

Ingate Firewall 1900

Designed for large enterprises, the **Ingate Firewall® 1900** from Ingate® Systems is a full-featured VoIP-enabling firewall with full support for SIP (Session Initiation Protocol) - that offers large corporations secure, complete support for IP live communications, including VoIP, IM and video applications. It is the largest Firewall in the Ingate line of award-winning SIP-capable products.

SIP-based live person-to-person communication does not traverse common NATs and firewalls, as they are not specifically designed to accept the SIP protocol. The **Ingate** SIP-capable Firewall addresses this issue and enables SIP-based communication to traverse the NAT/firewall and reach users while maintaining control over the enterprise network. The Firewall 1900 also solves far-end NAT traversal to extend the SIP capabilities within the corporate network to remote workers.

Maintaining the highest level of VoIP security, Ingate's SIP proxy-based Firewall delivers maximum control over SIP signaling, traffic and network security, creating one truly converged network for both data and VoIP. With **Ingate** products, enterprises can use VoIP and other live communications on the LAN and globally over the Internet or private IP networks.

INGATE FIREWALL 1900

The **Ingate Firewall 1900** has eight interfaces, two of which are mini Gbic, that can be used for fiber optic interfaces for greater flexibility and offers a total of 2600 Mbit/s throughput. The Firewall 1900 is capable of handling 1500 concurrent VoIP calls (e.g. RTP sessions), making it ideal for large enterprises.

Included with the **Ingate Firewall 1900** are 25 SIP traversal licenses, allowing up to 25 calls to traverse the Firewall simultaneously. Additional traversal licenses can be purchased at any time.

All **Ingate Firewalls** are fully featured, supporting stateful inspection and packet filtering with rules defined and maintained by the network security administrator utilizing the GUI. **Ingate Firewalls** include an encrypted Virtual Private Network (VPN) termination module. In addition to complete SIP support, **Ingate Firewalls** have a proxy for all standard protocols, including TCP, UDP, FTP and DHCP.

TRUSTED SECURITY FOR VOIP, IP APPLICATIONS

The **Ingate Firewall** SIP-proxy architecture grants fully secure traversal of the SIP-traffic. The ports for the media streams are only opened between the specific parties of a call and only for the duration of the call. The SIP-proxy inspects the SIP packets before sending them on. TLS and SRTP encryption ensures privacy, making call eavesdropping, call hijacking and call spoofing harder to do. **Ingate** also supports authentication of users and servers.

SUPPORT FOR SIP TRUNKING

More and more Internet Service Providers offer a SIP trunk - a combined Internet and voice connection. For enterprises with an IP-PBX this is an ideal cost-saving solution as they no longer need local PSTN gateways or costly PRIs/BRIs. However, the SIP traffic, as all other data traffic, needs to traverse the enterprise firewall. **Ingate Firewall 1900** handles the firewall and NAT traversal using the built-in SIP proxy.

CHOOSE THE RIGHT FEATURES FOR YOUR NETWORK

Ingate offers several other add-on software modules that allow you to tailor the Firewall to meet the specific demands of your business. Ingate Quality of Service (QoS) sets priorities to different kinds of data and allocates bandwidth for varied purposes - for instance, giving priority to VoIP.

Ingate Remote SIP Connectivity extends the SIP capabilities of the enterprise to employees working remotely (home office workers, road warriors, etc.). Remote SIP Connectivity manages the traversal of the remote NAT from the central **Ingate Firewall** and also includes a STUN server.

Ingate VoIP Survival adds a whole new dimension to hosted VoIP service by securing full redundancy in a SIP-based hosted IP-PBX environment all the way out to the customer premises. It serves as a backup to enhance the reliability and availability of a VoIP application platform.

Ingate Enhanced Security Module provides Intrusion Detection and Intrusion Prevention for SIP as well as encryption of the communication. The SIP Registrar Module allows for making the **Ingate** Registrar the primary registration server.

ADD GLOBAL VOIP CONNECTIVITY TO YOUR IP-PBX

The **Firewall 1900** opens up a world of possibilities and cost savings when used with a SIP based IP-PBX. Businesses can route telephone calls via IP, not only between branch offices and home workers, but also to offices and other users using SIP-based Internet telephony. No longer limited to telephony voice, communication can also include video, instant messaging, presence and more.

In addition, the **Firewall 1900** makes it possible for home workers, road warriors and even branch offices to belong the same central IP PBX -- with the highest level of security. The 1900 also affords the possibility to set up a private VoIP network, if preferred. Advanced IPPBX functions are supported, including such as call transfer, call hold and voicemail.

