Dialogic® Brooktrout® SR140 Fax Software

Dialogic® Brooktrout® SR140 Fax Software, a host-based Fax over IP (FoIP) engine, brings the power of industry-leading Dialogic® Brooktrout® fax hardware products to software-based solutions.

Using Brooktrout SR140 enables Dialogic's partners to focus on increasing the value of their document management and business process automation solutions while maintaining regulatory compliance with directives such as HIPAA and Sarbanes Oxley. A software-based solution also can make it easier to move toward virtualized or cloud-based architectures and create highly available and scalable platforms or services.

Dialogic® BrookTrout® SR140 Fax Software

Features	Benefits
T.38 IP fax protocol implementation encapsulates Dialogic® Brooktrout® T.30 fax data stream	Leverages over 25 years of experience with the T.30 stack, which Dialogic enhances to maintain interoperability with new fax equipment and to enable a high degree of reliability and efficient fax processing
G.711 fax pass-through	Can support fax on an IP network when a gateway or IP network operator does not support T.38, broadening the range of possible installations
V.34 transmission speeds for both T.38 and G.711	Can process faxes at twice the speed of V.17 fax products, reducing long distance toll costs
T.38 Internet Aware Fax (IAF) over UDP	Supports ITU-T T.38 Recommendation defining a real-time method for sending faxes directly between two FoIP endpoints over an all-IP network, eliminating TDM, G.711, and modem-derived speed limitations
SIP over TLS and SRTP fax security	Provides signaling and media encryption for secure fax communication; supports FIPS Object Module, which is required for JITC certification
API support for collection of network quality metrics	Useful in determining suitability of underlying fax transport, such as an IP network, for providing fax service
Voice play and record and DTMF detection and generation	Allows fax integration into IVR and call center systems for improved customer satisfaction
Server virtualization support	Enables the deployment of fax server applications on virtual machines with leading server virtualization software, which increases data center efficiency and provides failover for "mission-critical" fax applications

Two License Options Available

Brooktrout SR140 is scalable from two (2) to hundreds of ports, depending upon the FoIP transport method, application demands, operating system, physical or virtual machine, and host processor capacity. Channels can be added as needed by purchasing and installing additional software license keys up to the maximum supported. Two license versions are available:

- **SR140** — provides a rich set of FoIP features and functions suitable for high-speed, high-density fax production environments in both enterprise data centers and hosted service provider networks. Disaster recovery licenses are available for creating a backup system, which can be used if there is an interruption in service. This license is referred to as the "full SR140 license" below.

- **SR140-L** — provides a more basic feature set for lower density fax processing environments

Time-Tested, Industry-Leading Fax

Dialogic delivers time-tested industry-leading fax technology, offering a broad range of fax and FoIP products, which are supported by software partners around the world. Brooktrout SR140 can deliver highly reliable FoIP by using the T.38 fax protocol to send real-time fax messages over IP networks. Because the T.38 protocol retains the standard T.30 fax data stream, it can be used with legacy T.30-based devices and with newer T.38-based solutions. With over 20 years of experience, the Dialogic® Brooktrout® T.30 implementation can lay claim to being the most thoroughly field-tested offering as compared to those of all other fax technology vendors.

FoIP solutions built using Brooktrout SR140 can send and receive IP faxes at up to 33.6 kbps, based on the V.34 fax standard. Not only can Brooktrout SR140 process fax at twice the speed of 14.4 kbps fax boards, but it also supports V.8 fast handshaking and advanced compression, which can cut call setup and session-management time by one-third. A document that can be faxed in one minute with a 14.4 kbps intelligent fax board can be sent in less than 30 seconds with an application using Brooktrout SR140. This can translate into significant savings on long distance toll charges. In addition, SR140 optionally supports the ITU-T T.38 Recommendation for Internet Aware Fax (IAF), which defines a real-time method for sending faxes directly between two FoIP endpoints over an all-IP network. During Dialogic-conducted testing between two locations over a SIP trunk, a 15-page document that took ten (10) minutes to transmit using T.38 V.17 took only six (6) seconds using T.38 IAF. Dialogic has refined its T.30 implementation to account for numerous T.30 variants, which helps make fax processing reliable and leads to customers saving time and money. The T.38 stack has also undergone significant interoperability testing with other IP vendors, helping to provide flexibility and reliability when SR140 is deployed into IP networks.

