Extreme networks

Solution Brief

ExtremeCloud™ IQ for Manufacturing

Manufacturing: A Dynamic and Disrupted Industry

The manufacturing landscape is experiencing a dramatic change. Recent events have introduced a new set of challenges and risks for how industries manage and supply resources on a global basis. Market volatility, and how factories are located, staffed, maintained, and digitized are all placing pressure on manufacturing leaders, who were already faced with the challenging task of balancing innovation, digital transformation, and agility with resiliency, cost optimization, and efficiency initiatives.

This is all in addition to the preexisting expectation that manufacturing operations must be a reliable partner to the business and support corporate growth initiatives. How do manufacturing's IT teams and their supporting systems keep up with the constantly changing industry conditions while meeting the critical needs of the business?

Why Cloud and Why ExtremeCloud IQ

Cloud-driven network technologies support the specific requirements of manufacturing operations and their complex environments today. ExtremeCloud IQ leverages 4th generation cloud architecture, equipping manufacturing teams with a solution that delivers:

- Flexibility: Fit the immediate needs of the organization as well as seamlessly scale with future demands
- Agility: Speed and continuous delivery of new features and capabilities
- Security: Proven protection in the most risk-sensitive environments
- Technology: Access to feature-rich, best of breed technology to advance digital transformation initiatives

Why ExtremeCloud™ IQ: Business Benefits

Ensure Operational Uptime and Efficiency

Centralized Management

Deployment Flexibility

Actionable Insights

Open-API Platform

Ensure Operational Uptime and Efficiency

Manufacturing operations and their environments simply cannot afford to experience drops or disruptions in service; this is an inherent challenge with constantly changing layouts, physical and RF interferences, and even hazardous conditions. With a network solution built on ExtremeCloud IQ, manufacturing leaders ensure all key users and devices stay connected despite these complexities or unexpected changes.

With end-to-end visibility into network usage and performance across sites, any drops or interference in service is flagged immediately even if it occurs at a remote site. The location and movement of critical devices can also be tracked to optimize their usage, and/or discover their location if misplaced. Businesses can also leverage AI and machine learning insights, organizations can easily troubleshoot issues before they impact device or user uptime, as well as centrally monitor trends over time across distributed manufacturing facilities.

Centralized Management

A manufacturer's network solution is often responsible for supporting several sites with diverse business uses (office spaces, factories, distribution/fulfillment centers) across distributed regions. This creates challenges for IT teams who are responsible for maintaining uptime and productivity of all sites, and often lack dedicated onsite resources at each one. ExtremeCloud IQ delivers comprehensive, end-to-end wired and wireless network management from a single pane of glass for all users, devices, and IoT. For manufacturing operations, this increases operational efficiency, reduces associated costs of dedicated onsite IT support, and allows the network to easily grow with business demand.

Deployment Flexibility

Each manufacturing business may have unique requirements for their network solution: dependent on an organization's acute challenges, strategic goals, and characteristics of their supporting environments. With ExtremeCloud IQ, manufacturers have access to simple, flexible deployment and configuration options that seamlessly operate between public cloud, private cloud, and/or on-premises options. Businesses can also choose to deploy the cloud application on AWS, Azure, or Google cloud options.

ExtremeCloud IQ offers the unique ability to seamlessly and securely move access points, switches, and routers within or between any of its cloud management deployments. This is achieved without a drop in network uptime, to meet current and future business needs—a competitive advantage and requirement for manufacturing and their continuously changing environments—especially during peak hours or operation.

Actionable Insights

With dynamic environments that are prone to network disruptions but must also maintain uptime and productivity, manufacturing operations need a wholistic view into what's happening across their environments. ExtremeCloud IQ equips manufacturing businesses with meaningful intelligence that's built into the network infrastructure—delivering superior performance, troubleshooting, and remediation from a central platform (see above). With industry-leading data durability, teams can also monitor and compare how these insights change over the course of weeks, months, or even years.

