

# Dialogic®

## Dialogic® BorderNet™ Session Border Controller Solutions



 Dialogic® BorderNet™  
Session Border Controllers  
 Transform. Connect. Secure.




Mobile Experience Matters™

# Dialogic® BorderNet™ Session Border Controllers Transform, Connect and Secure Today's Networks and Services

Dialogic® BorderNet™ Session Border Controller (SBC) solutions help service providers transform, connect and secure their networks and services. They can help service providers address the real world challenges they face in transforming their networks and services to all-IP and enable them to deliver innovative multimedia services to their customers. BorderNet SBCs can connect diverse mobile, wireline and cable MSO service provider networks and help minimize expensive infrastructure upgrades without having to compromise on quality of service. They also help secure networks from attacks that can lead to outages and help assure service performance and network integrity to maintain a high level of user experience.

The BorderNet SBC Family can help service providers orchestrate and deliver multimedia services between many types of IP and TDM networks in use today. They enable service providers to seamlessly and rapidly deliver value added services (VAS) across network domains and heterogeneous infrastructure environments. BorderNet SBCs provide multimedia connectivity, security, service assurance, optimization and border management capabilities along with regulatory compliance features that offer exceptional CAPEX and OPEX value.

As shown in the graphic below, The BorderNet SBC Family is made up of an array of platform solutions that are well-suited for peering, access and business services applications in both mobile and fixed service provider networks and enterprise environments.

Dialogic® BorderNet™ Session Border Controllers			
<b>Scale</b>			
5000 - 32,000 SIP Sessions			<b>Dialogic® BorderNet™ 4000 Session Border Controller</b>
768 - 2016 GW Sessions Up to 8,000 SIP Sessions		<b>Dialogic® BorderNet™ 3000 Session Border Controller</b>	
4 - 120 GW Sessions 25 - 500 SIP Sessions		<b>Dialogic® BorderNet™ 2020 Session Border Controller</b>	
	<b>Business Services</b>	<b>Access</b>	<b>Peering</b>
	CPE, Edge-SBC, SIP Trunking	SIP Trunking, Retail and Business VoIP, VAS/Cloud Services, Government, IMS	IPX, Peering, Interconnect

## The BorderNet SBC Family of Solutions Includes:

### **Dialogic® BorderNet™ 4000 Session Border Controller**

- High-performance security and session management peering for mobile, wireline and cable MSO applications
- Scales up to 32,000 simultaneous sessions
- Lowers service delivery costs and reduces the time required to interconnect diverse IP endpoints

### **Dialogic® BorderNet™ 3000 Session Border Controller**

- Compact IMS-compliant SBC platform for low-density access and peering applications with “five-nines” availability in a 1RU form factor
- Reduces IP overhead and bandwidth consumption for VoIP sessions by up to 70% without sacrificing voice quality

### **Dialogic® BorderNet™ 2020 Session Border Controller**

- Multimedia SBC platform for VAS, SIP trunking applications and contact centers
- Unparalleled media handling capabilities, including support for video transcoding
- Reduces CAPEX and OPEX through simultaneous support for IP and TDM services and protocols

### **Dialogic® BorderNet™ 500 Enterprise Session Border Controller**

- Secure connectivity at the enterprise network edge for SIP trunking and hosted services
- Reduces CAPEX and OPEX through integrated support for connectivity to legacy TDM end-points
- Used in conjunction with the BorderNet 3000 SBC or BorderNet 2020 SBC to enable service providers to deliver a wide array of business services to their customers



## **World-Class Support Programs**

Dialogic delivers flexible, expert support with a global reach. Customers can choose from an array of contracts and support levels, which allows them to call upon a seasoned team with a proven track record and unmatched product knowledge. Experienced trainers present a wide variety of programs on Dialogic® products throughout the world.

The **Dialogic® BorderNet™ 4000 SBC** is the highest capacity SBC offered by Dialogic and provides security and session management for peering applications in both mobile and fixed environments. Deployed at the network border, the BorderNet 4000 SBC provides comprehensive session security and control, interworking and border management functions that enable operators to offer high quality SIP and H.323 peering services. The powerful routing capabilities and SIP interworking tools built into the BorderNet 4000 SBC can lower service delivery costs and reduce the time required to interconnect diverse IP endpoints. The BorderNet 4000 SBC's WebUI management system can be securely accessed through a web browser and simplifies management and configuration tasks. The WebUI can lower costs by simplifying operations, eliminating operator errors, and delivering enhanced reporting and system status information. The BorderNet 4000 SBC is available in a carrier ready, "five-nines" configuration.

