

Frequently Asked Questions

(Dialogic® BorderNet™ 500 Gateways)

Q: What is a Dialogic® BorderNet™ 500 Gateway, and what are its main functions?

A: A Dialogic® BorderNet™ 500 Gateway consists of a full featured enterprise Session Border Controller (SBC) and a full featured enterprise media gateway together in a single 1U enclosure. The product was developed by adding the Ingate SBC function, which was licensed by Dialogic, to the Dialogic® Enterprise Media Gateway function and integrating these two pieces into a single product.

Q: Why would I need a Dialogic® BorderNet™ 500 Gateways if I intend to connect SIP Trunks, or utilize hosted SIP services, within my enterprise or branch office?

A: When connecting a SIP Trunk to your enterprise or branch office, you are exposing your internal network to denial of service attacks, SPAM, SPIT, and other IP security issues. The session border control function within the BorderNet500 Gateways can prevent these and many other security concerns and protect your internal network from external network, or internet, attacks.

Q: If I am migrating to SIP Trunks, why do I need a gateway function at my network edge?

A: Although the migration to VoIP is progressing at an ever faster pace, there remains a large installed base of legacy telephony equipment. The gateway functionality within the BorderNet500 Gateways enables the connection of SIP Trunks to an enterprise or branch office without requiring upgrades or forklifts of the existing telephony equipment. Additionally, even if the premise contains an IP-PBX, the gateway function of the BorderNet 500 can provide failover routing to the PSTN in case of issues on the SIP Trunks for a more resilient communications infrastructure.

Q: What is Firewall / NAT traversal, and why do I need it?

A: Network Access Devices, such as firewalls, are commonly used to enhance network edge security. SIP does not natively pass through Network Access Devices; therefore, NAT traversal capability is required to allow the SIP streams to pass through, or traverse, the firewall or other Network Access Device. The BorderNet500 Gateways have both near end and far end NAT traversal capabilities to allow for SIP streams to pass through co-located NAT devices, as well as remote NAT devices.

Q: If I have SIP equipment deployed on my premise, but it is unable to communicate natively with my SIP providers trunks, will a Dialogic® BorderNet™ 500 Gateway provide the translation to enable these disparate SIP devices to communicate?

A: Because SIP is a standard which has many areas that are open to interpretation, SIP implementations can be incompatible with one another. BorderNet 500 Gateways have a rich set of features to enable SIP-to-SIP interoperability, such that in many cases they can enable disparate SIP devices to communicate with one another that would otherwise be unable to do so.

Q: What are the primary functions of Dialogic® BorderNet™ 500 Gateways?

A: The BorderNet 500 Gateways provide the following high level functions:

- 1) NAT Traversal – allows SIP streams to pass through the firewall and NAT devices;
- 2) SIP Interoperability – enables connection of incompatible SIP equipment;
- 3) SIP Security – prevents denial of service, SPIT and SPAM attacks as well as encrypting both the signaling and media stream to enable secure communications
- 4) Legacy Integration – allows for realization of the benefits of SIP Trunking and hosted SIP services without the need to replace or upgrade legacy telephony equipment; and
- 5) Demarcation – provides a clear demarcation point between the enterprise and service provider networks.

Q: Can I use a Dialogic® BorderNet™ 500 Gateway as a Microsoft Office Communications Server Survivable Branch Appliance (SBA)?

A: No. Although the basic architectures of a BorderNet 500 Gateway and a Dialogic® 4000 Media Gateway with SBA upgrade are the same, the BorderNet 500 is built on a lower cost server running the Linux operating system, and therefore does not have the processing power to run the SBA application.

Q: What hardware versions of the Dialogic® BorderNet™ 500 Gateways will be made available for customers?

A: Initially, there will be four different hardware versions: one version with no TDM interfaces, IP only, with a base configuration supporting 25 IP-to-IP sessions which is licensable up to a maximum of 150 IP-to-IP sessions; another version with 4 BRI ports, or 8 channels; another version with a single T1/E1 span, and another version with 4 T1/E1 spans.

Q: What other companies offer products that compete with or are comparable to the Dialogic® BorderNet™ 500 Gateways, and what features set the BorderNet 500 Gateways apart from those products?

A: Products we foresee as likely or possibly competing with or being comparable to the BorderNet 500 Gateways including the Acme Packet Net-Net Series SBCs, Adtran Netvanta, Audiocodes MSBG, Cisco CUBE, and NET VX and UX Series. Based on internal evaluations of the BorderNet 500 Gateways versus these products, it is Dialogic's belief that the BorderNet 500 Gateways offer more robust support for SIP Trunking while also having wide ranging interoperability and including features that enable the gamut of SIP applications with an eye toward enabling quick and simple Unified IP Communications.

Q: Some other products offer T1 router functionality. What about the Dialogic® BorderNet™ 500 Gateways?

A: Not at this time. However, many Dialogic customers report that their service providers drop a T1 router at their location as a part of their service package. Therefore, we don't see this as an issue for most of our enterprise customers.

Q: The Dialogic® BorderNet™ 500 Gateways have separately licensable software modules; what is the base functionality of a BorderNet 500 Gateway with no additional software modules added?

