

### FEATURES

Adaptable, Scalable Core Platforms

SS7/IP-SIGTRAN/ATM – Any-to-Any Connectivity

Comprehensive Feature Set – Rollout New High-Value Services

Proven Carrier-Grade Reliability

Customer Installable – Reduce E&I Costs



The SEGway™ X301 is PT's midsize carrier-grade platform solution, scalable to meet the needs of small to midsize service providers. The X301 is built on a 7U platform with four payload slots available for low (TDM) and high-speed (IP-SIGTRAN, ATM, Annex A) links. Service providers can use the X301 solution to manage their SS7 network and connect with multiple inter-connectivity partners. Whether the deployment is traditional (TDM, ATM, Annex A) or next-generation (IP), SEGway products can do it all. As with all SEGway systems, this robust carrier-grade offering is designed with PT's own high-quality software and hardware. This architecture gives service providers the reliability and high performance required in today's networks.

#### A Flexible Proven Solution for Growing Networks

SEGway signaling products have been deployed by OEMs and carriers in wireless and wireline configurations worldwide and conform to ANSI and ITU standards. Additional country-specific protocol variants are available upon request. Field-proven for over ten years, our products conform to the latest IETF SIGTRAN protocols, ensuring interoperability.

SEGway X301 core nodes, when deployed with PT's IP-Edge™ systems at a network's edge, offer operators a total network solution with an even more compelling value proposition. This powerful combination delivers to both wireless and wireline service providers a truly enriched package of flexible next-generation capabilities that maximize the value of their signaling networks.

Service providers who compare the overall lifecycle costs of their legacy signaling systems will find that PT's SEGway core products offer unparalleled savings over our competitors on both initial capital and annual operating costs.

#### Rock-Solid Performance and Quality

PT's SEGway products provide superior quality to carriers worldwide. The ability to design and produce our own hardware platforms, coupled with expertise in providing innovative software, enables us to produce high-performance, scalable, and flexible solutions.

# SEGway™ X301 PRODUCT SHEET

Designed for a telecommunications environment, the SEGway X301 is built on PT's 7U high-availability Advanced Managed Platform™. The system supports five-nines (99.999%) availability with built-in redundancy and hot-swap for all active system components. Onboard flash memory provides storage of executables and data, ensuring extremely fast system reload.

## Flexible Connectivity and Scalability

The SEGway X301 supports any-to-any connectivity (SS7, IP, and ATM, Annex A), which makes it well suited for deployment in both TDM, packet and IP-based networks. This multi-protocol, multi-standard platform provides a complete connectivity solution. The X301 scales up to 128 SS7 links with ATM-HSL and up to 1500 SIGTRAN M2PA links with support for multi-variant SS7 and SIGTRAN protocols. The SEGway X301's I/O options include a full array of physical interfaces, such as T1, E1, V.35, ATM, and Ethernet.

## User-Friendly Environment

SEGway solutions are designed with the end-user in mind. An intuitive, easy-to-navigate graphical web-based user interface with pull-down menu selectors assists operations personnel with the configuration of the system. Comprehensive message tracing capabilities allow support personnel to diagnose and troubleshoot problems quickly and easily. Many operators find SEGway systems easy to install and configure themselves after initial training, saving deployment costs.

## World-Class Support

PT manages every aspect of systems development, including hardware, software, integration, and deployment. Our customers benefit from our ability to provide products that are supported directly by our engineering team. This support includes all aspects of technical, OEM, and end-user assistance to ensure a successful product launch and deployment. Our professional services team is available on-site or remotely for engineering and installation activities. We offer a variety of training programs, installation services, 24x7 support agreements, and software maintenance contracts.

## Comprehensive Feature Set

### STP

When configured as an STP node, the SEGway X301 offers all the standard features and functionality expected of an STP solution, including Gateway Screening (GWS) and Global Title Translation (GTT). The SEGway X301 platform offers extended capabilities and features, such as Signaling Gateway (M3UA/SUA) and Point Code Emulation™. With four slots available for I/O, the SEGway X301 platform offers flexibility to interface with traditional SS7 (TDM, ATM, Annex A) and next-generation (IP-SIGTRAN) networks, while providing the ability to incorporate purpose-built application servers integrated into a single platform.

