

# Product Announcement

## The *Printer Intel Connector* (PIC)

### Product Overview

**Status:** Beta | **Deployment:** Remote | **Investment:** Added to MSI

Mobile Systems Intelligence (MSI) service is now enhanced with a powerful advancement that extends MSI's diagnostic intelligence beyond mobile computers to your critical output devices—your Zebra barcode printers.

The new **Printer Intel Connector** orchestrates printer-level logging, configuration, and job management directly through the MSI Core Platform, eliminating the "black hole" of printer visibility in the warehouse.



**The advancement:** When MSI detects a user experiencing a problem, it can now remotely activate device logging for affected devices to capture what's happening client-side. This creates a complete diagnostic picture—user impact, network behavior, and device behavior—all correlated in context.

### The MSI Advantage: Visibility

MSI already captures end-to-end transactional analysis for mobile computers, now with the Print Intel Connector, MSI can:

1. **Centralize Management** - Remove the need for separate diagnostic tools by integrating the Printer Logger Control Agent directly into the CVA Core Platform.
2. **Ensure Connectivity** - Access printers via USB or Bluetooth even when WiFi radio is down.
3. **Remote Configuration** - Push WLAN credentials and firmware without physical PC connections.
4. **Guarantee Execution** - Utilize an on-device Mobile Print Server (API based print function) to queue and cache jobs ensuring labels print in disconnected environments.

This is not just printer management. This is **intelligent, consolidated peripheral operations** that keep your supply chain moving.

# Four Key Capabilities

## 1. Unified Interface

Support teams currently juggle multiple disparate tools to diagnose printer issues.

The Printer Logger Control Agent integrates with the MSI Core Platform.

### Your benefit:

- **Remote Log Access:** A centralized dashboard provides log access for printers and connected devices.
- **Cross-device Correlation:** Identify interconnected issues between printers and mobile devices hidden by other tools.

## 2. Multi-Path Remote Access

When a printer drops off the Wi-Fi network, IT loses access to it, often requiring a physical retrieval of the device.

The PIC feature provides direct access to printers through a paired mobile computer using multiple connectivity options: USB, Bluetooth, or Network.

### Your Benefit:

- **Flexible Log Retrieval & Diagnostic Control:** Technicians use Bluetooth or USB to pull logs and fix issues remotely.
- **Uninterrupted Security & Compliance** enforcement: Prevents "dark" devices.
- **Field Force Multiplier:** Reduce IT dispatches for connectivity issues.

## 3. Remote Configuration and WLAN Management

Updating Wi-Fi credentials or firmware across a fleet of printers usually requires manual tethering to a desktop.

Support configuration via WebSockets or REST API using Zebra's native SGD command library.

### Your Benefit:

- **Batch Updates:** Streamline the process of updating WLAN credentials across multiple printers.
- **Remote Commands:** Technicians remotely apply settings, trigger commands, and validate results from a mobile device or centralized console.
- **Real-Time Monitoring & Proactive Maintenance:** Continuously track printer health firmware version s and WLAN connectivity status.
- **Operational Resilience:** Maintain business continuity during emergencies by revoking/reissuing credentials with onsite visits.

## 4. Mobile Print Server & Smart Queuing

Field and warehouse operations often halt when the network goes down because the fixed network print server cannot be reached.

A lightweight mobile print server runs directly on the mobile computer, routing print jobs to connected Zebra printers.

### Your Benefit:

- **Offline Continuity:** Enables local, real-time printing from web apps or RESTful clients even in disconnected conditions.
- **Smart Caching:** Implements local queuing and retry logic. If connectivity drops, the job is cached and prints automatically once reconnected, preventing duplicate prints and loss.
- **Disaster Recovery Lifeline:** Maintain critical print operations during extended IT failures.
- **Context-aware Job Routing:** Reroutes print jobs to available devices based on location, priority, and printer status so emergency labels bypass queues and route to nearest functional printer.

☐ **What This Means for Your Organization:** For Your IT Support Team - Fewer trips onsite to update and diagnose print failures | For Your Frontline Workers - Improved Experience and Productivity | For Device Lifecycle Management - Data-Driven Technology Decisions and Predictive and Proactive Management | For Your Leadership - Strategic Benefits

# Real-World Scenarios

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## Scenario 1: The Offline Printer

**The Situation:** A forklift driver's mobile printer drops off the network due to a changed SSID password. The driver cannot print LPN labels.

**Traditional approach:** The operator drives to IT, hands over the printer, and waits while IT manually cables it to a laptop to re-image the network settings.

With the Printer Intel Connector:

1. IT identifies the disconnected printer via the driver's connected mobile computer (via Bluetooth).
2. Using Remote WLAN Configuration, IT pushes the new SSID and credentials over the Bluetooth link.
3. The printer rejoins the network immediately.

**Outcome:** Issue resolved in minutes; driver never leaves the forklift.

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## Scenario 2: Network Outage on the Loading Dock

**The Situation:** The main warehouse Wi-Fi goes down in the shipping dock, severing the connection to the central print server. Shipping stops because shipping labels cannot be generated.

With Print Intel Connector:

1. The Mobile Print Server on the handheld device takes over.
2. The shipping app sends the print job to the local mobile server via the RESTful API.
3. The mobile device routes the job directly to the printer selected by the operator via USB or Bluetooth.

**Outcome:** Shipping continues without interruption despite the network failure.

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## Scenario 3: Intermittent Print Failures

**The Situation:** Users report that "sometimes labels don't print," but the issue isn't reproducible on demand.

**Traditional Approach:** Weeks of investigation, inability to reproduce consistently, frustration for users and IT

With Print Intel Connector:

1. **Log Retrieval Automation** is triggered.
2. System, communication, and error logs are extracted from the Zebra printer via the background Printer Logger Control Agent.
3. Data is structured and sent to the MSI core platform.
4. Analysis reveals a specific syntax error in a recent label template update.

