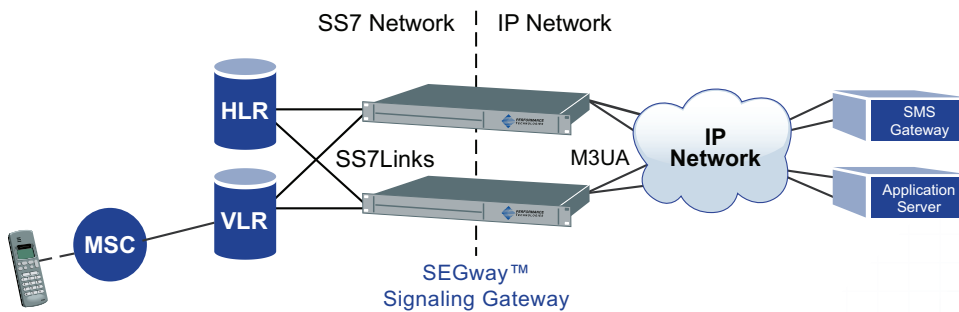


Signaling Gateway SOLUTION SHEET

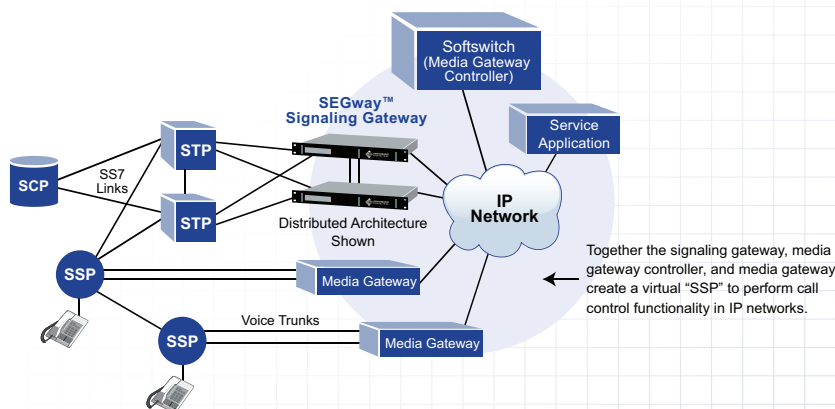
SEGway™ Product Overview

SEGway™ Signaling Gateways offer the unparalleled performance and functionality demanded by voice over IP (VoIP) and wireless networks of today and tomorrow. Designed using the latest industry standards and engineered for reliability, PT's signaling gateways support the convergence of Signaling System 7 (SS7) and IP networks.



An example of a mobile network application using a signaling gateway

When used in conjunction with softswitches, media gateways, and application servers, the signaling gateway provides the SS7 “on-ramp” that enables IP-telephony applications to emulate the call control functionality or service-processing capabilities of traditional circuit-switched telephone network switches, interconnection charges, or point code preservation/conservation.



An example of a VoIP network using a signaling gateway

BENEFITS

- Flexible Configurations
- Network-Proven Solutions
- World-Class 24x7 Support
- Carrier-Grade Product Offering

Signaling Gateway SOLUTION SHEET

Flexible Configurations

SEGway™ Signaling Gateways offer several types of user application interfaces to provide access to the complete SS7 information message stream. Our signaling gateways are designed to be easily adaptable and quickly integrated into the customer's call control or service creation software environment.

SEGway Signaling Gateways support IP connectivity to IP-enabled devices through the latest International Engineering Task Force (IETF) SIGTRAN protocol suite (M3UA and SUA over SCTP). Advanced Gateway Redirection™ goes further than the industry standards and enables even detailed routing and powerful routing keys. Traffic may be redirected to the application based on many MTP and SCCP layer parameters and may be sent to that application in its entirety or as a copy of the original traffic.

Our larger signaling gateway solutions may be licensed to include full STP routing capabilities and all the options available on our SEGway STPs.

SEGway Signaling Gateway software offers a powerful range of configurations. When the software is deployed as a Signaling End Point (SEP), the network provider can connect a number of softswitch and media gateway configurations in widely dispersed geographic areas with the signaling gateway appearing as a separate network entity or "virtual switch" and acting as a single point code to the SS7 network. The software may also be set up to emulate the presence of multiple endpoints via virtual point codes to allow access to more voice trunks and greater traffic distribution.

