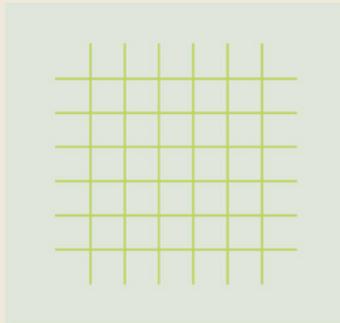


Every Tower. Every node. Under Control.

Monitoring and Management for
Telecommunication



RADIX® 

The Challenge:

Complexity without Clarity

Telecom operators manage thousands of towers, ODAS nodes, and power systems spread across hard-to-reach regions. Each site brings its own radios, generators, batteries, lighting systems, and security devices and each speaks a different language. Ericsson radios. Legacy diesel generators. Modern fuel sensors and access control. Instead of a unified view, teams inherit a patchwork of siloed tools and vendor-specific protocols.

The result? Compliance risks escalate as regulations tighten. FCC tower lighting mandates and NOTAM tickets demand precision, but inconsistent data means missed alerts can trigger \$15,000/hour penalties. Site visits spiral as teams roll trucks not to fix problems, but just to find them. Manual checks replace trusted telemetry. “Red alert” fatigue buries the issues that truly threaten uptime. What should be proactive becomes reactive. What should be predictable becomes expensive. Telecom portfolios don’t fail all at once - they fail in fragments, one blind spot at a time.

- **Compliance at Risk**

FCC lighting mandates and missed NOTAM alerts carry steep penalties.

- **Alarm Fatigue That Hides Real Failures**

Thousands of daily alerts with no priority logic bury the critical few - burning team capacity and increasing downtime risk.

- **Rising Truck Rolls**

Without reliable remote insight, teams are dispatched just to diagnose issues.

- **Data You Can’t Trust**

Inconsistent feeds from multiple systems delay response and hide real failures.

- **Siloed Tools**

Radios, generators, batteries, and sensors each come with their own platform, creating noise instead of clarity.

- **More Sites, Fewer People, Zero Room for Error**

With lean teams, lights out operations and remote facilities, swift resolutions depend on real-time information.

The Solution: mango



Modern telecom portfolios demand more than vendor dashboards and siloed alarms. Operators need a single source of truth that cuts through complexity, scales across thousands of sites, and makes remote operations reliable instead of reactive. Radix IoT delivers that layer. The platform unifies all tower subsystems - radios, generators, batteries, sensors, and access controls into one real-time view. It connects seamlessly with legacy equipment and modern devices alike, so growth doesn't mean replacement. Instead of managing dozens of platforms, teams work from one, cloud-based dashboard that scales with the portfolio.

The result: fewer truck rolls, earlier detection, faster resolution. Operators shift from hunting down problems to preventing them, reducing downtime risk while protecting compliance and cutting costs.

- **Portfolio-Wide Oversight**

All towers, nodes, and subsystems in one real-time dashboard.

- **Live Alerts That Drive Action**

Mango cuts through the noise and alerts on what matters. It connects directly to your workflow tools so teams can act immediately and consistently.

- **Remote Diagnostics & Proactive Maintenance**

Detect anomalies and resolve issues before they cascade into outages.

- **Compliance Protection**

Tracks FCC lighting mandates and other regulations with real-time insight.

- **Scalable Growth**

Mango connects legacy platforms with emerging technologies across modular builds and edge deployments. It becomes the stable layer that evolves with your infrastructure without needing replacement.





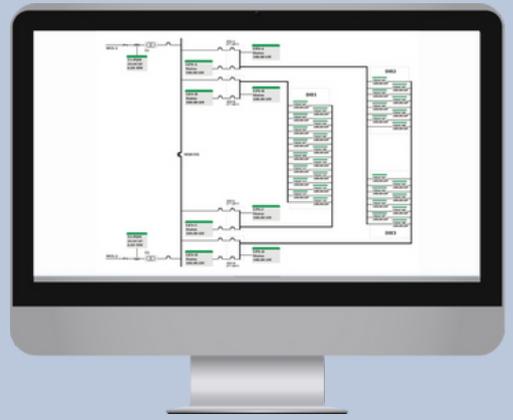
For Telecom Operations.

