



Highlights

- >> “Right-Sized” Adaptable 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 Performance Technologies' midsize 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) links. Service providers can use the X301 solution sets to manage their SS7 network and connect with multiple inter-connectivity partners. Whether the deployment is traditional (TDM, ATM) or next-generation (IP), SEGway products can do it all. As with all SEGway products, this robust carrier-grade offering is designed with Performance Technologies' 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 Performance Technologies' 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 Performance Technologies' SEGway core products offer unparalleled savings over our competitors on both initial capital and annual operating costs.

Rock Solid Performance and Quality

Performance Technologies' 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.

Designed for a telecommunications environment, the SEGway X301 is built on Performance Technologies' 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.



SEGway™ X301

Product Overview

Flexible Connectivity and Scalability

The SEGway X301 supports any-to-any connectivity (SS7, IP, and ATM), which makes it well suited for deployment in both TDM 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 64 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. Intuitive, easy-to-navigate screens with pull-down menu selectors assist operations personnel through 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 enough to install and configure themselves after initial training, thereby saving significant E&I costs.

World-Class Support

Performance Technologies 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. Our support includes all aspects of technical, OEM, and end-user support to ensure a successful deployment or product launch. 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 and Global Title Translation, and at the same time 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) 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. SEGway's versatility also includes the ability to extend its capabilities to that of a full-featured routing node (STP), including features such as Gateway Screening, Global Title Translation, and Point Code Emulation.

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IP-Edge

The SEGway X301 may also be configured as an IP-Edge solution, allowing carriers to cap their network transport and expansion costs by positioning small, compact, and robust carrier-grade devices within local communities of interest, concentrating SS7 traffic, and backhauling it 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. It functions as an enhanced SCCP gateway with filtering rules tailored for roaming, which enables carriers to act as brokers between roaming partners. It also has additional interoperability and security mechanisms to simplify provisioning, maximize inter-working, and ensure network integrity.

Additional Capabilities

In addition, the SEGway X301 platform can be equipped with powerful capabilities, such as Gateway screening, Global Title Translation, protocol conversion, and voice pass-through for circuit grooming.



SEGway™ X301

Product Overview

Ordering Information

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



Corporate Headquarters:
Performance Technologies
205 Indigo Creek Drive
Rochester, NY 14626

Tel: 585.256.0200
Fax: 585.256.0791
E-mail: sales@pt.com

Canadian Headquarters:
Performance Technologies
40 Hines Road
Suite 500
Kanata, ON K2K 2M5

Tel: 613.287.5344
Fax: 613.287.5398
E-mail: sales@pt.com

European Headquarters:
Performance Technologies UK Ltd.
Challenge House
Sherwood Drive, Bletchley
Milton Keynes, MK3 6DP

Tel: +44 (0) 1908 646000
Fax: +44 (0) 1908 646001
E-mail: sales@pt.com

www.pt.com

Technical Specifications

Signaling Link Capacity

- SS7 links: 32-128
- SIGTRAN links: 64
- ATM links: 8
- Synchronous T1/E1 HSL: 8

Protocols

- SS7: MTP2, MTP3, SCCP (ITU, ETSI, ANSI)
- IP/SCTP: M2PA, M2UA, M3UA, SUA
- ATM AAL5, SCCOP, SSCF
- Unchannelized E1/T1 – Annex A

Feature Options

- STP (MTP3 routing)
- Signaling Gateway (M3UA/SUA)
- IP-Edge
- Point Code Emulation (PCE)
- Global Title Translation (GTT)
- Gateway Screening (GWS)
- Roaming Broker

Hardware

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

Physical Interface

- Four slots available for I/O ports
- I/O slot options:
 - Channelized E1/T1 for low-speed links, 8 terminations per card, and maximum 32 links per card
 - ATM HSL (1.544/2.048): 2 terminations per card
 - E1/T1 HDLC HSLs
 - Serial v.35 for low-speed links, 8 terminations per card
- Drop and Insert on all channels

System Cards

- Redundant processors that provide 40 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: 100 to 240 V AC (50/60Hz)
- DC input: -37.4 to -60 V DC
- Three 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: 29.55 kg (65 lb) fully loaded with boards

Regulatory Compliance

- Designed for NEBS level 3 and ETSI installations
- RoHS