SCADA Integration

- PLC programming
- HMI & SCADA development
- Seamless system integration
- Multiple protocols support



6 SPC / SQC

- Process control
- Cp, Cpk analysis
- Quality monitoring
- Statistical reporting



7 Digital Twin

- Virtual replica of systems
- Simulation & optimization
- Process validation
- Better decision making



8 Virtual Commissioning

- Simulate & validate systems
- Test before implementation
- Reduce cost & time
- Minimize risk



9 Predictive Maintenance

- AI-driven insights
- Predict equipment failures
- Reduce downtime
- Optimize maintenance



10 Pick to Light System

- Light-guided picking
- Faster & accurate picking
- Reduced training time
- Higher productivity



11 Load Cell Automation

- High-precision weighing
- Batching & filling automation
- Real-time weight monitoring
- Increased accuracy & reduced wastage



End-to-End Solutions



Industry 4.0 Enabled



Customized Approach



Scalable & Future Ready



24x7 Support & Service Excellence



23+
Years of Experience



500+
Projects Delivered



200+
Happy Clients



Pan India Presence



Commitment to Excellence



OVERVIEW

Manufacturing Execution System (MES) bridges the gap between ERP and the shop floor by providing real-time visibility into production activities. It enables manufacturers to monitor, control, and optimize every stage of the manufacturing process.



KEY FEATURES

- Production Planning & Scheduling
- Work Order Management
- Production Tracking
- Machine Connectivity
- Recipe & Batch Management
- Electronic Work Instructions
- Operator Management
- Quality Inspection
- Product Traceability
- Real-Time Dashboards
- ERP Integration



BENEFITS

- Real-Time Production Visibility
- Increased Productivity
- Reduced Manual Data Entry
- Improved Product Quality
- Complete Manufacturing Traceability



MES CONNECTS YOUR ENTIRE MANUFACTURING PROCESS



OVERVIEW

Factory Automation System (FAS) connects machines, production lines, and industrial equipment to automate manufacturing operations, improve equipment utilization, and provide centralized monitoring.

KEY FEATURES

- Machine Monitoring
- Production Monitoring
- Utility Monitoring
- Energy Monitoring
- Alarm Management
- Production Dashboards
- Equipment Utilization
- Downtime Monitoring
- KPI Reporting
- ERP & MES Integration

BENEFITS

- Higher Productivity
- Lower Operating Costs
- Improved Machine Utilization
- Better Decision Making



Real-Time Monitoring

Monitor machines, production, utilities and energy in real time.



Centralized Control

Centralized platform to control and manage all operations.



Smart Alerts

Instant alarms and notifications for quick action.



Actionable Insights

Data-driven insights for better decision making.



Improved Efficiency

Maximize productivity and minimize downtime.

INDUSTRY APPLICATIONS



Automotive



Pharmaceutical



FMCG



Engineering



Food & Beverage



Textile



Steel



Electronics



OVERVIEW

OEE Monitoring helps manufacturers track and improve Overall Equipment Effectiveness by monitoring Availability, Performance, and Quality in real time. Identify losses, reduce downtime, and maximize production efficiency.

KEY FEATURES

- Availability Monitoring
- Performance Monitoring
- Quality Monitoring
- OEE Calculation
- Shift-wise Reports
- Machine-wise Performance
- Downtime Analysis
- MTBF & MTTR Reports
- Production Analytics

PLANT OEE DASHBOARD

Date : 15 May 2024

Shift : All

Line : All

OVERALL OEE



AVAILABILITY



PERFORMANCE



QUALITY



PLANNED PRODUCTION TIME

24:00:00

RUNNING TIME

20:41:00

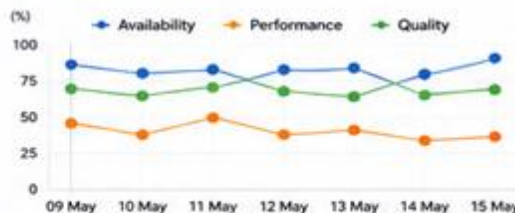
DOWNTIME

03:19:00

OEE TREND



OEE COMPONENTS TREND



OEE BY SHIFT



MACHINE-WISE OEE

Machine	Availability (%)	Performance (%)	Quality (%)	OEE (%)	Status
CNC - 01	88.1	82.3	95.2	69.1	●
CNC - 02	85.4	78.6	93.6	62.7	●
VMC - 01	90.0	85.1	96.1	73.4	●
PLC - 01	83.6	76.4	92.8	59.3	●
CMM - 01	91.2	87.3	97.5	77.6	●

