



MERAKI MR CLOUD-MANAGED WI-FI FOR LOGISTICS & MANUFACTURING

**HIGH-PERFORMANCE WIRELESS WITH EXPERT EKAHAU DESIGN,
TURNKEY INSTALLATION & MANAGED SERVICES**

A complete operational transformation guide for logistics operators, warehouse managers, and manufacturing plant leaders – brought to you by BTI Communications Group, Cisco Meraki Authorized Partner serving CA | AZ | IL.

99.99% Wireless Uptime –
Guaranteed performance across
warehouses, production floors &
outdoor yards

Expert Ekahau Design –
Predictive modeling for frozen
food, high-bay & OT
environments

Fixed-Price Delivery – Zero
variance, guaranteed outcomes,
own installation crews

OT/IT Security – Built-in segmentation, IDS/IPS & C-TPAT compliance readiness

 BTI Communications Group – Cisco Meraki Authorized Partner | CA | AZ | IL |  800-435-7284 | 

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EXECUTIVE SUMMARY: OPTIMIZING LOGISTICS & MANUFACTURING WITH MERAKI MR WI-FI

Logistics and manufacturing wireless infrastructure has never carried more operational weight. Warehouse picking errors, production line stoppages, frozen food/cold storage coverage failures, outdoor yard connectivity gaps, high-density forklift/AGV/IIoT traffic congestion, and supply chain visibility breakdowns are all symptoms of the same root cause – wireless infrastructure that was never designed for the demands of modern operations.

BTI Communications Group addresses these critical challenges with an infrastructure-led managed IT approach. We deliver a complete, fixed-price, and fully supported solution combining the power of Cisco Meraki MR cloud-managed Wi-Fi with expert Ekahau-designed deployments. Our dedicated installation crews ensure seamless integration, while ongoing managed services guarantee a network that performs reliably, secures critical operations, and scales with your evolving business needs, eliminating costly downtime and improving operational efficiency.

99.99%

WIRELESS UPTIME

Guaranteed performance across all operational areas.

60%

REDUCTION IN IT TICKETS

Streamlined management reduces support requests.

40%

FASTER ISSUE RESOLUTION

Proactive monitoring and expert support minimize disruptions.

ZERO

VARIANCE FIXED-PRICE

Predictable costs with guaranteed outcomes from initial assessment to ongoing support.

BTI Communications Group is a Cisco Meraki Authorized Partner serving regional logistics operators, multi-site warehouse groups, and manufacturing plant operators across CA, AZ, and IL. Every engagement begins with a no-cost Ekahau-powered site assessment and ends with a fully managed, fully supported wireless environment that performs reliably – month after month, year after year.

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THE CHALLENGE – LEGACY WI-FI IN LOGISTICS & MANUFACTURING

In the fast-paced world of logistics and manufacturing, a robust and reliable wireless infrastructure is not just a convenience—it's the backbone of operational efficiency. However, many organizations are still hampered by legacy Wi-Fi systems that were never designed to meet the rigorous demands of modern industrial environments. These outdated networks lead to a cascade of pain points, from crippling downtime to critical security vulnerabilities, ultimately impacting productivity, profitability, and customer satisfaction.



DOWNTIME & PRODUCTIVITY LOSSES

Dropped connections, persistent dead zones, and unreliable legacy controller failures bring warehouse operations and production lines to a grinding halt. This directly translates to significant order fulfillment delays, lost revenue, and increased operational costs. Each interruption, no matter how brief, disrupts critical workflows and impacts overall throughput, creating a ripple effect across the supply chain.



COVERAGE GAPS IN DIFFICULT ENVIRONMENTS

Achieving consistent Wi-Fi coverage in challenging industrial settings is a formidable task. Facilities with frozen food storage experience severe RF signal absorption by ice and metal racking. High-bay warehouses with 30-50ft ceilings and extensive metal shelving create complex propagation challenges. Outdoor yards grapple with weather extremes, vast distances, and external interference, while multi-building campuses struggle with seamless roaming and consistent connectivity across diverse structures.