**Outcome:** Root cause identified via historic data analysis without manual problem recreation and log extraction.

# Technical Overview

## System Requirements

### Supported Hardware:

- Zebra Android devices (Android 10 or higher)
- Zebra Link-OS Printers (Mobile, Desktop, Industrial)

### Connectivity Methods:

- Bluetooth (Classic and LE)
- USB (On-the-go)
- Network (Wi-Fi/Ethernet)

### Mobile Print Server Architecture:

- **Interface:** Exposes a RESTful API to accept print jobs, templates, and variable data.
- **Compatibility:** Works with native Android apps, web apps, or local sources.

**Integration:** Eliminates dependencies on proprietary SDKs for basic printing needs.

## Performance and Security

### Device Performance:

- **Smart Job Caching:** Prevents data loss during connectivity drops by queuing jobs locally on the mobile computer.
- **Optimized Transfer:** Log extraction and configuration updates are compressed to minimize impact on the mobile computer's performance.
- **Secure Transmission:** All printer configuration data (including WLAN credentials) is transmitted securely via the CVA encrypted pipeline.

# Training and Change Management For Your IT Support Team:

## Comprehensive Training Ecosystem

### Self-Paced Learning Portal:

- Interactive modules covering all PIC components (mobile server, queuing, multi-path access)
- Video tutorials for common troubleshooting scenarios (e.g., printer offline, queue management)

### Hands-On Workshops:

- Virtual lab environments simulating real-world outages and failures
- "Break-Fix" sessions where IT staff practice resolving complex issues
- Quarterly refreshers covering new features and best practices

## Diagnostic & Management Toolkit

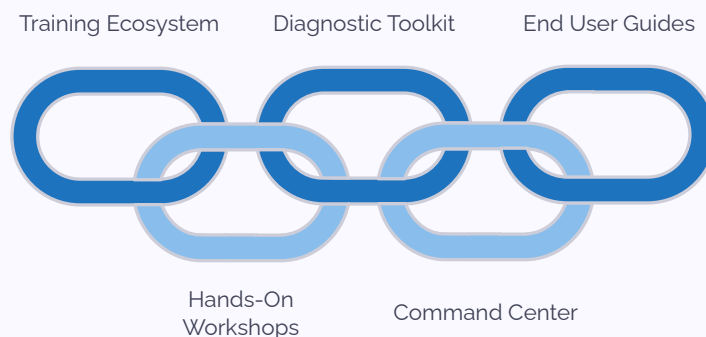
### Training on the PIC Command Center:

- Centralized dashboard for monitoring all mobile print servers and queues
- Real-time analytics on printer health, job status, and network conditions
- Automated diagnostics that identify root causes and recommend solutions

## For Your End Users

### Self-Paced Learning Portal:

- Short Video tutorials for "How to Report Issues" (e.g., not printing, printer offline, no power, queue management)



# Frequently Asked Questions

Q: Is there a printer agent required?

**A:** No. The intelligence resides in the **Printer Logger Control Agent (PLCA)** on your mobile computer. This agent communicates with the printer using standard Zebra protocols (SGD/ZPL), acting as a gateway to the MSI Core Platform.

Q: Will this work if the printer is completely offline?

**A:** Yes. As long as the mobile computer is paired to the printer via Bluetooth or connected via USB, you can perform diagnostics, pull logs, and push configurations even if the printer has no Wi-Fi connection.

Q: Will this allow for Wi-Fi password updates?

**A:** Yes. The **Remote WLAN Configuration** feature allows you to batch-update network credentials. This is particularly useful for re-provisioning printers that have dropped off the network.

Q: What happens to the print jobs if the printer runs out of battery?

**A:** The **Smart Print Queue** on the mobile print server caches the job. Once the printer is powered on and reconnected, the job is automatically retried, ensuring no labels are lost.

Q: Is there an additional cost?

**A:** Yes.

Q: Can we control when logging is activated?

**A:** MSI activates logging based on detected user impact using intelligent algorithms but is human activated to allow for customer-specific policies. However, your team can also manually activate logging if needed for specific diagnostic scenarios.

# Getting Started

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## Step 1: Inventory Assessment

- Identify your population of Zebra Link-OS printers and the mobile computers they pair with. Ensure mobile units are running the latest MSI agent

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## Step 2: Configure Logger Control Agent

- Contact your MSI representative to schedule planning session

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## Step 3: Pilot Deployment

- Deploy the updated agent to a small group of users.
- Test the **Mobile Print Server** functionality by simulating a network disconnect to verify local print queuing

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## Step 4: Full Rollout

- Push the update to your fleet via MDM. Begin utilizing the centralized dashboard for proactive printer monitoring.
- Share success stories and best practices across teams

## Support Resources

### Technical Support

For technical questions, troubleshooting, or platform assistance: [msi@connectrf.com](mailto:msi@connectrf.com) or +1 630 717 7200 ext 101

### Conclusion

The **Printer Intel Connector** closes the gap between your mobile computers and your output devices. By unifying diagnostics, configuration, and execution into the CVA platform, you eliminate manual troubleshooting and ensure that your labels—and your business—keep moving.

We're here to help. Your MSI team is ready to support your deployment planning and ensure you realize the full value of this enhancement.

**Contact your MSI representative to begin planning your deployment and start transforming your mobile device and printer support.**

Thank you for choosing Mobile Systems Intelligence. We're committed to your success.