Enabling FoIP When T.38 Is Not Supported

G.711 fax pass-through is supported by the full SR140 license version. While more susceptible to possible IP network issues, such as packet loss, jitter and latency, G.711 fax pass-through provides an option for enabling FoIP when T.38 is not supported.

Support for RFC 6913

SR140 supports IETF RFC 6913 for Indicating Fax over IP Capability in the Session Initiation Protocol (SIP). This feature allows service providers to selectively route FoIP calls over specific networks and improve the reliability of global FoIP faxing.

Fax Security

SR140 optionally supports both SIP over TLS and SRTP. SIP over TLS secures the SIP signaling exchange, while SRTP secures the RTP fax media stream when using G.711 mode. Changes are not required to an existing SR140-based application in order to implement SIP over TLS and SRTP.

Common Fax API for Both TDM and IP

Brooktrout SR140 supports the Dialogic® Brooktrout® Bfv API, the same API used by all Brooktrout fax products. Developers can choose to write one application to the Bfv API and deploy it on both TDM and IP equipment. This dual-network support also allows developers who wish to sell into both TDM and IP accounts to use either Dialogic® Brooktrout® TR1034 Fax Boards or Brooktrout SR140 as the fax technology in their solutions.

Technical Specifications

Basic Functions By License Version

	Full SR140 License Version	SR140-L License Version
Density	2 to hundreds of channels per system	2 to 8 channels per system
Fax transport mode	ITU T.38; G.711 pass-through	T.38
Fax transmission speed	V.17; V.34	V.17
Fax modems	ITU T.30 Group 3 V.34, V.17, V.29, V.27ter, V.21 and V.33 modulation with auto fallback	ITU T.30 Group 3 V.17, V.29, V.27ter, V.21 and V.33 modulation with auto fallback

Features and Functions (common to both SR140 license versions)

Virtualization	Up to 4 virtual machines per physical server, depending on application and server used
Image format	MH, MR (ITUT.4), MMR (ITUT.6)
Page format	A4, A3, and B4 with scaling
Resolution	100x100, 200x200, 300x300, 400x400, 600x600, 800x400, 400x800, 600x1200, 1200x1200
Features	Error correction mode (ECM)
	Aligned/unaligned
	MSB/LSB
	Line error detection/correction
	Font download
Signaling and control	H.323 (version 4); SIP (RFC 3261); IPv4; IPv6
Security	Signaling encryption: SIP over TLS
	Data encryption: SRTP
Interoperability	Dialogic maintains a list of equipment and SIP trunks that support T.38 and have been successfully tested with Brooktrout SR140 Fax Software; see www.dialogic.com/interoperability/fax.htm for a current list
Operating Systems	Windows; Linux. Details at http://www.dialogic.com/systemreleases
Application Programming Interface	Dialogic® Brooktrout® Bfv API
Minimum System Requirements	Application-dependent

Ordering Information

All options of Dialogic® Brooktrout® SR140 Fax Software licenses use Product Activation Technology. License activation may be completed via the internet, email, or fax, and involves entering the license key provided in the SR140 LAC Shipment (License Activation Code Shipment) email.

The Brooktrout SR140 Fax Software licenses are orderable in the channel denominations listed below. Multiple licenses can be installed on the same system to reach the desired channel count, up to the supported maximum. Optional support for T.38 IAF may also be added to existing full SR140 licenses in the same increments as shown below.

License Configurations	Full SR140 License Version	SR140-L License Version
Without disaster recovery	2, 4, 8, 12, 22, 24, 30, 48, or 60 channels	2, 4, or 8 channels
With disaster recovery	2, 4, 8, 12, 22, 24, 30, 48, or 60 channels	2, 4, or 8 channels

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