The **Dialogic® BorderNet™ 3000 SBC** combines powerful session management and security functions with "five-nines" availability in a 1RU form factor. The BorderNet 3000 SBC can operate as an IMS-compliant P-CSCF and can also be used for both low-density access and peering applications. Its security functionality includes the use of SIP signaling to control network access; signaling and media denial-of service (DoS) attack prevention; dynamic firewall pinhole control; and network topology and session "route" hiding. Extensive SIP header and parameter manipulation capabilities enable the rapid addition of new peering connections for streamlined service deployment. Service assurance features include SBC call protection, prevention of bandwidth "hogging" and network overload, load balancing, traffic prioritization and Quality of Service (QoS) marking. The BorderNet 3000 SBC also provides media multiplexing between units that can reduce IP overhead and bandwidth consumption for VoIP sessions by up to 70% without sacrificing voice quality.

The **Dialogic® BorderNet™ 2020 SBC** is the most versatile SBC in the BorderNet family. Combining media and signaling in a single unit, the BorderNet 2020 SBC is beneficially able to combine SBC and border element functions needed for access applications on the network edge. This includes applications that involve interworking between SIP and other IP protocols (including SIP-I, SIP-T, SIGTRAN M3UA) and between secure and insecure signaling paths, topology hiding with B2BUA and voice, fax, video, and tone transcoding between networks. Access applications supported include Value-Added Services (VAS), SIP trunking and contact centers. The BorderNet 2020 SBC is also well suited for retail and business VoIP, secure government applications and service provider IP peering applications that require transcoding.

The **Dialogic® BorderNet™ 500 ESBC** handles session border control requirements at the enterprise edge of the customer premise and provides a wealth of connectivity options for hybrid environments. For enterprises wanting to take advantage of the cost-efficiencies of SIP trunking and hosted services, the BorderNet 500 ESBC is well suited to help them. The BorderNet 500 ESBC can work with existing technology to allow authenticated SIP traffic through the enterprise firewall, resolve SIP interoperability issues, provide a wide variety of SIP security features such as B2BUA network elements, deep packet inspection, NAT traversal, SRTP, TLS, and HTTPS and supply a logical service termination point with detailed call quality statistics for managing QoS. Service Providers also can use BorderNet SBC solutions to deliver advanced business services to their customers. For example, By deploying BorderNet 500 ESBCs at customer premise locations in conjunction with either a BorderNet 3000 or BorderNet 2020 SBC in the core, service providers can make available an array of managed business services including SIP trunking.

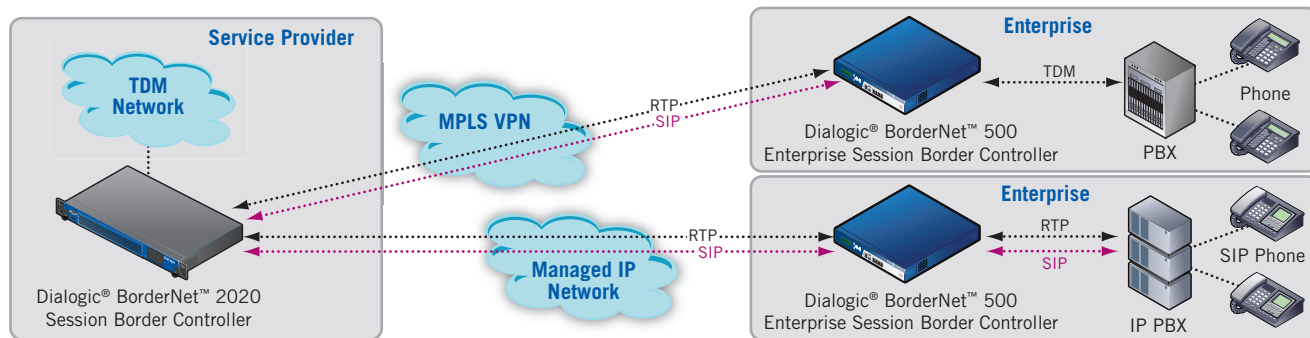
## SIP Trunking and Hosted Services

A SIP trunking service can offer significant cost-savings to enterprises by allowing them to use very cost-effective SIP trunks in place of expensive PSTN trunks. Instead of dedicated TDM connections delivered by the service provider to businesses, a SIP trunk allows traditional fixed PSTN lines to be replaced with connectivity via an IP connection.

The BorderNet Family of SBCs can play a critical role for service providers wanting to deliver a business service involving SIP trunking, as well as enterprise customers wanting to take advantage of the reduced costs and added features. A BorderNet 500 ESBC can be used at the enterprise edge to provide seamless legacy firewall traversal, SIP security and interoperability and a logical service termination point that allows the monitoring and management of call quality.

