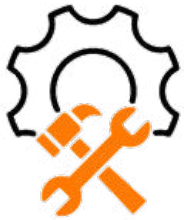


"Zero unplanned downtime on critical equipment for 18 months running. LOGICAL SYSTEMS Maintenance Management delivers on its promise."
Maintenance Manager, Fortune 500 Semiconductor Fab



DATASHEET

Maintenance Management

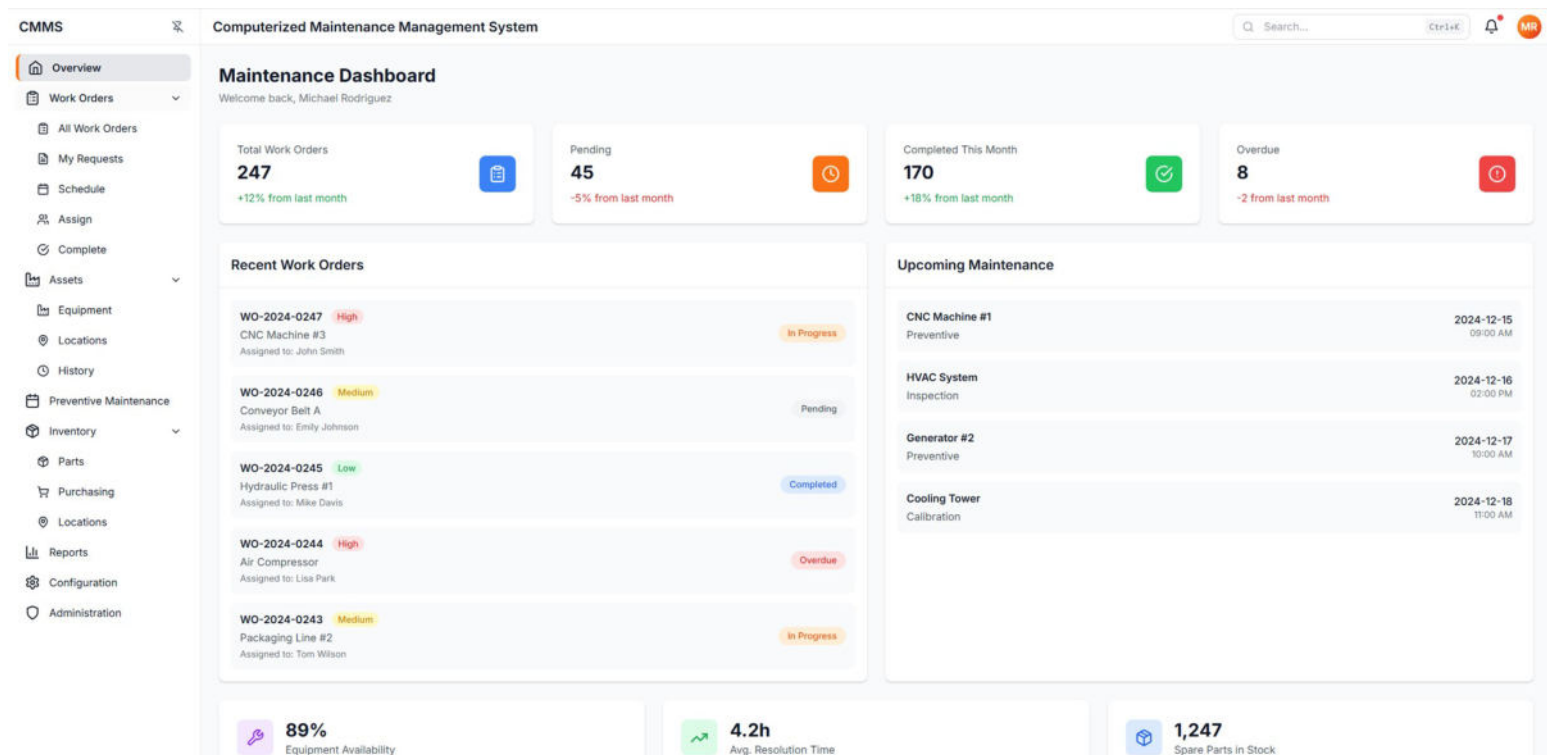
Turn Maintenance from Cost Center to Profit Driver