### Signaling Gateway

When configured as a Signaling Gateway node, the SEGway X301 offers the unparalleled performance and functionality demanded from VoIP, wireline, and wireless networks of today and tomorrow. This powerful Signaling Gateway has all the standard features and functionality to support the convergence of legacy SS7 and IP networks.

## IP-Edge

The SEGway X301 may also be configured as an IP-Edge solution, allowing carriers to cap network transport and expansion costs by positioning small, compact, and robust carrier-grade devices within local communities of interest, concentrating SS7 traffic, and backhauling this traffic to an IP-enabled core STP over a managed shared-use IP network.

## Point Code Emulation™

Point Code Emulation is a feature that can be used to significantly simplify and de-risk switch migration activities and allows service providers to grow their signaling networks transparently. This is accomplished by giving the carrier a method to translate between public and private point codes. Private point codes are defined by the carrier and are only visible within the carrier's network. These point codes are mapped to public point code entities visible to the SS7 network.

## Roaming Broker

The Roaming Broker platform enables a GSM carrier to act as a hub for roaming traffic by policing signaling traffic in a centralized location as defined within the GSMA Open Connectivity Roaming Model. Roaming Broker functions as an enhanced SCCP gateway with filtering rules tailored for roaming, which enable carriers to act as brokers between roaming partners. Roaming Broker also has additional interoperability and security mechanisms to simplify provisioning, maximize inter-working, and ensure network integrity.

## SIP Signaling Bridge™

As signaling networks evolve, the SIP Signaling Bridge gives carriers the flexibility to extend their signaling network seamlessly across their SS7 and SIP networks. SCP databases (e.g. 8xx, CNAM, Number Portability) can be easily accessed by SIP clients. Likewise, for carriers introducing SIP-enabled applications into their network, this feature bridges the gap of new service delivery, creating more value for the operator.

# SEGway™ X301 PRODUCT SHEET

## Technical Specifications

### ORDERING INFORMATION

To discuss specific requirements and/or pricing, contact sales@pt.com.

#### Signaling Link Capacity

- SS7 links: 128
- SIGTRAN links: 1500
- ATM links: 32
- Annex A: 16 HSL

#### Protocols

- SS7: MTP2, MTP3, SCCP (ITU, ETSI, ANSI)
- IP/SCTP: M2PA, M2UA, M3UA, SUA
- ATM AAL5, SSCOP, SSCF (QSAAL)
- Annex A
- SIP

#### Feature Options

- STP (MTP3 routing)
- Signaling Gateway (M3UA/SUA)
- IP-Edge
- Point Code Emulation (PCE)
- Global Title Translation (GTT)
- Gateway Screening (GWS)
- Advanced Routing
- SIP Signaling Bridge

#### Hardware

- Platform: 7U NEBS-designed 19-in. rack-mount enclosure

#### Physical Interface

- Four (4) slots available for I/O ports
- I/O slot options:
  - SS7 E1/T1, eight terminations per card
  - ATM HSL (1.544/2.048), eight terminations per card
  - Serial V.35 for low-speed links, eight terminations per card
- Drop and Insert on all channels

#### System Cards

- Redundant processors that provide 120 Gb storage and processing for system operation, administration, and maintenance functions
- Redundant 10/100/1000 Ethernet switching cards for interprocessor communications
- Redundant intelligent system control processors to monitor system health

#### Power and Cooling

- AC input: 110 to 220 V AC (50/60 HZ)
- DC input: -37.4 to -60 V DC
- Four 325 W DC supplies (+5 V @ 120 A, +3.3 V @ 160 A, +12 V @ 20 A, -5 V @ 4 A)

#### Mechanical

- Height: 7U, 311 mm (12.25 in.)
- Width: 436 mm (17.2 in.) without rack-mount flanges. Rack-mount flanges allow for mounting to 19-in. or optional 23-in. racks
- Depth: 431 mm (17 in.)
- Weight: 29.5 kg (65 lb) fully loaded with boards

#### Regulatory Compliance

- Designed for NEBS Level 3 and ETSI installations
- RoHS

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