

Fact Sheet

Secure Supply Chain Services

Secure, Simplified, Accelerated Deployment

Network deployment can be complex, uncoordinated and slow. Service providers face limited choices of deployment site and local permit requirements that continuously become stricter or more complicated. High-volume deployment projects often place the “business-as-usual” supply chain and warehouse facilities under great strain, causing slow inventory processing, disorganized warehouses, and delayed staging.

Project Materials Need Careful Management

Installation components are individually packaged and shipped to deployment sites with no coordination to time arrival with the site readiness of or installer schedules, which often means that parts and materials are missing, damaged, or incorrect. In combination with the typical level of complexity, all these problems cause multiple project reworks and an increased number of truck rolls per site. The end results are delayed completion and cost overruns.

Unsecured Locations Create Security Vulnerabilities

In addition to these logistical and supply chain challenges, multiple security vulnerabilities occur at every link in the supply chain. Many supply chain operations cannot keep accurate inventory records because of slow processing, materials and equipment left stranded by repeated project changes, and a lack of information about the status of assets and asset handoffs. Equipment is usually delivered to unsecured locations with no real-time tracking or any requirement for delivery signatures. And because most deliveries are not synchronized to coincide with site readiness, equipment is stored, often in unsecured locations—which may even be the back of an installer’s truck. This creates a high risk of loss and unauthorized or malicious intrusion.

A Complete, World-Class, Secure Supply Chain is the Answer

Fujitsu Secure Supply Chain Services ensure your assets are never at risk. Fujitsu all but eliminates loss, damage, theft or tampering by centralizing all project equipment in our secure, environmentally controlled warehouse in Richardson, Texas.

Physical Security

Equipment and supplies stored at the Fujitsu location are held in secured, customer-specific areas with limited access and 24/7/365 monitoring with continuous video surveillance and on-site security personnel. General access to the warehouse is controlled, and Fujitsu further limits access to the customer-specific areas within the warehouse premises.



IT Security

IT security is intrinsic to creating and operating a visible, secure supply chain. Fujitsu Secure Supply Chain Services include IT security, provided with the support of our global information security organization. This organization oversees an ecosystem of technology, people, and processes in four key security practice areas:

- Risk and Compliance Management – Mitigate risk and meet the expectations defined by internal policies, industry standards, and customer requirements.
- Secure Infrastructure – A network and computing foundation that underpins Secure Supply Chain Services.
- People and Data – Enable people to support the security mission and protect data in transit and in storage.
- Monitoring and Incident Response – Monitor the IT environment for security events and respond quickly to minimize disruption.

A Strong Information Security Framework

The security controls applied to our secure supply chain are based on Fujitsu’s Global Information Security Controls framework. This framework extends ISO 27001 by providing specific expectations for control implementation. We have aligned our program to this framework for over 10 years and look to other industry standards (such as NIST 800-53) for additional guidance. This supports a defense-in-depth approach

A Secure Chain of Custody

to mitigating risk at multiple layers of the environment, and implements measures to prevent, detect, and respond to undesirable security events.

Fujitsu participates in multiple annual security assessments from a number of external sources to validate our controls against expectations and identify opportunities for improvement.

Fujitsu also ensures the security of your assets while in transit. Shipments are tracked and delivered to our dynamic warehouses, manned and locked depots, close to your deployment sites. Your assets are checked in and out and all deliveries must be signed off.

Secure, Simplify, Synchronize and Speed your Deployments

Fujitsu Secure Supply Chain Services let you create an individualized approach to simplify, synchronize, and speed your deployments. You select the equipment, site, and date, and Fujitsu delivers the fully configured and integrated systems to our secure depots close to your sites, on the date specified for installation. You have full information about your assets and the status of your installation projects from start to finish—thanks to the peace of mind of a secure chain of custody.