OT/IT CONVERGENCE RISKS

The increasing integration of Operational Technology (OT) and Information Technology (IT) introduces new layers of complexity and risk. Compliance pressures from standards like C-TPAT, NIST, and IEC 62443 demand robust security. Yet, many legacy networks expose critical IIoT devices, PLCs, AGVs, barcode scanners, and RFID readers to security threats due to flat, unsegmented architectures, making them vulnerable targets for cyberattacks.



FRAGMENTED MANAGEMENT

Managing disparate wireless systems across multiple sites often results in inconsistent policies, exorbitant costs associated with traditional wireless controllers, and a complete lack of centralized visibility. This fragmentation complicates troubleshooting, slows down critical diagnostic processes, and makes it nearly impossible to maintain a consistent, high-performance network environment without excessive IT overhead.

"Every minute of wireless downtime on a production floor or in a warehouse costs your operation in labor, throughput, and customer commitments – and legacy Wi-Fi was never built to prevent it."

THE MERAKI MR OPERATIONAL TRANSFORMATION FOR LOGISTICS & MANUFACTURING

Cisco Meraki MR access points, combined with BTI's expert Ekahau design methodology and infrastructure-led managed services, represent a categorical upgrade in how logistics operators, warehouse groups, and manufacturing plant operators manage wireless connectivity.



ZERO-TOUCH DEPLOYMENT & CENTRALIZED DASHBOARD

Gain real-time analytics, comprehensive device visibility, proactive alerting, and unified management across all your sites from a single pane of glass. Eliminate the need for complex on-site controllers, simplifying operations and reducing IT overhead.



WI-FI 6E / HIGH-PERFORMANCE MR ACCESS POINTS

Leverage the latest Wi-Fi 6E technology, featuring MU-MIMO, OFDMA, seamless roaming, and advanced Quality of Service (QoS). This ensures unparalleled performance for high-density environments crowded with forklifts, AGVs, scanners, and critical IIoT devices, preventing bottlenecks and ensuring smooth operations.



BUILT-IN OT/IT SECURITY

Protect your critical infrastructure with integrated Layer 7 application control, Intrusion Detection/Prevention Systems (IDS/IPS), advanced malware protection, and automatic RF optimization. Robust network segmentation capabilities isolate Operational Technology (OT) devices from corporate IT traffic, fortifying your security posture against modern threats.



EXPERT EKAHAU DESIGN FOR CHALLENGING ENVIRONMENTS

Benefit from predictive RF modeling and on-site validation tailored to the most demanding industrial settings. Our Ekahau-designed deployments guarantee optimal coverage and performance in frozen food facilities, high-bay warehouses (30-50ft ceilings), expansive outdoor yards, and complex multi-building campuses.



RELIABLE HIGH-DENSITY COVERAGE

Ensure consistent and dependable connectivity for all your operational assets, including staff handhelds, forklifts, AGVs, barcode scanners, RFID readers, PLCs, and IIoT sensors. Experience unwavering performance even in the most RF-challenging industrial environments, maximizing uptime and efficiency.

"Meraki MR doesn't just replace your old access points – it transforms how your entire operation sees, manages, and secures its wireless environment."

REAL-WORLD LOGISTICS & MANUFACTURING WI-FI RESULTS & ROI

Operational outcomes are the only metrics that matter in logistics and manufacturing IT. BTI Communications Group's Meraki MR deployments consistently deliver measurable improvements that directly impact efficiency, cost savings, and compliance. Below is a representation of the key performance indicators and the tangible return on investment our clients experience.

99.99%

Wireless Uptime across all operational zones

45%

Reduction in Picking Errors after Wi-Fi modernization

38%

Faster Order Fulfillment cycle times

70%

Reduction in Wireless-Related IT Tickets

50%

Lower Total Cost of Ownership vs. legacy controller-based Wi-Fi

CLIENT SUCCESS STORIES

Our solutions are designed to address the specific challenges faced by logistics and manufacturing environments, translating into significant operational gains and robust security postures.