At the enterprise edge, the BorderNet 500 ESBC provides enterprise-focused SBC functionality for hosted services as well as for SIP trunking, including seamless and secure firewall traversal and QoS monitoring.

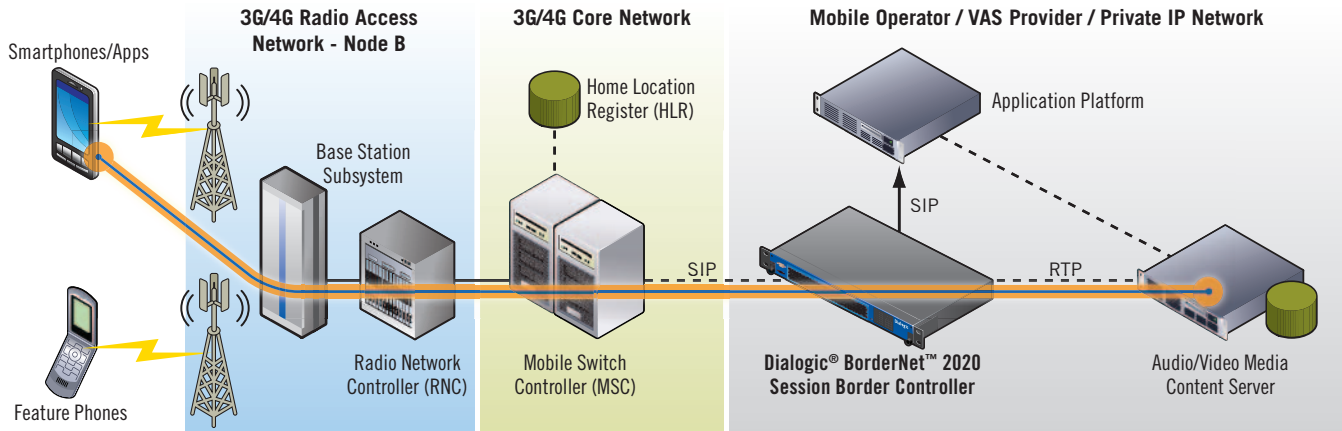
On the service provider side, a BorderNet 2020 SBC can terminate the SIP trunk and connect to the SS7/PSTN network and handle switching, signaling and media processing in a single unit while relaying calls and performing classic session border control functions. Although the diagram below shows a simplified view of SIP trunking service, a single BorderNet 2020 SBC can handle thousands of calls per minute while supplying secure session management to multiple enterprise installations with BorderNet 500 ESBCs connecting to VoIP or legacy TDM equipment.



## Value Added Services

Value Added Services are a rapidly growing set of interactive applications that can help increase revenue and customer satisfaction simultaneously. Consumers eagerly use them for information, entertainment, gaming and more. Businesses value them for advanced messaging, conferencing, efficient self-service, customer care and other productivity enhancements.

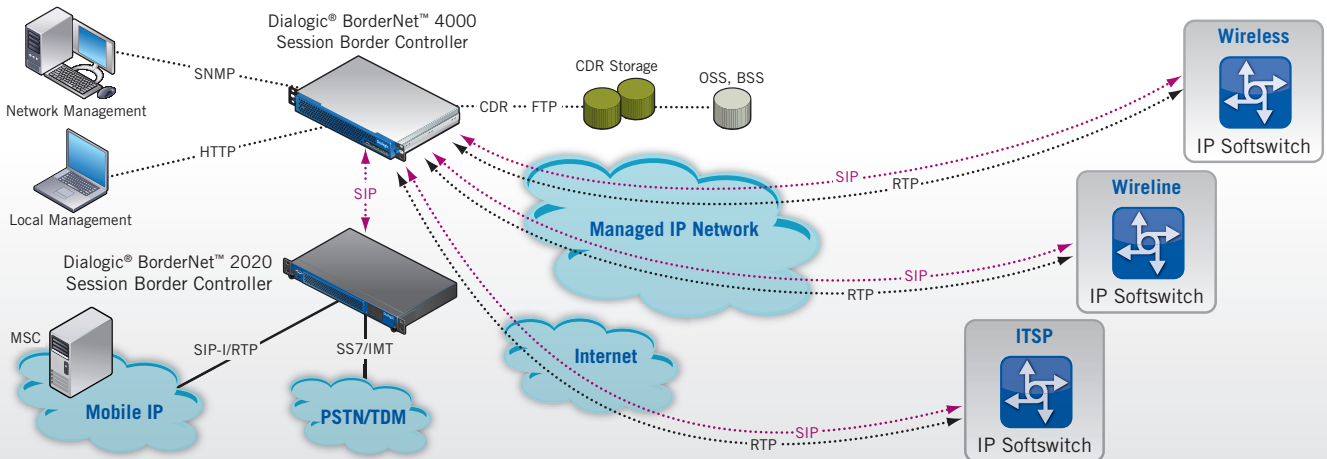
The BorderNet 2020 SBC provides carrier-ready secure interconnection across IP borders and Service Level Agreement (SLA) assurance, along with multimedia transcoding and IP signal interworking for application platforms on which a service provider has chosen to develop and deliver services. The BorderNet 2020 SBC enables subscribers to connect securely to SIP-based services such as conferencing and missed call notification from a diverse set of SIP or other IP endpoints such as smartphones.