Fujitsu Secure Supply Chain Services draw upon several Fujitsu multivendor services:

- Edge to Core Enclosures
- Factory Pre-configuration
- Material Management
- Dynamic Warehousing

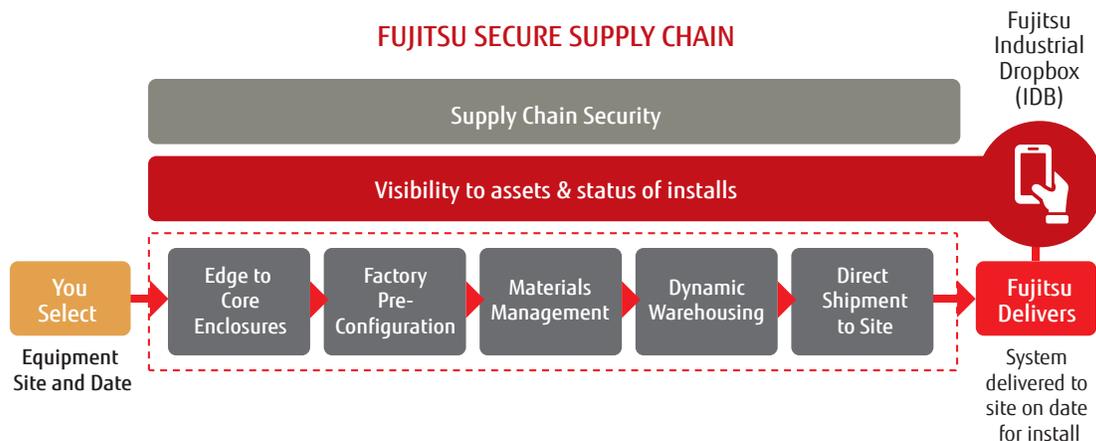
Edge to Core Enclosures

Fujitsu offers specialized best-in-class Edge to Core Enclosure designs to meet the environmental needs of network edge and municipal deployments. As deployments move to the network's edge, new challenges emerge because equipment is being placed in new locations closer to where the people are.

In some cases, these new locations mandate innovative equipment enclosures. Outdoor locations, for example, usually impose stricter environmental requirements as well as local or municipal aesthetic standards for equipment enclosures.

We take your vision, deployment location, components to be integrated, desired features and existing constraints and design an innovative cabinet that meets your requirements (including systems to be housed, thermal, power distribution, backup power and batteries, lightning protection, and security). After we verify the requirements, design layout, power sizing, and thermal analysis with you, your design enters the productization phase where it is engineered, prototyped, and compliance-tested. While this is everything you need for commercialization, we don't stop there. We can also manufacture, factory pre-configure, deploy, and maintain your enclosures.

Fujitsu Edge to Core Enclosures open up more sites for deployment by providing enclosures that can resist the elements and by expanding your deployment and mounting options. We also make permitting easier, especially for small-cell deployments.



Fujitsu Secure Supply Chain Services

Standardized and Simplified to Reduce Errors and Save Time

Simplify Installation with Factory Pre-Configuration

Fujitsu's factory pre-configuration service simplifies installation with plug-and-play systems. Multivendor Network Element (NE) components, such as Small Form-Factor Pluggables (SFPs) and similar plug-in modules), as well as cards and shelves used for power, signaling and optical connections are configured and integrated into standard or customized racks and cabinets in our controlled factory environment.

All network elements are labeled to your specifications and the configuration is documented using revision control to accurately capture changes as they are made. Our manufacturing processes are streamlined with standardized assembly and kitting.

Additionally, Fujitsu provisions the integrated systems, ensuring that equipment is consistently configured to your specifications. The as-built systems are then tested to ensure they are working as designed.

Consolidated Part Numbers and Transactions

Instead of ordering, receiving, stocking and collecting thousands of parts for installers to assemble, configure, test, install and turn up on site, you order a single part number from Fujitsu and have your installers perform the final installation and turn up on-site. This is how the Fujitsu factory pre-configuration service eliminates errors and reworks, ensures all your configurations are consistent, and reduces installation time and costs, speeding your time to market. Depending on the configuration, you may realize cost savings of up to 45% when compared to on-site rack builds.

Equally importantly, the pre-configuration service reduces security vulnerability. Hundreds of transactions are consolidated and since all site equipment is configured and integrated in a secure factory setting, installations are not just quick and easy, but also more secure.