Manufacturing excellence demands equipment reliability. Unplanned downtime costs manufacturers an average of \$50,000 per hour, while poor maintenance practices reduce equipment life by 30-40%. Every minute of unexpected equipment failure cascades through production schedules, disrupting customer deliveries and eroding profitability. LOGICAL SYSTEMS Maintenance Management application transforms maintenance operations from reactive firefighting to proactive asset optimization through intelligent work order management, preventive maintenance scheduling, and real-time performance analytics. By shifting from break-fix to predict-and-prevent strategies, manufacturers can reclaim the hidden factory within their operations and achieve world-class OEE benchmarks.

Built on the Inductive Automation® Ignition platform, our CMMS solution seamlessly integrates with existing automation infrastructure to provide comprehensive asset lifecycle management. Unlike standalone maintenance systems that create data silos, our solution leverages Ignition's unified architecture to connect directly with PLCs, SCADA systems, and historians for real-time equipment monitoring and automated work order generation. The system connects maintenance teams, operations, and management through mobile-responsive interfaces that deliver the right information to the right people at the right time. Technicians access work instructions and equipment history on tablets, operators submit maintenance requests with one click, and managers monitor KPIs from executive dashboards. From single facilities to global manufacturing networks, LOGICAL SYSTEMS CMMS scales to meet your operational requirements while maintaining enterprise-grade security and reliability.

Our proven implementation methodology ensures rapid deployment with minimal disruption, typically achieving ROI within 3-6 months through reduced emergency repairs (40-50%), improved labor productivity (20-30%), and extended asset life (15-20%). We begin with a comprehensive assessment of your current maintenance practices, then configure the system to match your workflows while introducing industry best practices. Our experienced implementation team provides hands-on training, data migration support, and change management guidance to ensure user adoption from day one. Experience maintenance excellence with a solution designed by manufacturing professionals for manufacturing professionals.

Complete Lifecycle Maintenance Management on One Platform



Work Order Management

- Unlimited work order creation with priority-based scheduling
- Drag-and-drop calendar interface for visual planning
- Mobile work order execution with photo/document attachments
- Labor and parts tracking with cost roll-ups

Asset Management

- Hierarchical equipment registry with unlimited levels
- Complete maintenance history and documentation
- Warranty and service contract tracking
- Criticality analysis and spare parts associations

Preventive Maintenance

- Flexible scheduling by calendar, meter, or condition
- PM compliance tracking and optimization
- Procedure checklists with safety lockout verification
- Automatic work order generation with parts reservation

Inventory Control

- Multi-location parts tracking with min/max alerts
- Automated purchase requisitions and approvals
- Vendor performance monitoring
- Parts usage analysis and ABC classification

Total Productive Maintenance

Holistic approach to equipment maintenance that maximizes productivity.

Analytics & Reporting: The CMMS app provides real-time KPI dashboards that track critical metrics including MTBF (Mean Time Between Failures), MTTR (Mean Time To Repair), and seamless OEE integration for comprehensive equipment effectiveness monitoring. Maintenance cost analysis can be viewed by asset, department, or work type, enabling managers to identify cost drivers and optimization opportunities across the organization. Technician productivity and utilization reports reveal workforce efficiency patterns, helping supervisors balance workloads and identify training needs. Advanced failure analysis with root cause tracking uncovers recurring issues and systemic problems, transforming breakdowns into learning opportunities that prevent future failures. Scheduled report distribution via email ensures stakeholders receive timely updates on maintenance performance, compliance metrics, and cost trends without manual intervention.