DOWNTIME ANALYSIS (TOP LOSSES)

Loss Category	Duration	% of Downtime
Breakdown	01:05:00	32.6%
Setup & Adjustment	00:45:00	22.6%
Minor Stoppages	00:40:00	20.1%
Changeover	00:30:00	15.1%
Others	00:19:00	9.6%

MTBF & MTTR



BENEFITS

- Increase Equipment Efficiency
- Reduce Downtime
- Improve Production Performance
- Continuous Process Improvement



TOTAL MACHINES
25



RUNNING MACHINES
18



STOPPED MACHINES
07



PLANNED DOWNTIME
01:20:00



UNPLANNED DOWNTIME
01:59:00



TOTAL PART COUNT
125,480



GOOD COUNT
118,340



REJECT COUNT
7,140



QUALITY RATE
94.3%



REAL-TIME MONITORING
Live data from the shop floor



ACTIONABLE INSIGHTS
Identify losses & improve efficiency



SMART ANALYTICS
Data-driven decision making



HIGHER PRODUCTIVITY
Maximize equipment utilization

OVERVIEW

The Andon System provides real-time visual and audible alerts to notify operators and supervisors about production issues, machine faults, or quality problems.

KEY FEATURES

- Machine Status Display
- Production Target vs Actual
- Operator Call
- Supervisor Call
- Breakdown Alerts
- Quality Alerts
- LED Display Boards
- Tower Light Integration
- SMS & Email Notifications

BENEFITS

- Faster Issue Resolution
- Reduced Downtime
- Improved Communication
- Increased Productivity



HOW ANDON SYSTEM WORKS



APPLICATIONS

- Manufacturing Plants
- Assembly Lines
- Injection Molding
- Automotive Industry
- Food & Beverage Industry
- Pharmaceutical Industry



OVERVIEW

Design, program, and integrate industrial control systems for automated manufacturing processes. We deliver reliable, scalable, and future-ready solutions that connect machines, people, and data for better control and decision making.



SERVICES

- PLC Programming
- HMI Development
- SCADA Development
- Control Panel Design
- Machine Commissioning
- Industrial Networking
- OPC UA Integration
- MQTT Communication
- Modbus, Profinet & Ethernet/IP Integration



BENEFITS

- Seamless System Integration
- Real-Time Monitoring & Control
- Improved Efficiency & Reliability
- Scalable & Future-Ready Solutions
- Reduced Downtime & Maintenance Cost

INDUSTRIAL COMMUNICATION PROTOCOLS



Reliable Data Communication Across Devices & Platforms

SYSTEM INTEGRATION ARCHITECTURE



End-to-End Integration | Real-Time Data | Centralized Control | Smart Operations

SUPPORTED BRANDS



REQUIREMENT
ANALYSIS



SYSTEM DESIGN &
ENGINEERING



PROGRAMMING &
DEVELOPMENT



TESTING &
SIMULATION



INSTALLATION &
COMMISSIONING



SUPPORT &
MAINTENANCE



Custom Solutions
for Every Industry



Expert Engineering
Team



Proven Technology
& Best Practices



On-Time Delivery &
Project Support



Life Cycle Support &
Maintenance

OVERVIEW

Statistical Process Control (SPC) and Statistical Quality Control (SQC) help manufacturers monitor process performance and improve product quality through real-time data analysis.