A Material Management Solution to Fit your Project Scope

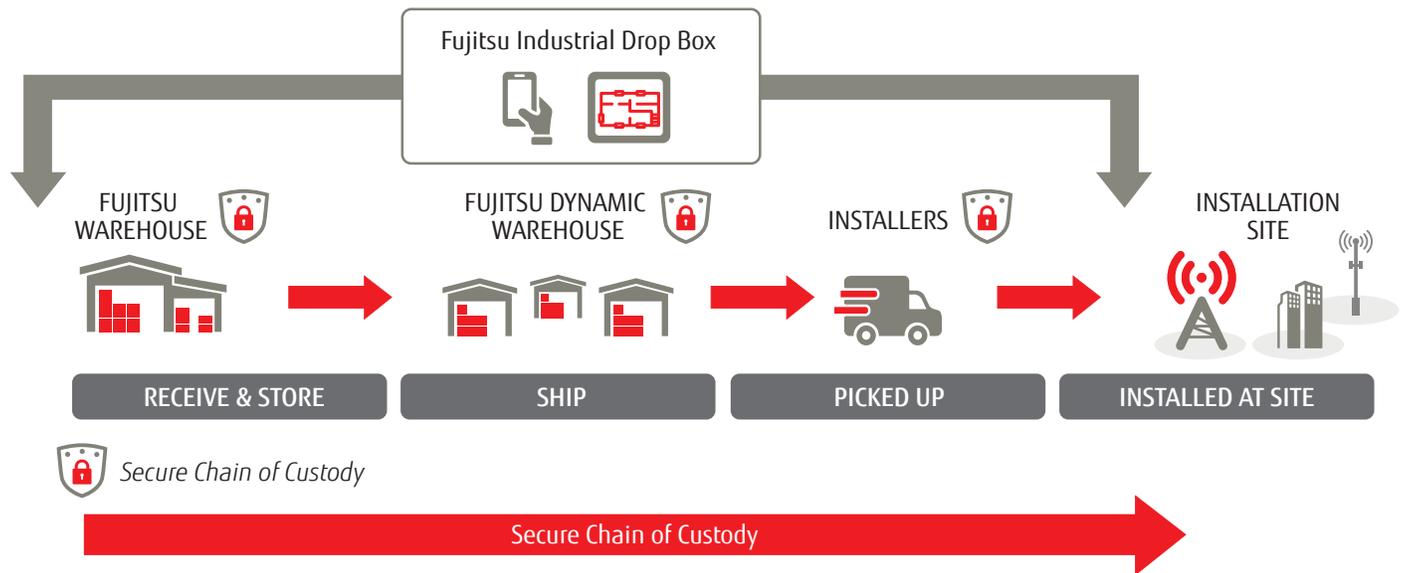
High-volume network rollouts represent valuable business opportunities. But these projects may overwhelm your materials management infrastructure, derail entire projects, and increase security vulnerabilities through problems like these:

- Sluggish inventory processing
- Low inventory accuracy
- Stranded inventory
- Disorganized warehouses
- Components individually packaged & shipped to site
- Late shipments to sites
- Missing, damaged or wrong parts

Fujitsu Material Management is a customizable solution specifically developed to take the risk and worry out of managing project materials. We work with you from the outset to set up secure and efficient processes for receiving, inventory tracking, kitting, staging, and shipping. The Material Management solution ensures high inventory accuracy, eliminates stranded inventory by managing discrepancies as project priorities change, and gives you the assurance that the right equipment and parts arrive packaged together in working condition when and where they are needed for deployment.

With the Fujitsu Supply Chain team's expertise at your service, you can take materials management to a whole new level. Count on Fujitsu for organized, disciplined processes; secure, effective material controls; and the highest levels of inventory accuracy.

Efficient Packing and Dispatch, Precise Coordination



Secure Synching of Delivery and Installs With Full Visibility to Assets

Secure the Chain of Custody with Dynamic Warehousing

Dynamic Warehousing is a Fujitsu service that uses our specialized software system, Industrial Dropbox, to provide an end-to-end, secure chain of custody and packing/shipping solution for all your deployment materials and equipment. The system simplifies and speeds ordering and dispatch of materials, aids coordination and communication between program managers and installation technicians, and ensures a high degree of inventory accuracy. With real time tracking, visible handoffs, precise synchronization of delivery times to installation schedule, this system helps keep projects punctual and within budget by preventing delays or loss of material in transit. With Dynamic warehousing, you have up-to-the-minute information about asset location, status, and handoffs, and installers make a single trip to a nearby depot to pick up all the parts, packaged together, for site installation.

Count on Fujitsu for a Reliable, Efficient Supply Chain

With Fujitsu Secure Supply Chain Services, you simplify, synchronize and speed your deployments and ensure your assets are never at risk. When you work with us, you can count on more than three decades of supply chain expertise and experience to not only provide a secure chain of custody, effective material controls, and the highest levels of inventory accuracy, but also deployment innovations and other capabilities to lower your deployment costs.

Fujitsu Network Communications, Inc.

2801 Telecom Parkway, Richardson, TX 75082

Tel: 888.362.7763

us.fujitsu.com/telecom