Mobile Capabilities: The system features native responsive design optimized for tablets and smartphones, ensuring technicians have full functionality whether at their workstation or in the field. Offline mode with automatic synchronization enables continuous work even in areas with poor connectivity, capturing all updates and syncing seamlessly when connection is restored. Digital signatures and photo capture provide verification and visual documentation directly within work orders, eliminating paperwork and improving audit trails. Integrated barcode and QR code scanning allows instant access to equipment information and work orders with a simple scan, reducing data entry errors and saving valuable time. Voice-to-text functionality enables rapid note entry in noisy industrial environments or when wearing safety gloves, ensuring important observations are captured accurately and efficiently.

Seamless

Integration to Existing Architectures

The LOGICAL SYSTEMS CMMS acts as the maintenance hub within your digital manufacturing infrastructure, exchanging critical data with production, quality, and business systems. OEE Integration automatically generates work orders when equipment availability drops below thresholds, while completed maintenance activities update OEE calculations in real-time. This closed-loop integration ensures maintenance and production teams work from a single source of truth. ERP Synchronization maintains consistency between maintenance operations and financial systems. Purchase orders flow to ERP for approval and processing, while actual costs return to CMMS for total cost of ownership calculations.

CMMS

Overview

Work Orders

All Work Orders

My Requests

Schedule

Assign

Complete

Assets

Equipment

Locations

History

Preventive Maintenance

Inventory

Parts

Purchasing

Locations

Reports

Configuration

Administration

Computerized Maintenance Management System

Equipment Management

Monitor and manage all equipment and machinery

Total Assets6

Operational4

Maintenance1

Out of Service0

Avg. Availability97.6%

Total Value\$720,000

Equipment List

CNC Machine #1

Operational

AST-2024-001 • VF-2SS

Building A - Production Floor

Critical Priority98.5% Available

Next Maintenance2025-01-20

Hydraulic Press #1

Under Maintenance

AST-2024-002 • MSP 400

Building A - Stamping Area

High Priority94.2% Available

Next Maintenance2025-02-01

Air Compressor Unit

Operational

AST-2024-003 • GA 90

Building C - Utility Room

High Priority99.1% Available

Next Maintenance2025-01-15

Conveyor System A

Operational

AST-2024-004 • X85

Building B - Assembly Line 1

Medium Priority97.8% Available

Next Maintenance2025-02-10

Welding Robot #4

Standby

AST-2024-005 • KR 210

Next Maintenance2025-03-05

Equipment Details

CNC Machine #1

Operational

Asset Number:AST-2024-001

Category:Production Equipment

Manufacturer:Haas Automation

Model:VF-2SS

Serial Number:SN-45678-2022

Location:Building A - Production Floor

Department:Manufacturing

Maintenance Info

Last Maintenance:2024-11-20

Next Maintenance:2025-01-20

Warranty Expiry:2025-03-15

Performance Metrics

MTBF:1200 hours

MTTR:4.5 hours

Availability:98.5%

Total Cost:\$125,000

Master data synchronization ensures equipment and parts information remains aligned. Historian & SCADA Connection enables condition-based maintenance through real-time equipment monitoring. Vibration levels, temperatures, and operating hours trigger work orders automatically when parameters exceed defined limits. Historical trending identifies degradation patterns before failures occur. Quality System Integration links equipment maintenance to product quality metrics. The system tracks correlations between maintenance activities and quality outcomes, enabling predictive quality management based on equipment condition. Electronic Forms Integration digitizes maintenance checklists, safety permits, and inspection reports. Forms completed during maintenance activities automatically attach to work order records, ensuring complete documentation for audits and analysis.