FREE SOFTWARE UPGRADES FOR THE FIRST YEAR

The **Ingate Firewalls 1190** have no data user restrictions. Software upgrades are free for the first year. Thereafter, an annual licensing fee will apply. New software versions can be downloaded quickly and easily online from the Ingate website.

TECHNICAL SPECIFICATIONS INGATE FIREWALLS	1190	1500	1550	1650	1900
Interfaces (10/100 Mbit/s)	3	0	0	0	0
Interfaces (10/100/1000 Mbit/s)	0	4	4	4	6
Interfaces SPF (mini Gbic)	0	0	0	0	
Redundant power supply	no	no	no	no	yes
Flash disk for system operation	yes	no	no	no	yes
Dimensions WxDxH (cm)	228x146x44	430x369x44	430x369x44	430x369x44	430x485x88
Certifications	CE, FCC, UL	CE, FCC, UL	CE, FCC, UL	CE, FCC, UL	CE, FCC, UL
Performance					
Throughput (Mbit/s) (1.500 byte packets)	50	330	380	385	00
Packets per sekund (46 byte packets)	4.500	8.500	75.000	15.000	30.000
VPN tunnels	5	100	00	400	800
3DES (168-bit) (Mbit/s) (1438 byte packets)	10	45	55	65	110
AES (128-bit) (Mbit/s) (1438 byte packets)	15	60	80	85	190
SIP connection setup (SIP + RTP)	0.15s	0.15s	0.15s	0.15s	0.15s
RTP data delay (10 Mbit/s/100 Mbit/s)	0.19/0.08 ms	0.19/0.08 ms	0.19/0.08 ms	0.19/0.08 ms	0.19/0.08 ms
Number of concurrent RTP sessions (voice sessions G.711)	40	150	300	650	1.500
Concurrent encrypted RTP sessions (both SRTP and TLS)	0	75	150	330	750
Busy hour call attempt	36.000	7.000	7.900	7.900	34.000
Administration					
Automatic check for new releases	yes	yes	yes	yes	yes
Configuration options: Web GUI (HTTP, HTTPS) and CLI (SSH, serial cable)	yes	yes	yes	yes	yes
DHCP client and PPPoE	yes	yes	yes	yes	yes
DHCP server	yes	yes	yes	yes	yes
SNMP	yes	yes	yes	yes	yes
Max number of VANS (80.1q compliant)	16	3	64	18	56
Internal log to HD	yes	yes	yes	yes	yes
Logging to PCAP file	yes	yes	yes	yes	yes
Syslog	yes	yes	yes	yes	yes
E-mail events	yes	yes	yes	yes	yes
Support for failover multiple ISPs	yes	yes	yes	yes	yes
External RADIUS server authentication for IPsec, GUI and SIP	yes	yes	yes	yes	yes
Free software upgrades	Firstyear	Firstyear	Firstyear	Firstyear	Firstyear
Firewall functionality					
Stateful inspection	yes	yes	yes	yes	yes
Packet filtering	yes	yes	yes	yes	yes
DHCP proxy	yes	yes	yes	yes	yes
Proxies for TCP, UDP and FTP	yes	yes	yes	yes	yes
Flexibel NAT and PAT	yes	yes	yes	yes	yes
VPN functionality					
X.509 certificate or shared secret	yes	yes	yes	yes	yes
Generating of X.509 certificates for clients	yes	yes	yes	yes	yes
PPTP server	yes	yes	yes	yes	yes
IPsec (3DES, AES, NULL, MD5 and SHA1)	yes	yes	yes	yes	yes
SIP functionality					
SIP proxy	yes	yes	yes	yes	yes
SIP registrar	yes	yes	yes	yes	yes
SIP traffic to private IP addresses (NAT/PAT)	yes	yes	yes	yes	yes
Billing and authentication for SIP users from external RADIUS server	yes	yes	yes	yes	yes
SIP connect compliance	yes	yes	yes	yes	yes
Add-on modules					
SIP Trunking (connecting an IP-PBX to an ITSPs SIP trunk)	yes	yes	yes	yes	yes
Remote SIP Connectivity (Far-end NAT-passering incl. STUN-server)	yes	yes	yes	yes	yes
QoS (bandwidth limitation and prioritization)	yes	yes	yes	yes	yes
Enhanced Security (IDS/IPS for SIP, SRTP and TLS)	yes	yes	yes	yes	yes
VoIP survival (VoIP redundance internet connction fails)	yes	yes	yes	yes	yes
SIP Registrar Module (Ingate is used as the primary SIP registrar)	yes	yes	yes	yes	yes