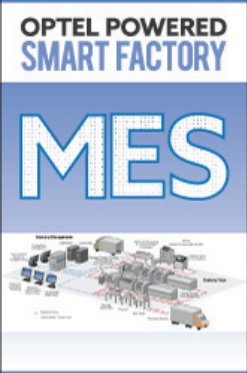
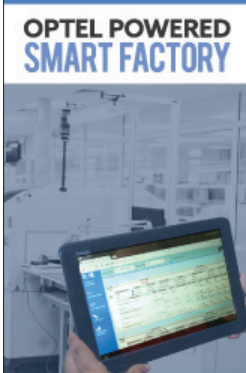
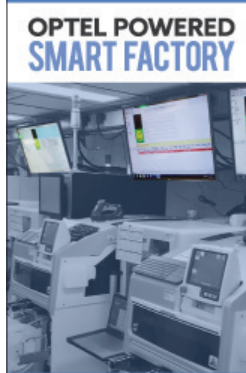
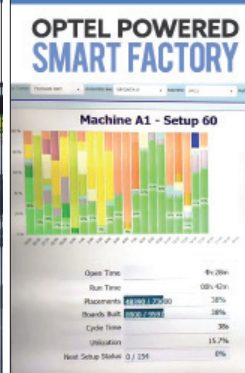
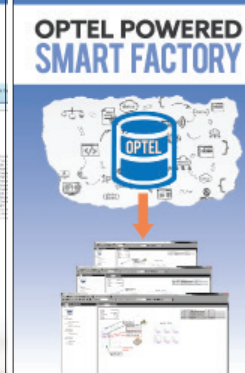







# OPTEL POWERED SMART FACTORY

Optimal Electronics Corporation provides innovative smart factory solutions for electronics manufacturing. Our Manufacturing Execution Software, Optel, controls processes in electronics manufacturing plants, from materials management, production scheduling, machine programming, through component, process, and quality traceability.

 <p><b>OPTEL POWERED SMART FACTORY</b></p> <h1>MES</h1> <p>Manufacturing Execution System</p>	 <p><b>OPTEL POWERED SMART FACTORY</b></p> <p>Artificial Intelligence Based Dynamic Production Scheduling</p>	 <p><b>OPTEL POWERED SMART FACTORY</b></p> <p>Complete Traceability Components, Processes and Quality</p>	 <p><b>OPTEL POWERED SMART FACTORY</b></p> <p>Machine A1 - Setup 60</p> <table border="1"><tr><td>Down Time</td><td>0%</td></tr><tr><td>Run Time</td><td>100%</td></tr><tr><td>Placement</td><td>20%</td></tr><tr><td>Stand Still</td><td>20%</td></tr><tr><td>Cycle Time</td><td>30%</td></tr><tr><td>Utilization</td><td>15.7%</td></tr><tr><td>Next Setup State</td><td>0 J 134</td><td>0%</td></tr></table> <p>Real-time Plant Performance Monitoring</p>	Down Time	0%	Run Time	100%	Placement	20%	Stand Still	20%	Cycle Time	30%	Utilization	15.7%	Next Setup State	0 J 134	0%	 <p><b>OPTEL POWERED SMART FACTORY</b></p> <p>Database Driven Paperless Work Instructions</p>
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Next Setup State	0 J 134	0%																	
<p><b>MANUFACTURING EXECUTION SYSTEM</b> for Electronics Manufacturing</p>	<p><b>ARTIFICIAL INTELLIGENCE BASED</b> Dynamic Production Scheduling</p>	<p><b>COMPLETE TRACEABILITY</b> Components, Processes and Quality</p>	<p><b>REAL-TIME PLANT PERFORMANCE</b> Monitoring</p>	<p><b>DATABASE DRIVEN</b> Paperless Work Instructions</p>															
																			

## OPTEL BENEFITS:

### Maximize Equipment Utilization – “Keep Machines Running Longer and Faster”

- Minimize number of setups and total setup time, improve machine optimization, and eliminate all problems that keep machines from placing parts.

### Eliminate Materials Management Problems

- Real time and accurate tracking of material location and quantity, and consumption and scrap feedback to ERP for inventory adjustments.

### Provide Real-Time Insight Into Production Performance

- OEE calculation, machine performance monitoring by hour, shift, day, and downtime reason capture and reporting.

### Provide Comprehensive Traceability Solutions

- Level 4 component, process, and quality traceability as defined by the IPC-1782 Standard for Manufacturing and Supply Chain Traceability of Electronic Products.

### Reduce Labor Cost

- Eliminate non-value added activities and reduce total head count.



# OPTEL POWERED SMART FACTORY

## OPTEL FEATURES:

### Assembly Data Modeling

- CAD and BOM Import and Data Definition
- Stencil Design Analysis
- Off Line Selective Solder Machine Programming

### Productivity Improvements

- Dynamic Production Scheduling and Control
- Machine Optimization and Programming
- Global Component Library
- Engineering Change Management

### Real Time Performance Monitoring

- OEE Calculation
- Real Time Machine Performance Monitoring
- Duty Cycle Based Feeder Maintenance

### Complete Materials Management

- Material Receiving, Storage and Kitting
- Electrical Component Verification
- Off Line Setup and On Line Setup Verification
- Electronic Kanban
- Moisture Sensitive Component Tracking
- Component Scrap Reporting to ERP

### Component Traceability

- SMT Component Traceability
- Manual Insertion Component Traceability
- Box Build Component Traceability
- RMA/Repair Component Traceability
- Die Attach/Wafer (Clean Room) Traceability

### Paperless, Dynamic, and Database-Driven Work Instructions

- Routing Document (Traveler)
- Line Setup Document
- Machine Setup Instructions
- Screen Printer Setup Instructions
- Reflow Oven Setup Instructions
- Database-Driven Graphical Work Instructions

### Routing Enforcement and Process Traceability

- Routing Enforcement
- Process Data Collection
- Process Traceability Reports

### Quality Management and Traceability

- First Article Inspection
- Visual Inspection
- Defect Data Collection and Traceability
- Defect Repair Loop

