

PRODUCT OVERVIEW



BlueCherry[®] IoT Machine Bridge

Real-time shop floor intelligence.

Machine-level visibility. Immediate impact.

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The BlueCherry IoT Machine Bridge extends the BlueCherry Supply Chain Intelligence Platform directly to the factory floor by capturing real-time, machine-level production data from both modern smart equipment and legacy sewing machines without requiring operator input.

By transforming raw machine activity into actionable insights, the Machine Bridge enables manufacturers to optimize production, improve quality, and drive measurable efficiency gains while accelerating ROI in real-time.



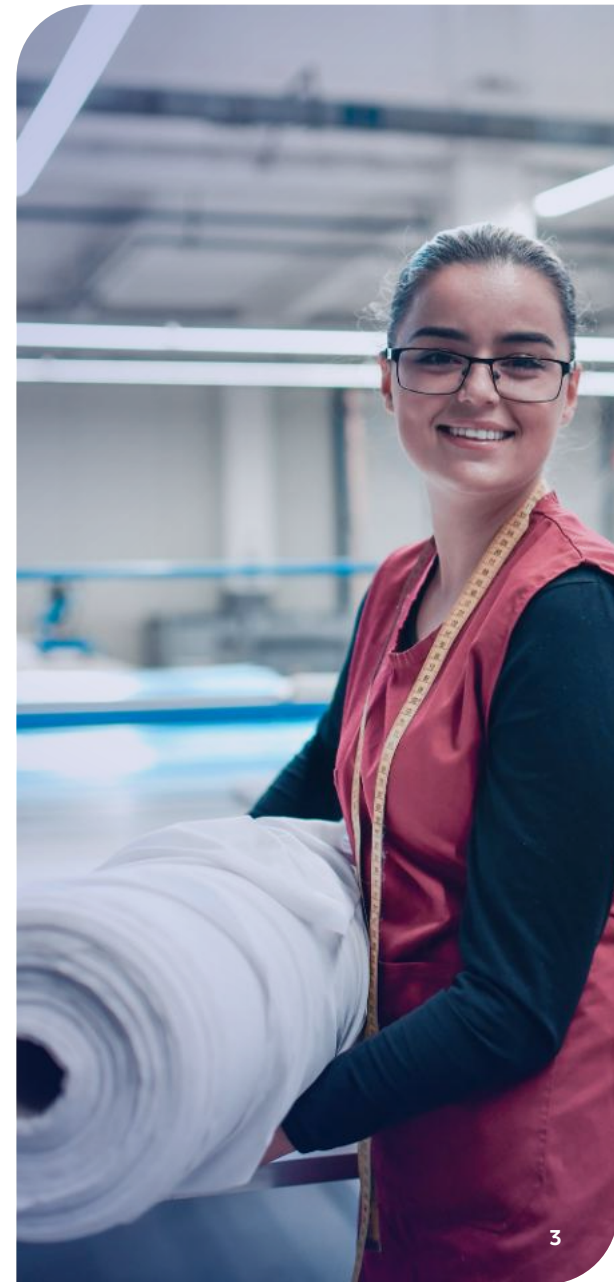
Key Capabilities

Automated machine-level data capture

- Captures production activity directly from machines, with no manual entry required
- Detects start, stop, stitch, and trim events in real time
- Eliminates human error and improves data accuracy

Universal machine connectivity

- Connects seamlessly to:
 - Any smart machines (e.g., Juki) via wireless gateway
 - Any legacy machines using rotation sensor technology
- Enables full visibility across mixed factory environments, including smart and legacy machines



Real-time production visibility

- Live dashboards for:
 - Line balancing
 - Operator performance
 - Production throughput
- Delivering immediate insight into bottlenecks and inefficiencies

Advanced time and motion intelligence

- Provides accurate cycle time and task time validation per unit
- Continuous, objective performance data for:
 - Faster time studies
 - Standard optimization
 - Productivity benchmarking

Integrated quality and maintenance insights

- Detects patterns linked to:
 - Defects
 - Machine downtime
 - Performance degradation
- Enables proactive intervention before issues can escalate