A: The following is the base functionality shipped as part of each BorderNet 500 model:

- SIP Proxy
- B2BUA
- Advanced Dial Plan capabilities, including source-based matching, regular expression handling, Domain handling and Time of Day handling
- Basic Denial-of-Service (DOS) attack prevention
- Encryption, TLS and SRTP, but no RTP to SRTP transcoding
- Advanced SIP routing
- Support for capacity for 10 user registrations. Additional registrations are provided as part of the SIP Registrar Module

Q: The Dialogic® BorderNet™ 500 Gateways have separately licensable software modules: what are the modules and their functionality?

A: The following are the separately licensable software modules, and a brief description of each module:

- **Remote Connectivity Module (BN500SWRCM)** - Extends SIP capabilities to employees working remotely; manages remote NAT traversal from a central firewall, and includes a STUN (Simple Traversal of UDP through NAT) server that allows NAT clients (for example, a computer behind a firewall) to set up phone calls to a VoIP provider hosted outside of the local network.
- **QoS Module (BN500SWQOSM)** - Sets priorities for different types of data and allocates bandwidth for various purposes, for example, to give priority to VoIP. The QoS Module can support dynamic prioritization and bandwidth allocation. Prioritization can be set based on the type of network traffic, including services protocol and/or port, packet size, SIP traffic, and IP address. The traffic types can be identified according to sender, receiver, application, Type-of-service (TOS) value or DSCP value.
- **Enhanced Security Module (BN500SWESM)** - Provides encryption and intrusion detection and prevention for SIP. Increases the security of the BorderNet 500 Gateway by supporting transcoding between RTP and SRTP as well as transcoding between different coding schemes within SRTP. Also enhances the basic Denial-of-service (DOS) protection of the BorderNet 500 to protect against intelligent DOS attacks.
- **VoIP Survivability Module (BN500SWVSM)** - Enables redundancy in a SIP-based environment for secure hosted VoIP services. This Module is targeted at situations where the local end points are registered to a hosted registration server. The VoIP Survivability Module copies the key user settings and registrations from the hosted server into the BorderNet 500 Gateway so that if the connection to the hosted server is severed the Gateway can maintain on premise routing and re-route external calls to the PSTN. The VoIP Survivability Module has been validated with the Broadworks VoIP application platform.

- **SIP Registrar Module** (BN500SWSRM) – Enables the RADIUS interface capabilities and also enables a local Registrar capability. In this situation, the local endpoints register with the BorderNet 500 Gateway as their primary registration server.
- **Additional SIP Traversal Channel** (BN500SWASTC) – Each of these licenses adds one more SIP-to-SIP session to the BorderNet 500 Gateway unit. The maximum number of SIP-to-SIP sessions that can be supported by any of the BorderNet 500 units is 150 sessions.

Q: Do the Dialogic® BorderNet™ 500 Gateways support fax?

A: The answer at this time is not straightforward. The plan is to support T.38 fax on every BorderNet 500 Gateway SKU in the future. At this time, however, the situation is different for the various hardware SKUs:

- BN500IP – Only supports pass through of fax at this time. It can pass through either G.711 or T.38, but it cannot do translations between them.
- BN508BRI – Supports G.711 and T.38 pass through as well as translation between TDM and T.38. Also supports full density V.34.
- BN501PRI – Supports only G.711 and T.38 pass through. Does not support any TDM-to-T.38 at this time.
- BN504PRI - Supports G.711 and T.38 pass through. TDM-to-T.38 support can be enabled to support V.34 via a separately purchased V.34 fax license.

Q: How many SIP-to-TDM sessions are supported for each available device (*)?

A:

0	for the BN500IP
8	for the BN508BRI
30	for the BN501PRI
120	for the BN504PRI

Q: How many routing entries are available at each available device (*) ?

A:

25	for the BN500IP
8	for the BN508BRI
30	for the BN501PRI
120	for the BN504PRI

Q: How many SIP-to-SIP entries are available at each available device (*) ?

A:

25	for the BN500IP
8 – N° of SIP-to-TDM entries	for the BN508BRI
30 – N° of SIP-to-TDM entries	for the BN501PRI
120 – N° of SIP-to-TDM entries	for the BN504PRI

For each SIP-to-SIP session in use there will be one TDM port which will become unused or without resources to be routed

- Q: What happens if I need all TDM ports to be routed to SIP but I still need SIP-to-SIP sessions on the same device ?
- A: You need to purchase “**BN500SWASTC M01-206-01 Additional SIP Traversal Channel, 0 TDM Ports, 1 SIP-to-SIP Session**” one per each SIP-to-SIP session you need. You can also do the same for the **BN500IP**.
- Q: Which is the max. number of sessions/routing entries (TDM-to-SIP & SIP-to-SIP) supported by any device considering the additional licenses ?
- A: 150
- Q: Which is the max. number of endpoints that can be registered to any **BN500** without purchasing additional licenses ?
- A: 10
- Q: What happens if we need to get more than 10 devices registered to the device ?
- A: We need to purchase one “**BN500SWSRM M01-205-99 SIP Registrar Module, N/A TDM Ports, N/A SIP-to-SIP Sessions**”
- Q: How many endpoints can be registered to the device with a Registrar Module ?
- A: There’s no limit.
- Q: What is the meaning of “**BN500SWASUR M01-205-01 Additional SIP User Registration, N/A TDM Ports, N/A SIP-to-SIP Sessions**” ?
- A: Please not consider this SKU, it will be removed from the web site.

(*) without any extra license

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