Dialogic

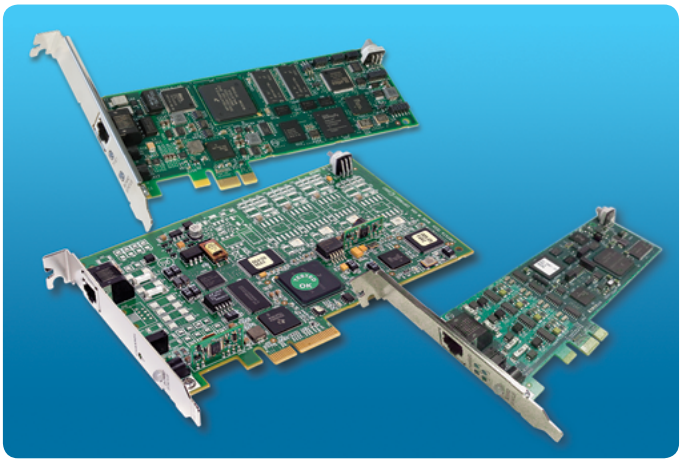
Datasheet

Dialogic® Brooktrout® TR1034 Fax Boards

The Dialogic® Brooktrout® TR1034 Fax Boards are high-performance, intelligent fax boards that offer TDM (analog, BRI, T1/PRI, E1/PRI) fax capabilities. Inbound fax routing makes the Brooktrout TR1034 boards suitable for many computer-based fax applications, including document management, business process automation, and regulatory compliance with Sarbanes Oxley, HIPAA, and Basel II.

Available in both PCI and PCI Express (PCIe) formats, Brooktrout TR1034 boards deliver unparalleled call completion at fast connection rates across a wide variety of fax machines and line conditions.

Dialogic delivers time-tested industry-leading fax technology, offering a broad range of fax products. The Dialogic® Brooktrout® T.30 Stack has been deployed for more than 20 years.



Features	Benefits
Powerful DSPs dedicated to media processing	Provides real-time processing of complex operations (such as V.34 fax receiver and transmitter, voice compression, and echo cancellation) without reducing overall system performance, which lowers implementation costs
Analog, BRI, T1/PRI and E1/PRI interfaces	Supports a broad range of configurations
Based on V.34 fax standard for mission-critical fax deployments	Can process faxes at twice the speed of V.17 fax boards
Inbound fax routing	Supports fax servers, fax-to-email, unified messaging, fax document management, workflow and document delivery, and systems that comply with government regulations
Field-proven T.30 implementation	Helps to deliver faxes consistently and with high reliability

The Brooktrout TR1034 boards feature sophisticated hardware that operates with low power consumption. Onboard fax protocol processing can reduce a fax server's CPU utilization and improve overall system performance. Up to four TR1034 fax boards can operate concurrently in a single server, providing scalability to address changing communications needs.

Brooktrout TR1034 boards send and receive TDM faxes up to 33.6 kbps, based on the V.34 fax standard. Not only can TR1034 boards process fax at twice the speed of 14.4 kbps fax boards, they also support 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 the Brooktrout TR1034 boards. This can translate into significant savings on long distance toll charges.

Brooktrout TR1034 boards are available in a variety of interface types and channel densities, as shown in Table 1. In addition, the Dialogic® Technology Expansion Capability (TEC) upgrade allows increased density on Brooktrout TR1034 T1/E1 models. See the *Expansion Capability Allows Increased Feature Set for Dialogic® Brooktrout® TR1034 Fax Board* technology brief for more information.

Interface	Channels
Analog	2 and 4
BRI	2 and 4
T1/PRI (PCI only)	4, 8, 16, and 24
E1/PRI (PCI only)	8, 10, 16, 20, and 30
Software-selectable T1/E1 (PCIe only)	4, 8, 16, 24, and 30

Table 1. Board Types and Channel Densities for the Dialogic® Brooktrout® TR1034 Fax Boards

Brooktrout TR1034 boards implement multinational ISDN protocols, as well as most supplementary services and many signaling protocols. These features provide application compatibility with most PBXs from major vendors and allow worldwide deployment of fax servers with Brooktrout TR1034 boards.