KEY FEATURES

- Control Charts
- Cp & Cpk Analysis
- Process Capability Analysis
- Inspection Management
- Defect Analysis
- Quality Reports
- Statistical Dashboards
- Digital Inspection Records

BENEFITS

- Consistent Product Quality
- Reduced Rework
- Lower Scrap Rate
- Better Process Stability

SPC WORKFLOW



APPLICATIONS



REPORTS & ANALYTICS

- Control Chart Reports
- Capability Analysis Reports
- Defect Pareto Reports
- Inspection Summary Reports
- Trend Analysis Reports
- Custom Quality Reports



SPC DASHBOARD

Line 1

29 May 2024

Shift : A



Dashboard

Control Charts

Capability Analysis

Inspections

Defect Analysis

Reports

Settings

TOTAL INSPECTIONS

1,245

+12.5%



PASSES

1,182

94.9%



FAILURES

63

5.1%

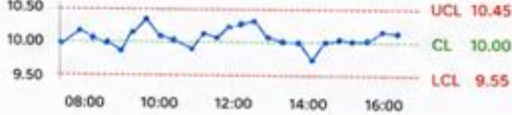


SCRAP RATE

1.28%

-0.35%


 $\bar{X}$ - R CHART (Diameter)

 $\bar{X}$ CHART


R CHART



PROCESS CAPABILITY (Diameter)

Cp

1.67

Cpk

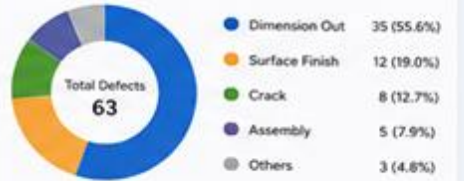
1.33

Ppk

1.28



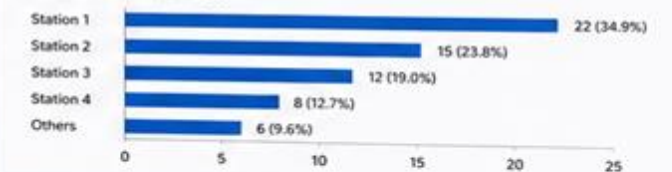
DEFECTS BY TYPE



INSPECTION TREND



FAILURES BY LOCATION



Improved Process Stability



Higher Product Quality



Data-Driven Decisions



Reduced Scrap & Rework



Compliance & Traceability



MODEL



SIMULATE



MONITOR



OPTIMIZE



OVERVIEW

Digital Twin creates a virtual replica of machines, production lines, or entire factories to simulate, monitor, and optimize operations before physical implementation.



APPLICATIONS



Factory Simulation



Production Optimization



Material Flow Analysis



Capacity Planning



Layout Validation



Operator Training



Process Improvement



BENEFITS



Lower Project Risk



Improved Planning



Faster Decision Making



Reduced Implementation Cost



HOW DIGITAL TWIN ADDS VALUE



REAL-WORLD DATA

Collect data from machines, sensors, and systems



VIRTUAL MODEL

Build a digital replica of the physical system



SIMULATION

Simulate scenarios and analyze impact



INSIGHTS

Gain actionable insights from real-time data



OPTIMIZATION

Optimize performance and drive continuous improvement

USE CASES



Greenfield Planning



Brownfield Optimization



Line Balancing & Bottleneck Analysis



What-if Scenarios



Real-time Monitoring & Predictive Insights



Better Collaboration



Real-Time Visibility



Higher Efficiency



Smart Decisions



Sustainable Operations

OVERVIEW

Virtual Commissioning allows you to test and validate automation systems in a virtual environment before physical installation to reduce commissioning time and project risks.

KEY FEATURES

-  PLC Logic Validation
-  Robot Simulation
-  Conveyor Simulation
-  Sensor Testing
-  Machine Sequence Verification
-  Digital Commissioning
-  System Validation

BENEFITS

-  Faster Startup
-  Reduced Commissioning Time
-  Lower Engineering Cost
-  Minimized Installation Errors