Mango installs flexibly, whether on ruggedized edge hardware at a tower site or as a cloud-native service spanning thousands of locations. It supports over 40 protocols, including Modbus, SNMP, MQTT, BACnet, and REST/GRPC APIs, normalizing telemetry from radios, generators, batteries, lighting systems, and modern IoT sensors into a single operational layer. Instead of managing each subsystem through its own vendor interface, operators gain a unified, real-time view across the entire portfolio.

Built to solve challenges.

Beyond integration, Mango captures and standardizes the operational knowledge that typically lives in field teams. It benchmarks sites against one another, identifies anomalies, and applies contextual logic by factoring in load, weather, and historical performance to surface the events that truly matter. With remote diagnostics and predictive insights, operators reduce truck rolls, protect uptime, and meet compliance requirements without adding headcount or replacing existing investments. Over time, Mango becomes the connective tissue linking infrastructure performance to operational readiness.

Unified, Scalable, and Built for the Demands of Telecommunication



Multi-System Integration

Mango connects to your existing BMS, metering, and compliance systems using BACnet, Modbus, SNMP, APIs, and more, bringing all facility data into one centralized, real-time view.



Built for Complex Portfolios

Whether you're managing five sites or fifty, Mango helps you unify operations across decades of expansion and multiple vendors, standardizing visibility without needing to replace what already works.



Remote-Ready Operations

From any location, your team can monitor system health, identify root causes, and respond faster without system hopping or relying on radios, floor walks, or manual logs.



Contextual Intelligence

Mango filters alerts by location, impact, and priority and cuts through the noise - helping your team focus only on what matters. No more alarm fatigue, just clear, actionable insight.



Faster Deployment, Lower Overhead

Mango is easy to implement, lightweight, and designed to work with what you already have. It supports phased rollouts, minimizes IT burden, and delivers value quickly without disrupting day-to-day operations.

mango Quantifiable ROI

40% Reduction in Truck Rolls Across Remote Sites

With unified remote monitoring, Mango eliminates unnecessary dispatches for diagnostics. Operators only roll trucks when a repair is required, saving more than \$500,000 annually in a 10,000-site portfolio.

35% Faster Resolution of Site Failures

Mango enables remote diagnostics and anomaly detection, letting teams identify root causes and prioritize service before downtime escalates. Outages are resolved faster without waiting on site inspections.

30% Lower Compliance Risk Exposure

By continuously monitoring tower lighting, fuel levels, and battery health, Mango helps prevent SLA breaches and FCC violations that can cost up to \$15,000 per hour in penalties.

28% Decrease in Alert Fatigue Across Multi-Vendor Systems

Mango filters out false alarms and surfaces only the critical events. Teams focus on what matters most, reducing wasted time and protecting uptime.

25% Reduction in Downtime Across Telecom Portfolios

Shifting from reactive to predictive operations, Mango benchmarks sites, detects anomalies early, and enables preventative maintenance that keeps networks running.



mango Driving ROI

After implementing Mango by Radix IoT, telecom operators transformed how they monitor and manage infrastructure across towers, ODAS nodes, power systems, and site security. Previously, teams relied on siloed vendor dashboards, manual checks, and frequent truck rolls just to identify issues. With Mango, they unified telemetry across all subsystems and locations, enabling remote diagnostics, automated alerts, and real-time visibility into failures. What once required costly site visits and hours of guesswork is now resolved in minutes, with less downtime and lower operational costs across geographically dispersed portfolios.

