

# IP-Edge Solutions PRODUCT SHEET

## SEGway™ Product Overview

### FEATURES

Reduced Transport and Operational Costs

Network Diversity

Robust and Fault-Tolerant Network Architecture

Proven Interoperability

Hardware Investment Protection (Upgradeable)

RoHS and NEBS Level 3 Compliant Chassis

#### IP-Edge Functionality

SS7 networks continue to grow and evolve to meet the demands of burgeoning wireless and next-generation networks. Connectivity to STP nodes for SS7 transport is a significant expense to network operators in both transport and link expansion costs. The SEGway™ IP-Edge allows carriers to cap these costs by positioning a small, compact, and robust carrier-grade device within local communities of interest, concentrate their SS7 traffic, and backhaul it to an IP-enabled STP over managed, shared-use IP networks. This deployment architecture provides the added advantage of increasing a network's reliability, making it more robust and fault-tolerant.

#### Powerful Functionality

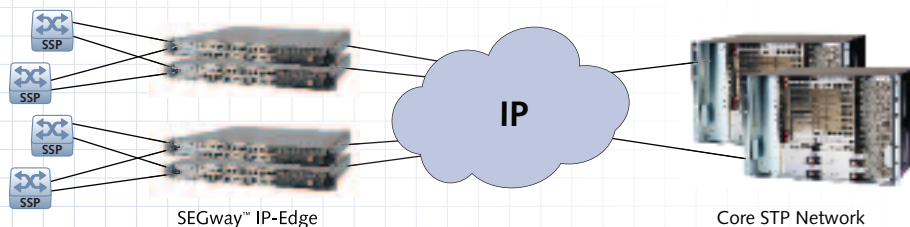
Small, compact, and robust, these carrier-grade devices are positioned next to wireless or wireline network entities, such as Service Switching Points (SSP), Service Control Points (SCP), or Home Location Registers (HLR). These entities are connected with standard SS7 or ATM (TDM) circuits. The SEGway IP-Edge concentrates the SS7 traffic and transports it to a core network STP by

using either the IETF's standards-based M2PA over SCTP or the ATM high-speed links, allowing carriers to reduce traffic backhaul requirements to STPs.

The SEGway IP-Edge gives operators the option to use standard MTP3 A-Link routing to perform local routing of messages or to use the Advanced Managed Routing function to route all traffic through the core network STP.

#### Reduce Network Transport Costs

Connectivity to STP nodes for SS7 transport is a significant expense to network operators both in facility and in link expansion costs. Carriers who use SEGway IP-Edge products can expect to realize a significant reduction in their signaling transmission costs when compared to dedicated TDM circuits. SS7 traffic from expensive TDM circuits may be off-loaded onto shared-use private IP networks. Unused T1/E1 channels can be used for voice pass-through or cross-connect capability. Local A-Link routing reduces backhauled bandwidth requirements.



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## Carrier-Grade Product Offerings

PT's carrier-grade portfolio includes a wide range of modular, standards-based platforms that provide customers with cost-effective choices based upon network growth and reliability requirements. As with all SEGway products, these robust carrier-grade offerings are designed by using PT's own high-quality software and hardware.

### SEGway™ X401

The SEGway X401 platform is PT's high-capacity carrier-grade platform. With the ability to scale up to 1536 SS7 links in a single compact system, the SEGway X401 offers a lucrative ROI for both wireline and wireless service providers who want to take control of their SS7 networks. Ongoing lifecycle costs are well below those of any comparable product on the market today.



Built on our 12U high-availability Advanced Managed Platforms™, the SEGway X401 flexible interfaces include low-speed (TDM) and high-speed (IP-SIGTRAN, ATM, Annex A) SS7 links that are scalable to meet the needs of medium to large service providers. Designed for five-nines (99.999%) reliability, this system includes redundant CPUs, switches, and shelf controllers, as well as dedicated processors with onboard storage for system management and OA&M features.

### SEGway™ X301

The SEGway X301 is PT's midsize platform solution, built to be scaleable up to 128 SS7 links to meet the needs of small to midsize service providers. Based on a 7U platform with four payload slots available for low (TDM) and high speed (IP-SIGTRAN, ATM, Annex A), this solution can be used to manage SS7 network and connect with multiple interconnectivity partners. Designed for five-nines (99.999%) reliability, the system includes redundant CPUs, switches, and shelf controllers.



### SEGway™ X211 and SEGway™ X101

PT's family of small platforms includes the SEGway X101 and SEGway X211. Built on a compact 1U form factor, these systems provide the flexibility to cost-effectively support carriers who require a smaller scale, budget-minded platform with the capability to operate within converged network environments. The SEGway X211 supports a maximum capacity of 64 SS7 links and the SEGway X101 supports up to eight SS7 links. Both systems support TDM and IP-SIGTRAN links, while the SEGway X211 has additional support for ATM and Annex A high-speed links.



	SEGway™ X401	SEGway™ X301	SEGway™ X211	SEGway™ X101
<b>Link Capacity (Logical)</b>				
Low Speed Links per I/O card	128	128	64	8
Low Speed Links per System	1536	128	64	8
ATM QSAAL HSL per System	96	32	4	—
Unchannelized HSL Annex A per System	48	16	4	—
V.35 per System	112	32	—	—
Sigtran M2PA Links per System	3000	1500	64	4
Sigtran SUA/M3UA Associations	3000	1500	64	—
<b>Physical Interfaces</b>				
I/O Cards per System	14	4	3	1
SS7 T1/E1 Ports per I/O Card	8	8	8	8
ATM T1/E1 Ports per I/O Card	8	8	4	—
V.35 Ports per I/O Card	8	8	—	—
Ethernet Connections	4	4	4	3
<b>Other Limits</b>				
Linksets	3000	1500	64	16
Routesets	4000	4000	2048	512
Routes per Routeset	8	8	8	4
Routes per System	8000	8000	8000	1024
Virtual Point Codes	3500	3500	3500	8
Network Appearances	8	8	8	1
ASP Routing Keys	1024	1024	250	250
Gateway Screening	10,000	10,000	—	—
Routing CPUs	2-12	2-6	1-4	1
SCTP Assoc. per Routing CPU	250	250	16	—
Management CPUs	2	2	1	1U
<b>Chassis Physical Specs</b>				
Height	12U	7U	1U	1U
Enclosure	19- or 23-inch rack-mount	19- or 23-inch rack-mount	19- or 23-inch rack-mount	19- or 23-inch rack-mount
Weight	44.2 kg (97.5 lbs)	29.55 kg (65 lbs)	9.06 kg (20 lbs)	6.8 kg (15 lbs)
<b>Transactional Capacity</b>				
Transactions/Second per System	400,000	200,000	10,000	1024

#### Protocols

- GR82-Core (Telcordia®)

#### MTP Specifications

- ITU-T Q.700 through Q.707
- ITU-T Q.703 Annex A
- ANSI T1.111-1992 Message Transfer Part GR246-Core T1.111 (Telcordia)

#### SCCP Specifications

- ITU-T Q.711 through Q.714
  - Connectionless – Class 0 and 1
  - Connection-Oriented – Class 2
- ETSI ETS 300 589
- ANSI T1.112

#### SIGTRAN Specifications

- SCTP: RFC4960
- M2PA: RFC4165
- M3UA: RFC4666
- SUA: RFC3868

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## SEGway™ Product Overview

### ORDERING INFORMATION

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

### CONTACT US



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