CMMS

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Parts

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Administration

Computerized Maintenance Management System

Work Orders

Manage and track all maintenance work orders

8

2

2

3

1

5

All Work Orders

Work Order #

Equipment

Location

Description

Type

Priority

Status

Assigned To

Requested By

Created

Due Date

Est. Hours

Co

WO-2024-0247

CNC Machine #3

Building A - Production Floor

Routine maintenance and calibration

Preventive

High

In Progress

John Smith

Michael Rodriguez

2024-12-10

2024-12-15

4h

\$4

WO-2024-0246

Conveyor Belt A

Building B - Assembly Line 1

Replace worn belt sections

Corrective

Medium

Open

Mike Johnson

Tom Wilson

2024-12-09

2024-12-20

6h

\$1:

WO-2024-0245

Hydraulic Press #1

Building A - Stamping Area

Oil leak repair - urgent

Emergency

Critical

Open

Lisa Park

John Davis

2024-12-08

2024-12-12

3h

\$8

WO-2024-0244

Air Compressor Unit

Building C - Utility Room

Quarterly filter replacement

Preventive

Low

Completed

Emily Johnson

Michael Rodriguez

2024-12-07

2024-12-14

2h

\$1:

WO-2024-0243

Packaging Line #2

Building B - Packaging Area

Sensor calibration and alignment

Predictive

Medium

In Progress

Tom Wilson

Amanda Foster

2024-12-06

2024-12-16

5h

\$6

WO-2024-0242

HVAC System - Main

Building A - Rooftop

Annual inspection and cleaning

Preventive

Low

Completed

Robert Brown

Michael Rodriguez

2024-12-05

2024-12-15

8h

\$9

WO-2024-0241

Welding Robot #4

Building A - Welding Bay

Torch replacement and calibration

Corrective

High

On Hold

David Kim

Steve Martin

2024-12-04

2024-12-13

4h

\$2

WO-2024-0240

Generator #2

Building D - Power Station

Load bank testing

Preventive

Medium

Completed

Carlos Mendez

Michael Rodriguez

2024-12-03

2024-12-10

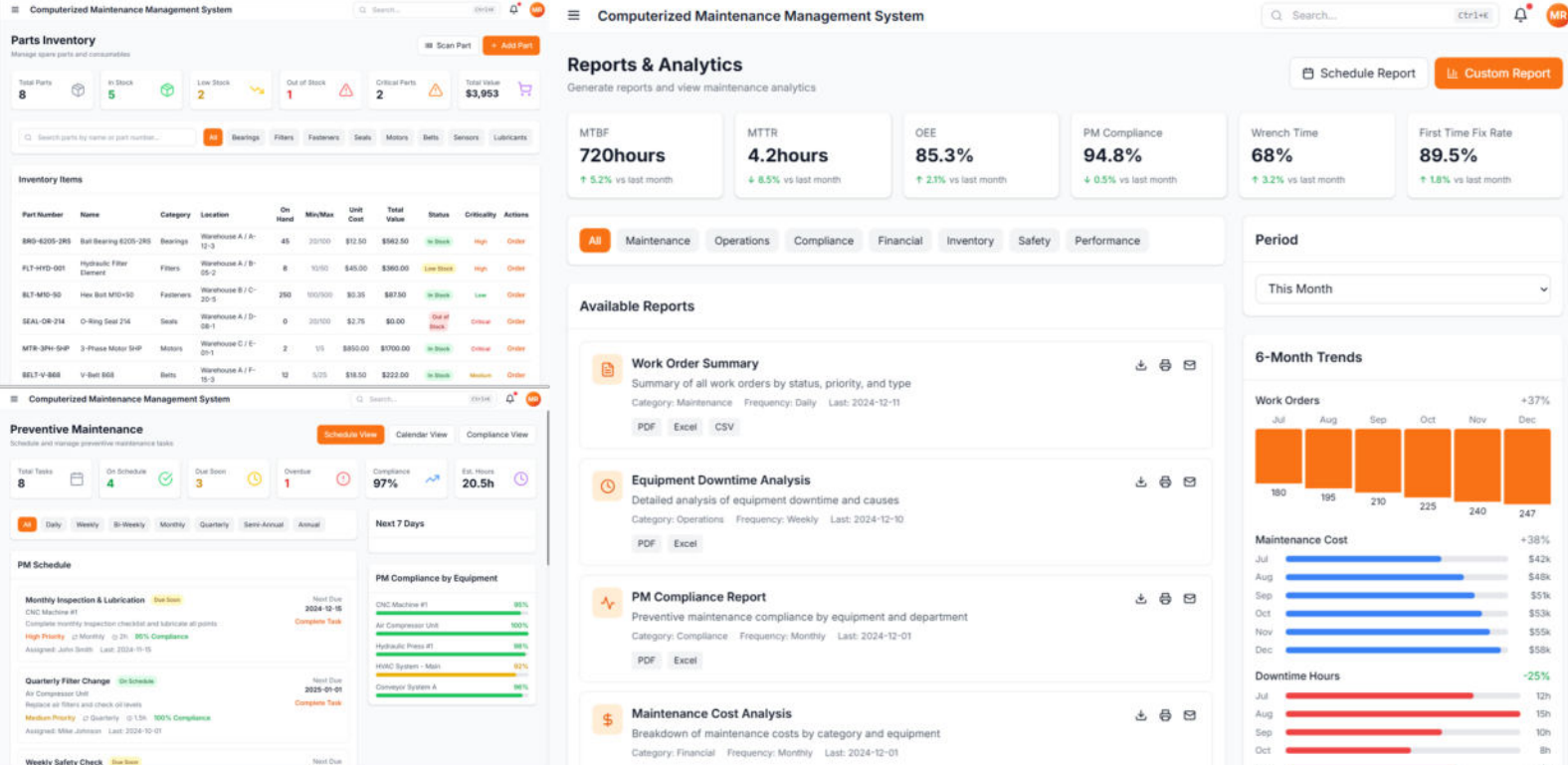
6h

\$7