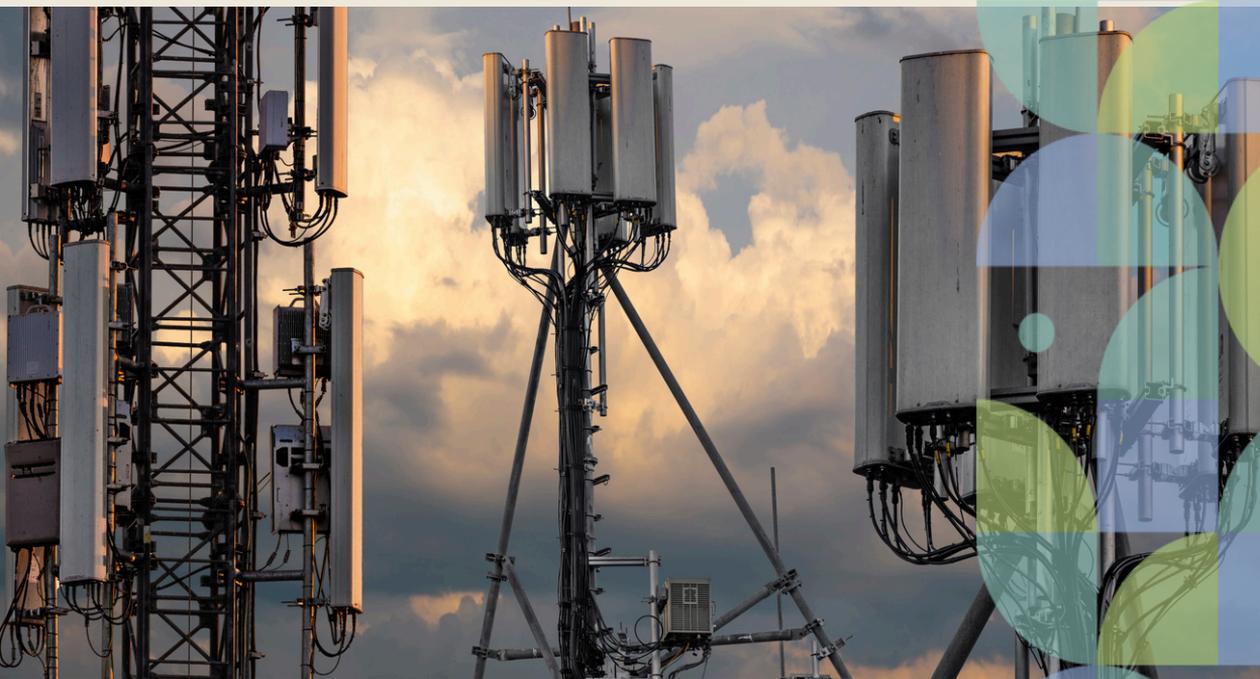
Measurable System Gains

- **Remote Fault Diagnostics and Resolution**
- **Battery, Generator, and Fuel Monitoring**
- **Compliance Oversight for FCC Lighting and NOTAMs**
- **Predictive Maintenance and Anomaly Detection**
- **Security and Environmental Monitoring**
- **Predictive Maintenance and Anomaly Detection**
- **SLA-Linked Fault and Outage Detection**
- **Multi-Vendor, Multi-Protocol Integration**

In another case, a large tower operator struggling with rising SLA penalties and compliance risks used Mango to overlay existing equipment with a unified management layer. Their teams now detect anomalies before they trigger outages, reduce unnecessary truck rolls, and protect against \$15,000 per hour downtime costs. Instead of operating reactively across fragmented systems, they now act proactively from a single, real-time dashboard that scales with expansion and supports both legacy and modern assets.

Unified Insight for Every Tower, Node, and Site

Unlock the full potential of your telecom operations.



Ready to streamline your operations? Discover how Mango by Radix IoT can boost uptime, cut costs, and scale your portfolio - contact us for a demo today.

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