The network is even smarter and more effective when leveraging Extreme's AI and machine learning capabilities, even as the business' capacity needs and density increases. With more and more devices and IoT being utilized in manufacturing, it's never been more vital to have complete visibility into these assets and their usage.

Open Platform

Facing constant pressure to reduce labor costs, deliver faster production times, diminish processing errors, and better manage inventory, manufacturing is turning to digital transformation to achieve better business outcomes. While the network is a critical component in supporting these goals, the right network solution acts as a strategic business asset to enable innovation. ExtremeCloud IQ provides manufacturing organizations with a flexible, scalable, open API platform that easily supports and integrates with 3rd party ecosystem providers to fuel innovation—not hinder it.

Why ExtremeCloud™ IQ: Technology Benefits

Uninterrupted Service and Coverage | Broad User and Device Support | Robust Security and Control | 360° Network and Client Insights | Network Health and Comparative Analytics

Uninterrupted Service and Coverage

A constant goal (and challenge) for manufacturing organizations is guaranteeing operational uptime; a major onus is placed on the IT team to maintain network service and coverage. With Extreme's 4th generation cloud platform, IT teams have a platform that provides continuous operation and innovation for industry-leading uptimes. The system intuitively and easily adapts to changing RF conditions, prioritizing vital users/devices across environments. If the cloud management platform does have an outage, the onsite network continues to operate and deliver service.

Broad User and Device Support

Whether it's on the factory floor, in an office setting, or a combination of the two, manufacturing environments often have wide array of devices that need to be supported by the network – including legacy connected equipment, BYOD devices, IoT things and more. It's up to the IT team to securely and effectively configure the network so all these devices have appropriate network access and service.

With ExtremeCloud IQ, manufacturing operations have constant visibility into all wired/wireless activities, ensure the network can support the quantity of devices, as well as manage capacity and performance for all devices connecting with new or legacy protocols. This means IT teams can actively manage available bandwidth by user/device and ensure productivity apps and tools have dedicated quality of service. It also allows legacy devices to work with modern communication methods, increasing their value and shelf life.

Robust Security and Control

Cyber and network security is essential for manufacturing businesses and their operations. Digital transformation and the increasing number of devices in manufacturing environments has fueled efficiency and innovation, but it's also elevated security risks. IT teams must keep the business' data, personnel, and connected assets protected across all of their distributed, supporting sites.

Extreme's cloud-driven network solutions delivers robust wired/wireless security tools: including seamlessly authenticating/onboarding a cross-section of devices with policy-based protocols, monitoring/controlling all network activities across the sites from a central location, or accessing relevant analytics to keep the business operational, efficient, and safe. To further instill confidence in IT teams, Extreme has also achieved ISO 27001 certification- illustrating best-practice security in cloud-managed networking.

360 Degree Network and Client Insights

IT teams responsible for supporting manufacturing operations need to know what's going on in their environments at all times; this includes a deep view of the entire network infrastructure and the clients connected to it, an arduous responsibility for distributed sites, some of which maintain 24x7x365 functioning uptime.

With ExtremeCloud IQ, IT teams have Network 360 and Client 360, powerful tools that utilize machine learning and comparative analytics to harvest valuable insights across the manufacturing environments. Client 360 intelligently organizes rich datasets pertaining to client operation, health, and performance – all presented in a simple and intuitive way to easily identify problems, resolve network errors, and optimize performance for clients. Network 360 collects, processes, and analyzes vast amounts of network and client-generated data, condensing it down to consumable and actionable insights for IT teams in a single view.

Network Health and Comparative Analytics

As cited above, manufacturing leaders can track network health my monitoring key usage and performance indicators across their many sites with adjusted reporting windows. The same rich set of experience data is available on the client side too.

Manufacturing organizations can also access comparative analytics, which anonymously correlates network performance metrics against other Extreme Networks customer deployments, so IT staff can recognize and address issues proactively before they have a harmful impact on employees, guests, or critical devices. Comparative analytics leverages an anonymous network data pool available in ExtremeCloud IQ so network admins can compare their performance with the averaged performance of others.