How it works

Dual-mode operation

Mode 1: Legacy machine enablement

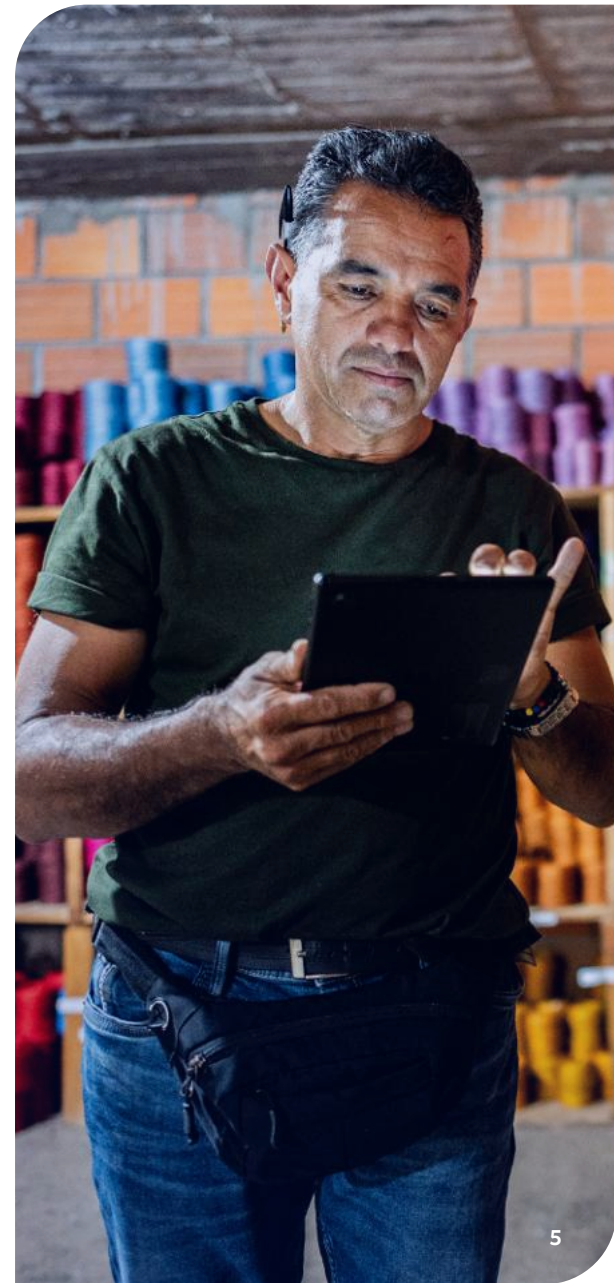
- Photosensor acts as a rotation sensor
- Detects machine activity (stitches, trims)
- Converts physical motion into digital production data

Mode 2: Smart machine integration

- Captures data directly from smart machines
- Transmits data via Wi-Fi to the BlueCherry data environment
- Eliminates the need for workstation terminals in certain setups

System components

- Machine Bridge hardware device
- Embedded device software
- Data collection application (for non-terminal environments)
- Optional sensors (e.g., photosensor for legacy machines)



Business impact

Operational efficiency

- Improves line balancing and throughput
- Reduces idle time and production variability