VIRTUAL ENVIRONMENT

-  PLANT MODEL
-  PLC LOGIC
-  I/O SIGNALS
-  SIMULATION
-  DIAGNOSTICS



SIMULATION DASHBOARD

SYSTEM STATUS



Running

CYCLE TIME

18.6 s



PRODUCTION COUNT

1,245

+12.5%



UTILIZATION

87%



I/O MONITOR



VIRTUAL COMMISSIONING WORKFLOW



SUPPORTED SYSTEMS & TECHNOLOGIES

SIEMENS

TIA Portal
PLCSIM Advanced

Rockwell Automation

Emulate 3D
Studio 5000

ABB

RobotStudio

visual components

Visual Components

Schneider Electric

EcoStruxure
Machine Expert

KUKA

KUKA.Sim

FANUC

RoboGuide

OMRON

Sysmac Studio



Up to **50%** Faster
Commissioning



Up to **30%** Reduction in
Engineering Effort



Significant Reduction in
On-site Issues



Higher Quality & Reliability
from Day One



OVERVIEW

AI-powered predictive maintenance continuously monitors equipment health and predicts failures before they occur. Take proactive actions, reduce downtime, and improve overall equipment effectiveness.



MONITORED PARAMETERS



Vibration



Temperature



Motor Current



Bearing Health



Power Consumption



Machine Runtime



Equipment Condition



Maintenance Scheduling



BENEFITS

Prevent
Unplanned DowntimeIncrease
Equipment LifeLower
Maintenance CostsImprove
Plant Reliability

Dashboard

Assets

Monitoring

Alerts

Analytics

Reports

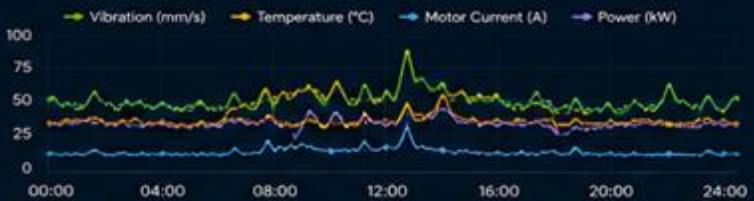
Maintenance

Settings

ASSET OVERVIEW



PARAMETER TRENDS



HEALTH SUMMARY



PREDICTED FAILURE

27
Days RemainingPREDICTION CONFIDENCE
89%

ALERTS

-  High Vibration Detected
Pump-01 | 10:35 AM **Warning**
-  Bearing Temperature High
Motor-03 | 09:20 AM **Critical**
-  Maintenance Due Soon
Compressor-02 | 15 May 2024 **Info**

FAILURE PREDICTION



HOW PREDICTIVE MAINTENANCE WORKS



DATA COLLECTION
Sensors collect real-time data from machines and equipment



DATA TRANSMISSION
Data is securely transmitted to the cloud platform



AI ANALYTICS
AI models analyze patterns and detect anomalies



PREDICTION
System predicts potential failures and their timeline



PROACTIVE ACTION
Alerts and insights help take action before failure occurs

EQUIPMENT HEALTH STATUS

Pump-01

92%

Good

Motor-03

68%

Fair

Compressor-02

88%

Good

Gearbox-01

45%

Poor

MAINTENANCE SCHEDULE

 Pump-01 Routine Check	15 May 2024	Scheduled
 Motor-03 Bearing Replacement	18 May 2024	Due Soon
 Compressor-02 Oil Change	20 May 2024	Scheduled



Real-Time Monitoring
24/7 equipment monitoring



AI-Powered Insights
Advanced AI & ML algorithms



Actionable Alerts
Timely alerts & notifications



Better ROI
Higher uptime & efficiency



OVERVIEW

Pick to Light (PTL) is a light-guided picking solution that improves warehouse and production line picking accuracy by directing operators to the correct storage location using LED indicators and digital displays.



KEY FEATURES



LED Pick Indicators



Digital Quantity Display



Confirmation Push Button



Real-Time Order Picking



Barcode & RFID Integration



ERP / WMS / MES Connectivity



Multi-Color LED Guidance



Ethernet Communication

LIGHT GUIDES. PEOPLE FOLLOW. ACCURACY IMPROVES.