MULTI-SITE LOGISTICS & WAREHOUSE OPERATION

"A regional 3PL operator with 4 distribution centers across CA and AZ was experiencing chronic Wi-Fi dead zones in high-bay racking areas and frozen food storage, causing scanner dropouts and order fulfillment delays. BTI deployed Cisco Meraki MR with Ekahau-designed coverage across all four facilities – including specialized antenna placement for frozen food zones and outdoor yard coverage. Result: 99.9% scanner uptime, 40% reduction in picking errors, and a single Meraki Dashboard providing real-time visibility across all sites."

MANUFACTURING PLANT OT/IT CONVERGENCE

"A mid-sized manufacturing plant in IL was running production-critical PLCs and AGVs on the same flat network as corporate IT – a major C-TPAT and IEC 62443 compliance risk. BTI redesigned the wireless architecture with Meraki MR, implementing full OT/IT segmentation, IDS/IPS, and centralized policy management. Result: Full compliance achieved in 60 days, zero production downtime during cutover, and a 55% reduction in security incidents."

WHY BTI GROUP DELIVERS RESULTS OTHER PROVIDERS CAN'T

The logistics and manufacturing wireless market is crowded with providers who can sell you Meraki hardware. Very few can do what BTI does – design it with Ekahau expertise, install it with their own certified crews, integrate it with OT/IT security frameworks, and manage it for a fixed monthly fee that is far below the cost of doing it yourself. Our comprehensive approach and deep industry experience set us apart, ensuring that your wireless infrastructure is not just deployed, but optimized, secured, and supported for peak operational performance.

EXPERT EKAHAU ENGINEERING

Full-stack Wi-Fi engineering using the latest Ekahau tools for predictive design, on-site surveying, validation testing, and ongoing optimization. This ensures robust and reliable connectivity even in the most challenging environments like frozen food storage, high-bay warehouses, and expansive outdoor manufacturing areas, where traditional designs often fail.

INFRASTRUCTURE-LED MANAGED IT

We offer flexible delivery models: fully managed, co-managed, or a specialized cybersecurity overlay. Unlike vendors who simply sell hardware, BTI owns the operational outcome, providing end-to-end responsibility and ensuring your wireless network contributes directly to your business objectives.

DISCOUNTED ITEMIZED PRICING

Benefit from transparent, discounted pricing on every Cisco Meraki hardware and software component. These cost savings are passed directly to our clients, ensuring competitive procurement without compromising on quality or service.

FIXED-PRICE GUARANTEED DELIVERY

Our detailed fixed-price scope of work guarantees outcomes with zero variance. You'll experience no surprises, no hidden fees, and no change orders—just clear expectations and consistent results from start to finish.

OWN INSTALLATION CREWS

We provide full turnkey installation using BTI's own fleet of certified crews. This includes specialized equipment like lifts and expertise in all cabling infrastructure, from fiber optics to copper, eliminating reliance on subcontractors and ensuring consistent quality and accountability.

24/7 SOC, SIEM & NOC INTEGRATION

Your network benefits from round-the-clock monitoring through our Security Operations Center (SOC) and Network Operations Center (NOC). This integration provides continuous threat detection, proactive management, and rapid response to any anomalies, ensuring maximum uptime and security.

GRC & COMPLIANCE FRAMEWORKS

We ensure seamless integration with critical governance, risk, and compliance (GRC) requirements. Our solutions support standards such as C-TPAT, NIST, and IEC 62443, helping your operations meet stringent industry regulations and avoid costly penalties.

ISNETWORLD CERTIFIED

BTI is ISNetworkworld certified, signifying our approval for deployment in high-risk industrial environments. We are also approved on key contracts including LA County TESMA, GSA, and CMAS, further validating our credentials and reliability.

LOCAL ON-SITE TEAMS

With rapid response teams strategically located in California, Arizona, and Illinois, BTI ensures prompt on-site support when you need it most. Our local presence means faster issue resolution and personalized service, minimizing potential disruptions to your operations.

"BTI doesn't hand you a box of access points and walk away. We design, install, secure, and manage your wireless environment – and we stand behind every outcome with a fixed price and our own crews."