LOGICAL SYSTEMS
AUTOMATION & INTEGRATION SERVICES

03

CMMS



Key Features and Benefits

Features

- Unlimited assets, work orders, and users
- Configurable workflows with approval routing
- Multi-site support with centralized reporting
- Role-based security with Active Directory integration
- RESTful API for third-party integrations
- Built-in backup and disaster recovery
- 21 CFR Part 11 compliance for regulated industries
- Multi-language and multi-currency support
- Customizable dashboards and reports
- Advanced scheduling with resource leveling
- Predictive maintenance analytics
- IoT sensor integration capabilities

Benefits

- 40-50% reduction in emergency repairs
- 20-30% improvement in labor productivity
- 15-20% extension in equipment life
- 25-35% reduction in maintenance costs
- 10-15% improvement in OEE
- 30-40% reduction in spare parts inventory
- 90%+ improvement in PM compliance
- 50%+ reduction in safety incidents
- Complete maintenance history and traceability
- Improved regulatory compliance
- Enhanced communication between departments
- Data-driven decision making

Technical Requirements

System Requirements

Ignition® (8.1.+) Core Modules, Quad-core processor, 16 GB RAM, 10 GB free disk space

Supported Operating Systems

Windows Server 2019/2022/2025, Windows 10/11, macOS (X, 10.16+), Linux (Ubuntu, CentOS, RHEL)

Supported Protocols

MQTT, OPC UA / OPC DA, REST API (JSON Payloads)
Kafka (via connector), Snowflake (via pipeline, data bridge)

Supported Databases

Microsoft SQL Server, Oracle, MySQL, MariaDB, PostgreSQL, any database with JDBC driver

Supported Browsers

Chrome, Firefox, Safari, Microsoft Edge



LOGICAL SYSTEMS
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Specialists in Automation & Digitalization for Manufacturing Industries

www.logicalsistemas.io | info@logicalsystems.io

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