Data-driven decision making

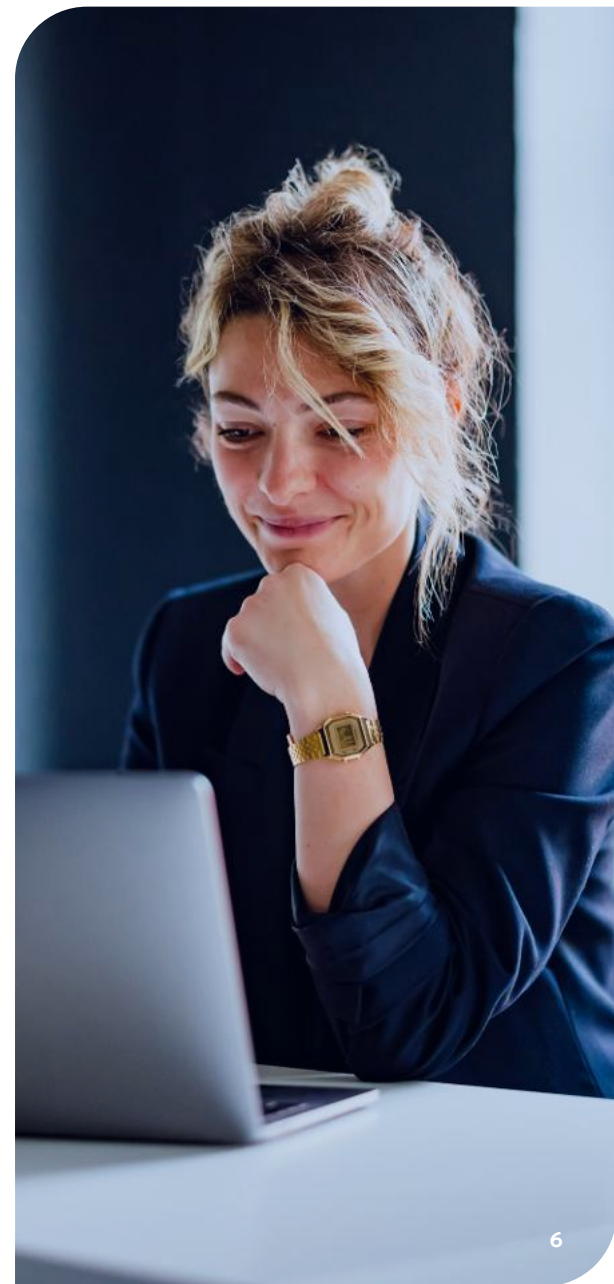
- Replaces assumptions with real-time, objective data
- Enables continuous optimization across production lines

Factory digitization without disruption

- Works alongside existing infrastructure
- Eliminates the need for full equipment replacement

Faster ROI

- Rapid deployment with immediate visibility
- Measurable gains in productivity, quality, and output



Role within the BlueCherry Platform

The Machine Bridge is a critical enabler of the end-to-end supply chain intelligence platform and BlueCherry's AI-powered digital thread, connecting shop floor execution directly to:

- **PLM** → product definition and design
- **ERP** → planning and costing
- **SFC / MES** → real-time execution
- **QA / ESG** → compliance and traceability

This connectivity allows manufacturers to move from reactive reporting to predictive insights and autonomous optimization.

Ideal use cases

- Digitizing legacy factory environments
- Improves production visibility across global operations

- Supporting ESG / compliance traceability initiatives
- Enabling AI-driven production optimization

ROI

The BlueCherry IoT Machine Bridge transforms the factory floor into a connected, intelligent production environment. It unlocks real-time insights, improves operational performance, and lays the foundation for AI-driven manufacturing at scale.

Business impact

Based on typical apparel manufacturing environments:

Efficiency gains

- +8–15% increase in line efficiency
- +10–20% reduction in idle time

Labor productivity

- +5–12% improvement in operator productivity
- Reduced reliance on manual tracking and supervision

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Quality improvements

- 10–25% reduction in defects
- Faster root cause identification

Time study acceleration

- 50–70% reduction in time study effort
- Continuous performance benchmarking vs periodic sampling

Financial impact (typical mid-size factory)

For a factory with:

- 10 production lines
- 250 operators
- \$8M annual production cost

Expected annual value creation:

- Labor efficiency gains: \$400K–\$900K
- Reduced rework/defects: \$150K–\$300K
- Throughput improvement: \$300K–\$700K

Total annual impact: \$850K – \$1.9M

Payback period

- Typical deployment cost: \$50K–\$150K
- Payback period: < 3–6 months
- ROI (Year 1): 5x – 15x

Take the next step

In an industry where every minute matters, BlueCherry turns time into a competitive advantage.

For more information, visit bluecherry.com or contact us at bluecherry@cgsinc.com.



The right fit