IMPLEMENTATION BEST PRACTICES – BTI'S PROVEN DEPLOYMENT FRAMEWORK FOR LOGISTICS & MANUFACTURING

A successful logistics and manufacturing Wi-Fi deployment is not measured at go-live – it is measured at 12, 24, and 36 months post-deployment, when the network continues to perform reliably despite changes in facility layout, device density, and operational demands. BTI's meticulously designed deployment framework ensures long-term performance, security, and adaptability, setting the foundation for sustained operational excellence.

01

NO-COST EKAHAU SITE ASSESSMENT

BTI conducts a comprehensive Ekahau-powered site survey including predictive RF modeling, existing infrastructure audit, device density analysis, and identification of challenging zones (frozen food, high-bay, outdoor yards). The deliverable is a detailed coverage gap report and recommended architecture, ensuring no stone is left unturned in understanding your environment.

02

FIXED-PRICE SCOPE OF WORK & DESIGN

BTI produces a detailed fixed-price proposal with itemized Meraki hardware, licensing, cabling, installation labor, and managed services. This approach guarantees zero variance and predictable outcomes, eliminating unexpected costs or scope creep throughout the project lifecycle.

03

EKAHAU PREDICTIVE DESIGN & VALIDATION

We perform a full predictive RF design using Ekahau AI Pro, incorporating advanced AP placement modeling, precise channel planning, and thorough coverage validation for all operational zones. This includes specialized considerations for demanding environments such as frozen food storage, high-bay warehouses, and expansive outdoor areas.

04

TURNKEY INSTALLATION BY BTI'S OWN CREWS

BTI's certified installation crews handle all aspects of physical deployment, from cabling (fiber to copper) and AP mounting (including specialized lifts for high-bay areas) to outdoor enclosures and Meraki Dashboard configuration. Our internal teams ensure consistent quality and accountability, avoiding reliance on subcontractors.

05

OT/IT SEGMENTATION & SECURITY CONFIGURATION

We implement comprehensive Meraki network segmentation, meticulous VLAN design, robust IDS/IPS activation, and Layer 7 policy configuration. This step is critical for establishing a secure operational technology (OT) and information technology (IT) environment, complete with C-TPAT, NIST, and IEC 62443 compliance documentation.

06

POST-INSTALLATION EKAHAU VALIDATION SURVEY

Following installation, an on-site RF validation survey is conducted using Ekahau tools to confirm optimal coverage, signal strength, seamless roaming performance, and reliable device connectivity across all designated zones. This ensures the network performs exactly as designed before final handoff.

07

ONGOING MANAGED SERVICES & OPTIMIZATION

Our commitment extends beyond deployment with 24/7 NOC/SOC monitoring, proactive alerting, continuous firmware management, Ekahau-driven network optimization, and quarterly business reviews. All these critical services are bundled into one fixed monthly fee, providing peace of mind and sustained performance.

TAKE THE FIRST STEP TOWARD WIRELESS THAT WORKS AS HARD AS YOUR OPERATION

REQUEST A NO-COST EKAHOU-POWERED LOGISTICS & MANUFACTURING WI-FI ASSESSMENT

Your warehouse staff, production lines, forklifts, AGVs, and IIoT devices deserve wireless infrastructure that performs reliably, protects your OT environment, and scales with your operational demands. BTI Communications Group delivers exactly that – with expert Ekahau design, our own installation crews, and a fixed monthly fee that covers everything.

1. SITE SURVEY & PREDICTIVE DESIGN REVIEW

A no-cost Ekahau-powered assessment of your current wireless environment, coverage gaps, and a recommended Meraki MR architecture.

2. FIXED-PRICE WI-FI MODERNIZATION WORKSHOP

A structured half-day workshop with BTI's engineering team to scope your full wireless transformation, including OT/IT segmentation, compliance requirements, and managed services options.

3. FULL OPERATIONAL TRANSFORMATION PROPOSAL

A complete fixed-price proposal covering Meraki hardware, Ekahau design, turnkey installation, OT/IT security configuration, and ongoing managed services.

"BTI's Fixed-Price | Own Crews | Ekahau-Designed | Fully Managed Model means you get one partner, one price, and one point of accountability – from design to deployment to day-2 operations."