## Wholesale IP Services

The wholesale telecommunications market is extremely competitive. Wholesale service providers are called upon to deliver high-value, low-cost solutions quickly and securely to their demanding customer base of wireline, wireless, and internet service providers. To deliver competitive value at the right price point, wholesale providers look for products that supply high reliability and high voice quality, as well as impeccable security and additional services such as monitoring.

The BorderNet 2020 SBC can simultaneously support both TDM and IP connections. This makes it a compelling solution for wholesale IP voice applications since calls today originate on many different networks and require a service provider to handle multiple variants of SS7 and SIP simultaneously. For high capacity IP wholesale applications, the BorderNet 4000 SBC is a powerful IP services platform that can provide security and session management with very low CAPEX and OPEX, SLA assurance, sophisticated accounting features, and the robust reliability that wholesale customers desire. For bandwidth constrained applications, the BorderNet 3000 SBC bandwidth optimization feature enables low-cost, high-quality wholesale IP services by reducing bandwidth usage by up to 70% without sacrificing voice quality.



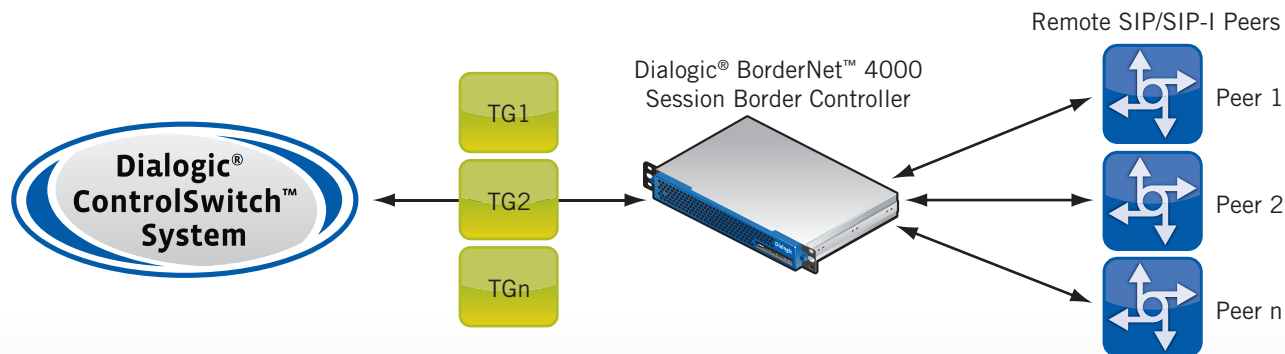
## Interconnect for Peering

Peering offers many benefits for providers, including the ability to deliver improved service because of increased redundancy, capacity, and routing control, along with better performance with fewer potential bottlenecks. But as peering opportunities grow, so does network complexity and the need to provide reliable and secure network interconnect.

The BorderNet 4000 SBC is capable of delivering comprehensive session security and control, interworking, and media management functions at the network border that enable service providers to offer high-quality SIP and H.323 peering services. The powerful routing capabilities and browser-based SIP interworking tools built into the BorderNet 4000 SBC can contribute to lower service delivery costs and reduced time required to interconnect diverse IP endpoints in increasingly complex interworking situations.

The BorderNet 4000 SBC can also provide a first line of defense against fraud and malicious attacks with its set of layered security capabilities that can keep network services and quality uncompromised.

In addition to its strong capabilities in peering applications, the BorderNet 4000 SBC seamlessly integrates with the Dialogic® ControlSwitch™ System. When deployed with the ControlSwitch System, the BorderNet 4000 SBC can act as a security gateway for both SIP and H.323 traffic. Unlike standalone SBCs, management of the BorderNet 4000 SBC is integrated into the Dialogic® ControlSwitch™ Element Management System (EMS). This integration allows, for example, ControlSwitch System IP trunk group provisioning to be done through the BorderNet 4000 SBC using the ControlSwitch EMS, which can significantly reduce the complexity of managing IP peering connections.



# Dialogic®

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