



SIGNALING, ROUTING  
AND SECURITY

Product Data Sheet

# Signaling Transfer Point

## ✓ Business Benefits

- Reduces maintenance costs by up to 30%
- Lowers TCO by running on commodity hardware
- Improves performance and increases reliability
- Scales operations cost effectively
- Accelerates development and eases roll-out of new services
- Ends dependence on proprietary hardware-based solutions
- Future-proofs SS7 networking by building a bridge to 5G

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### + The Challenge

With the impending exit of all but a handful of Signal Transfer Point (STP) router manufacturers from the market, telecom service providers must find replacements for their aging, hardware-based SS7 call routing infrastructure. These replacements must support the latest IP networking protocols for call signaling and enhanced, end-user features and functionality.

### ⌵ The Titan.ium Solution

The solution to this problem isn't yet more expensive, inflexible, and proprietary hardware. The solution carriers are turning to is flexible and cost-effective virtualized servers running on commercial off the shelf (COTS) hardware. Titan.ium's Signaling Transfer Point is a leading example of this sort of solution.

Virtualized Titan.ium STP servers turn an existing hardware-dependent call routing infrastructure into a defined, managed and orchestrated software solution. The benefits of this change can be enormous, allowing operators to meet the demands of an ever-more connected world via a completely refreshed, cost-effective and flexible SS7 network infrastructure.

Modern, agile, and extensible, Titan.ium's virtual STP increases simplicity and flexibility, and improves cost efficiency. Maintenance costs on legacy hardware are up to 30 percent higher than software solutions that while less expensive can do much more. In many cases, replacing legacy hardware can pay for itself in as little as two to three years all while providing additional capabilities such as:

- SIGTRAN compatibility
- Network function virtualization (NFV)
- STP routing throughput rate limiting
- Message modification based on configurable rules

### ⌵ Business Benefits

As a software-based and virtualized solution, Titan.ium's STP provides a clear upgrade path to new telecom services with lower costs and greater performance — all without impacting SS7 revenue.

Titan.ium delivers its STP and an array of other innovative signaling solutions on its Titan Centralized Signaling and Routing Control (CRSC) platform. Titan applications are virtualized and NFV-compliant and are deployed into the customer cloud or onto commercially available hardware, providing optimal network flexibility.

Titan.ium's STP enables carriers to reduce operating costs and increase revenues all while dramatically simplifying the core network. All existing services continue to be supported and new services can be accelerating across multiple generations of networks.

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### Use Case 1 Far East Migration

In a recent migration, Titan.ium engineers helped an Asian network operator move its STP service off of proprietary hardware. The operator's STP service had grown over the years to include custom in-house support, management, and customer service features. Titan.ium transitioned the existing hardware-dependent STP to its virtual STP running on a Titan platform with no disruption to existing services. The operator now has all the services its customers expect on a system that is easier to manage, support, and scale.

Using the underlying flexibility of Titan, Titan.ium's STP can be expanded with additional applications and services, including mobile number portability (MNP), signaling relay function (SRF), and MAP Application Terminating Function (MATF). This achieves efficiencies by simplifying and reducing the signaling in the network.

### Key Capabilities

#### **E1 / T1 / J1 Support**

Titan.ium's STP can be equipped to support traditional TDM SS7 and high-speed ATM SS7, making it a highly flexible and scalable signaling solution for all system architectures, maximizing network investments.

#### **ANSI / ITU Interworking**

Titan.ium's STP provides translation for ITU and ANSI messages.

#### **Capability Point Codes**

The mated pair Titan.ium STP offers the capability to present one-point code to the network for a service. There can be multiple point code services by each mated pair STP.

#### **Point Code Mapping**

Point code mapping allows transparent configuration and manipulation of SS7 nodes without disrupting or reconfiguring the SS7 network

#### **TDM Bridge**

TDM termination and STP can be separated for greater flexibility and reduction of signaling Point Codes, supported MTP2-M2UA.

#### **Global Title Translation (GTT)**

Final and intermediate global title (GT) translations are supported. Variable-length GT and GT prefix, infix, and postfix manipulation are all supported, along with multiple GTT tables.

#### **Gateway MTP/SCCP/ISUP Layer Screening**

MTP, SCCP and ISUP layer Gateway Screening functionality is built-in based on Operator configurable parameter extraction and rules processing.

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### Key Capabilities (continued)

#### **GSM MAP Screening**

GSM MAP screening is supported based on any combination of parameters from the received message and policies. This allows the STP to allow, reject, or re-route any message defined for the case.

#### **Multi-Layer MTP/SCCP Routing Capability**

Titan.ium's STP supports standard MTP and SCCP layer routing, which may be extended by parameter combinations in the received message, locally provisioned data, or even data taken from external sources and policies. Also included is SCCP XUDT to UDT message type conversion.

#### **ISUP OPC/CIC Routing**

ISDN User Part (ISUP) Origination Point Code (OPC) and Circuit Identification Code (CIC) message routing is supported.

#### **Multiple Network Instance Capability**

Multiple network instance capability enables multiple variant (ANSI, ITU, Chinese, and Japanese) and network-indicator combinations that execute simultaneously.

#### **Number Portability**

A number portability dip can be triggered on inspection of any TCAP application (MAP, CAP, INAP, etc.). NP queries can be resolved by a centralized NP service (for example Titan.ium's NP service). Alternatively, the STP can include a local in-memory NP database for low-latency NP resolution.

#### **SS7 Firewall Integration**

The Titan.ium SS7 firewall can be integrated with the STP and other SS7-based Titan.ium applications such as HLR and IN-SCP.

### **Contact Titan.ium Today**

Please visit [www.titaniumplatform.com](http://www.titaniumplatform.com) for product or solution information. For configuration and pricing details, please contact your local account representative via [sales@titaniumplatform.com](mailto:sales@titaniumplatform.com)

### **About Titan.ium**

Titan.ium Platform is a leader in signaling, routing, subscriber data management, and security software and services. Our solutions are deployed in more than 80 countries by over 180 companies, including eight of the world's top ten communications service providers and all of the top five. Titan.ium supports any network, domain, signaling protocol, and infrastructure with advanced routing capabilities and a unified end-user experience.