Technical Specifications

Hardware

Software-Selectable T1/ E1, Low Profile; PCIe only

CPU speed	300 MHz
Digital signal processors	1 multi-core (532 MIPS)
Telephony interface	One RJ-48C T1/E1 interface via an RJ-45 connector; RJ-45 to RJ-45 cable included
Signaling	ISDN PRI: North America, Euro ISDN T1 CAS: RBS E&M (wink and immediate) E1 CAS: Configurable MFC R2 support
Media channels	Up to 30 V.34 fax and speech
Physical	Low-profile; 6.6 in. long x 2.53 in. wide
Server bus	x1 lane PCIe 2.0
Power	5 W

T1 or E1 with IP Ethernet, Full Size; PCI only

CPU speed	200 MHz
Digital signal processors	Up to 6 (600 MIPS)
Ethernet interface	One 10/100Base-T interface
Telephony interface	One RJ-48C T1/E1 interface via an RJ-45 connector; RJ-45 to RJ-45 cable included
Signaling	ISDN PRI: North America, Euro ISDN T1 CAS: RBS E&M (wink and immediate) E1 CAS: Configurable MFC R2 support SIP (RFC 3261) H.323 (version 4)

Media channels	PSTN: Up to 30 V.34 fax and speech IP: Up to 30 V.34 fax and speech (V.17 for G.711 fax)
Telephony bus	ECTF H.100; MVIP-90, (via bus adapter)
Physical	Full-size; 12.283 in. long x 4.2 in. wide
Server bus	33 MHz PCI 2.2 (3.3/5 V signaling)
Power	7 W max, +5 V power supply required

Analog, Low Profile; PCIe only

CPU speed	200 MHz
Digital signal processors	One (122 MIPS)
Telephony interface	RJ-11 interface via an RJ-45 connector; RJ-45-to-RJ-11 interface cable included
Signaling	Loop start
Media channels	Up to 4 V.34 fax and speech
Physical	Low-profile; 6.6 in. long x 2.53 in. wide
Server bus	x1 lane PCIe 2.0
Power	5.5 W (2 channels or 4 channels)

BRI, Half Size; PCIe only

CPU speed	200 MHz
Digital signal processors	One (61 MIPS)
Telephony interface	Two BRI interfaces via two RJ-45 connectors; RJ-45 to RJ-45 cable(s) included
Signaling	ISDN BRI, Euro, Japan
Media channels	Up to 4 V.34 fax and speech
Physical	Half-size; 6.875 in. long x 4.2 in. wide
Server bus	x4 lane PCIe 1.0a
Power	2 channels, 5.1 W; 4 channels, 5.5 W

Fax Processing

Fax modems	ITU T.30 Group 3 V.34, V.17, V.29, V.27ter, V.21
Fax transport mode	PSTN: ITU T.30 IP (PCI only): ITU T.38; G.711 pass-through (no V.34 support)
Speed	Up to 33.6 kbps with auto fallback (up to 14.4 kbps for G.711)
Resolution	Normal and fine resolution: 100x200, 200x200
Additional resolutions	Black and White: 200x400, 300x300 (super fine), 300x600, 400x800, 400x400, 600x600, 600x1200, 1200x1200 Color: 100x100, 300x300, 400x400, 600x600, 1200x1200
Image format compression	MH, MR, MMR
Image pass-through	Color fax T.42 (JPEG), JBIG T.85 (B/W), T.43 (color)
Page sizes	A4, A3, and B4 with scaling; on-board image conversion
Format conversion	Enhanced ASCII conversion support with headers and footers
Transmission rate enhancements	Error Correction Mode (ECM) Line error detection with repeat good line

Voice Processing

Voice codecs	G.711 (PCM, 64 kbps, μ-law and A-law) OKI ADPCM (6 kHz and 8 kHz sample rates) WAV (11 kHz 8/16 bit .WAV; 8 kHz 16 bit .WAV)

DTMF/MF/Special Information Tone (SIT) detection

Playback volume control, pitch corrected speed control

Silence compression

Call Progress and Call Control

International call progress and tone detection

Programmable tone and cadence detection/generation

CED, CNG, v.21 modem detection

ANI/DNIS, DTMF, and MF detection

Human detection

Answer machine detection

IP Interoperability

Dialogic's FoIP products interoperate with a variety of IP PBXs, IP gateways and SIP trunks. See Dialogic Brooktrout Tested FoIP Interoperability for a current list.

Operating System Support

Windows, Linux, and Solaris. Details are in the Guide to *Dialogic® System Software, Operating Systems and Dialogic® Products*

Installation and Configuration

Windows Plug and Play

Graphical Configuration Tool under Windows

Application Programming Interface

Dialogic® Brooktrout® Bfv API

Environmental

Operating temperature	0°C to 50°C
Humidity	10% to 95% non-condensing

Reliability (Estimated MTBF Per Telcordia Method 1)

T1/E1	PCI: 502,200 hours (full-length board) PCIe: 911,000 hours (low-profile board)
Analog	PCIe: 1,100,000 hours (low-profile board)
BRI	PCIe: 815,600 hours (half-length board)

Approvals, Compliance, Warranty

Environmental Information	http://www.dialogic.com/en/company/environmental-policy.aspx
Country-specific safety and telecom approvals	http://www.dialogic.com/declarations
Warranty information	http://www.dialogic.com/warranties

Ordering Information

Please see the *Ordering Information* tab for this product

www.dialogic.com

For a list of Dialogic locations and offices, please visit: https://www.dialogic.com/contact.aspx

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