

IP Media Gateways: Bridging the Worlds of TDM and IP

The Old and the New

As Internet Protocol (IP) networks proliferate, and Voice over IP (VoIP) and other IP-based communications services and applications enjoy unprecedented popularity, a large number of enterprises still have legacy, TDM-based phone equipment installed in their premises. In addition, as service providers migrate to an all IP-based converged network infrastructure, most must still support TDM-based customers who are connected to the network with digital and analog phones.

Avoiding the "Forklift" Upgrade

Many of these enterprises are keenly interested in cutting their communications costs by implementing a VoIP solution, but are concerned about "forklift upgrading" their legacy telephone infrastructure. They need solutions that will allow them to gradually migrate to an IP-based communications environment while at the same time preserving their investments in legacy Private Branch Exchange (PBX) systems and proprietary digital phone sets.

Service providers are also eager to offer new converged IP network services, and need flexible, scalable, and cost-effective solutions that will allow them to serve both their new VoIP and old Public Switched Telephone Network (PSTN) subscribers with voice, data and multimedia convergence applications and services in a reliable, scalable and timely fashion.

Enabling An Elegant Migration to IP

IP Media gateways convert either voice or signaling information from traditional TDM networks into a format suitable for transmission over IP networks, and are used to extend PBX functionality into an IP network, enable toll bypass between enterprise sites using VoIP, or use legacy digital phones with an IP network. They are an ideal way to provide enterprises with an elegant and highly cost-effective migration path to IP communications that not only preserves a company's investment in legacy equipment, but also provides the means to gradually deploy new feature-rich IP endpoints such as IP phones and PC-based softphones, and deploy new capabilities such as teleworker and virtual IP contact center applications.

IP Media gateways also enable service providers to reduce their time to market in offering next generation, productivity boosting IP-based voice, data, and multimedia convergence services, and provide true, converged network operation and performance.

A Full Suite of Solutions For Enterprises and Service Providers

A new, full suite of cost-effective and highly flexible IP Media Gateway solutions from Intel – from turnkey appliances to all the ingredients necessary to build your own embedded IP media gateways – have been designed to ensure that legacy TDM technology can co-exist with new IP Communications solutions for many years to come.

Intel NetStructure® PBX-IP Media Gateways

The Intel NetStructure® PBX-IP media gateway appliance offers a turnkey solution for integrating legacy PBXs and proprietary digital phones to an IP network. Ideal for enterprise-based Interactive Voice Response (IVR), IP-PBX, Least Cost Routing, and Contact Center applications, the Intel NetStructure PBX-IP Media Gateway appliances feature seamless integration with much of the worldwide installed base of PBXs and digital phones, and support Fax-Over-IP and key supplementary services such as Message Waiting Indication (MWI), transfer, hold, ANI and DNIS.

Intel NetStructure® T1/E1 IP Media Gateways

For larger enterprises and service providers interested in offering new IP-based enhanced services, the Intel IP Media Gateway appliances are also available in single and dual-span T1/E1 configurations in a 19-inch 1U rack-mountable and easily stackable form factor, enabling quick and easy scalability. And like the PBX-IP Media Gateways, the T1/E1 IP Media Gateways have been fully regression tested to ensure interoperability with all industry-leading PBX vendors to ensure "plug and play" operation.

Board-Level Gateways

For application developers who require embedded gateway functionality, Intel NetStructure® Host Media Processing Software Release 2.0 for Windows and Intel NetStructure Digital Network and Station Interface Boards are key ingredients in building a cost-competitive architecture for IP-PBX and contact center applications.



VoIP Media Gateway Reference Platforms

The VoIP Media Gateway Reference Platform is an integrated white-box media gateway designed to introduce VoIP application developers and system integrators to the flexibility and media-processing-specific features of a gateway solution built on Intel® products, including Intel NetStructure® Host Media Processing Software and Digital Network Interface Boards, and Paraxip* Gateway software. It was created to provide a turnkey platform for development, interoperability testing, and pilot deployments.

Signaling Gateways

Service providers use SS7 and SIGTRAN signaling gateways to relay the upper layers of the SS7 protocol across an IP network, allowing next-generation networks to use current circuit-switched and mobile network value-added services. SS7 signaling can also be offloaded onto the IP network or directly to IP endpoints. Scaling from 4 to 128 SS7 links, SS7 signaling gateways from Intel provide SS7 and SIGTRAN connectivity for multichassis call control, wireless, or IN applications. They run a wide range of SS7 signaling protocols and local variants, enabling worldwide deployment in a variety of applications.

Committed to Your Success

In addition to providing all the essential ingredients for delivering industry-leading IP Media Gateway solutions, Intel provides valuable resources—such as the Intel® Communications Alliance, with nearly 200 solutions provider members—to help enable service providers to quickly move to new IP services that delight customers and dramatically shorten time-to-revenue, and allow enterprises to move to enhanced VoIP applications without abandoning their investment in their legacy telephone infrastructure.

For more information about this new suite of IP Media Gateway solutions, and how Intel can help you bridge the worlds of TDM and IP, contact your local authorized distributor, or visit us online at www.intel.com/go/iptoday