Network-Proven Solutions

PT's signaling solutions have been deployed for international and domestic applications in wireless and wireline configurations worldwide, including the United States, Canada, France, United Kingdom, Netherlands, Brazil, Mexico, Japan, and China. Our signaling gateways offer multiple co-resident stacks that conform to ANSI, ITU-T, Japanese, and Chinese SS7 specifications. This flexibility allows customers to transparently deploy their own IP network solution throughout the world without needing to rewrite their own software.

World-Class Support

PT understands every aspect of systems development – including hardware, software, integration, and deployment – and offers various aspects of technical, OEM, and end-user support to ensure a successful deployment or product launch. We offer a variety of training programs, 24x7 support agreements, and maintenance contracts.

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. Whether your deployment is more traditional (TDM, ATM) or next-generation (IP), SEGway products can do it all. As with all SEGway products, these robust, carrier-grade offerings are designed with PT's own high-quality software and hardware. In a transitional network configuration, SS7 linksets may be a combination of traditional circuit-switched links and IP links for maximum flexibility.

SEGway™ X401 Signaling Gateway

The SEGway X401 platform is PT's high-capacity carrier-grade application platform designed specifically to meet the growth and reliability requirements for evolving telecommunication networks. With the ability to scale up to 1536 SS7 links with HSL, 3000 SIGTRAN M2PA links in a single compact system and 3000 M3UA/SUA associations, the SEGway X401 offers a lucrative ROI for both wireline and wireless service providers. Ongoing life-cycle costs are well below those of any comparable product on the market today.



When configured as a Signaling Gateway node, the SEGway X401 offers all the standard features and functionality expected, along with the ability to extend its capabilities to that of a full-featured routing node (STP), including features such as Gateway Screening, Global Title Translation (GTT), and Point Code Emulation™. With 14 slots available for I/O and application server blades, the SEGway X401 platform offers unprecedented flexibility to interface with traditional SS7 (TDM, ATM) and next-generation (IP-SIGTRAN) networks while at the same time offering the ability to incorporate purpose-built application servers, all integrated in a single platform.

Built on our 12U high-availability Advanced Managed Platform™, the SEGway X401 flexible interfaces include low-speed (TDM) and high-speed (IP-SIGTRAN, Annex A, ATM) SS7 links scalable to meet the needs of medium to large service providers. Designed for five-nines (99.999%) reliability, the 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 Signaling Gateway

The SEGway X301 is PT's midsize platform solution. With the ability to scale up to 128 SS7 links, it is built to meet the needs of small to midsize service providers. Built on a 7U platform with six payload slots available for low (TDM) and high speed (IP-SIGTRAN, Annex A, ATM), this solution can be used to manage SS7 networks and connect with multiple interconnectivity partners.



When configured as a signaling gateway node, the SEGway X301 offers all the standard features and functionality expected along with 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™. Designed for five-nines (99.999%) reliability, the system includes redundant CPUs, switches, and shelf controllers.

SEGway™ X211 Signaling Gateway

The SEGway X211 is a full-featured signaling gateway in a small 1U MicroTCA chassis. It supports M3UA/SUA SIGTRAN protocols, up to 64 links including SS7, M2PA, ATM and Annex A links. With options such as MTP3 routing, the SEGway X211 offers a very cost-effective solution.



SEGway™ X101 Signaling Gateway

For smaller deployments, PT offers a very economical entry-level Signaling Gateway. Scalable in four, eight, or 16 link configurations, these solutions can grow to meet your network and budget requirements.



Signaling Gateway SOLUTION SHEET

Technical Specifications

	SEGway™ X401	SEGway™ X301	SEGway™ X211	SEGway™ X101
Link Capacity (Logical)				
Low Speed Links per I/O card	128	128	64	16
Low Speed Links per System	1536	128	64	16
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 per System	3000	1500	64	16
Physical Interfaces				
I/O Cards per System	14	4	3	1
T1/E1 SS7 Ports per I/O Card	8	8	4	8
T1/E1 ATM Ports per I/O Card	8	8	4	—
V.35 Ports per I/O Card	8	8	—	—
Ethernet Connections	4	4	4	3
Other Limits				
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	4
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	N/A
Chassis Physical Specs				
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)
Transactional Capacity				
Transactions/Second per System	400,000	200,000	10,000	1024

ORDERING INFORMATION

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

Protocols

- GR82-Core (Telcordia®)
- SIP

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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