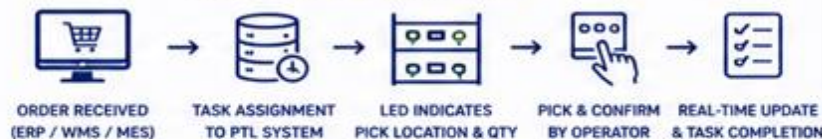
UP TO
99.9%
PICKING ACCURACY

60 – 70%
FASTER PICKING

PAPERLESS
OPERATIONS

INCREASED
PRODUCTIVITY

HOW PICK TO LIGHT WORKS



PICK TO LIGHT DEVICE



SEAMLESS SYSTEM CONNECTIVITY



Real-Time
Visibility



Improved
Accuracy



Operational Cost



APPLICATIONS



Warehouse Picking



Assembly Lines



Kitting Operations



Spare Parts Distribution



E-Commerce Fulfillment



Automotive Manufacturing



BENEFITS



Up to 99.9% Picking Accuracy



60–70% Faster Picking



Reduced Operator Errors



Paperless Operations



Increased Productivity



Scalable &
Flexible



ACCURATE
Every Pick. Every Time.



FAST
Pick More. Do More.



SMART
Intelligent. Connected.



RELIABLE
Built for Performance.



PRODUCTIVE
Better Processes. Better Results.

OVERVIEW

Load cells are precision sensors that convert applied force or weight into an electrical signal for accurate measurement. They are widely used in industrial weighing, process automation, batching, filling, packaging, and inventory monitoring.

Integrated with PLC, HMI, SCADA, or ERP systems, load cells enable real-time weight monitoring and process control.

KEY FEATURES

- High-Precision Weight Measurement
- Real-Time Weight Monitoring
- Digital & Analog Signal Output
- Static & Dynamic Weighing
- PLC / HMI / SCADA Integration
- Overload Protection
- Stainless Steel & IP65 / IP68 / IP69K Options
- Multi-Platform Capacity (1 kg to 100+ Tons)
- Fast & Stable Response
- Industrial-Grade Performance

HARDWARE COMPONENTS



Platform Load Cells



Compression Load Cells



Shear Beam Load Cells



S-Type Load Cells



Load Cell Indicator / Controller



Junction Box



Weight Transmitter



PLC / HMI Interface



Monitoring Software



HIGH ACCURACY
UP TO
0.01%

WIDE CAPACITY
RANGE
1 kg to 100+ TONS

RUGGED & RELIABLE
BUILT FOR
INDUSTRY

HOW LOAD CELL AUTOMATION WORKS



LOAD CELL INDICATOR



- Digital Display
- Signal Processing
- Alarms & Outputs
- Easy Configuration

SEAMLESS SYSTEM CONNECTIVITY



APPLICATIONS

- Tank & Hopper Weighing
- Silo Weighing
- Platform Scales
- Conveyor Weighing
- Batching & Mixing Systems
- Filling & Packaging Machines
- Warehouse & Logistics
- Food & Beverage Industry
- Chemical & Pharmaceutical Plants
- Manufacturing & Process Industries

BENEFITS

- Accurate Weighing & Measurement
- Reduced Product Wastage
- Improved Process Efficiency
- Automated Batching & Filling
- Better Quality Control
- Increased Productivity
- Lower Manual Intervention
- Reliable Long-Term Performance



ACCURATE
Every Measurement



FAST
Real-Time Monitoring



SMART
Intelligent Automation



RELIABLE
Built for Industry



PRODUCTIVE
Better Processes, Better Results.



Smart Solutions. Stronger Operations. Better Tomorrow.

Thank You!

We appreciate your time and attention.
We look forward to working with you
and delivering excellence together.



+91 7218370532
+91 9168712189



sales@brilliantinfosys.com
salesfas@brilliantinfosys.com



www.brilliantinfosys.com



Kothrud, Pune



Follow us on
LinkedIn

• Partnering for a Smarter, Automated & Connected Future. •



INNOVATIVE SOLUTIONS
Technology-driven
exceptional solutions



RELIABLE PARTNER
Committed to your
success



OPERATIONAL EXCELLENCE
Optimizing processes for
maximum efficiency



QUALITY ASSURED
Delivering quality and
consistency in everything



CUSTOMER FOCUSED
Your goals drive
our innovation

