

Dialogic® Converged Services Platforms (CSP)

Dialogic® Converged Services Platforms (CSP) are high-performance, carrier-grade, and open programmable media platforms with integrated signaling capabilities for delivering enhanced telecommunications services. The CSP Platforms bridge existing wired and wireless networks with next-generation IP networks and integrate signaling protocols for IP (SIP and H.323), TDM (SS7, PRI, and R1/R2), mobility, and IN. Their versatility allows the CSP Platforms to speed up time-to-market, reduce costs, increase revenue, and protect a carrier's investment in legacy equipment.



Products Discussed in This Datasheet

- Dialogic® CSP 2090 Converged Services Platform
- Dialogic® CSP 2040 Converged Services Platform

Features	Benefits
Powerful and robust media processing capabilities	Allows the development of new innovative and legacy voice-based applications
Integrates multiple protocols in a single system	Can accelerate time-to-market by shortening development time for communications applications
Supports circuit- and packet-switched protocols and interfaces in a single platform	Allows the migration of services from legacy networks to next-generation networks and IP-based architectures, and protects carrier investment in legacy equipment
Supports a single platform for signaling and for media	Reduces the cost and complexity of implementing new services
Provides high-reliability features such as “no single point of failure,” hot swappable boards, fault monitoring, fault isolation, and automatic switchover; includes NEBS Level 3 compliance	Enables the secure and robust operating environment required in carrier-class installations that must meet rigorous 99.999% (“five nines”) reliability standards
Allows a high degree of scalability by scaling from 96 to 14,000 IP and/or TDM ports	Enables network operators to deploy services cost-effectively, even at introduction, and to scale up as traffic grows
Distributed signaling architecture that separates physical network interfaces from logical signaling operations, allowing the distribution of telephony services across service resources	Enables flexible configuration and seamless integration of IP and TDM signaling protocols
Includes Dialogic® Programmable Protocol Language (PPL), a development tool that allows modification of a signaling protocol's state machine	Allows developers to create and/or customize signaling variants rapidly in the office or in the field, which can significantly improve deployment time and expedite network compliance

The CSP Platforms deliver high levels of media processing and call control in circuit-switched, packet-switched, or converged networks.

The CSP 2090 is a multi-board chassis with twenty slots that can support up to 2,048 physical voice channels over TDM or IP interfaces or combinations of TDM and IP ports. It can scale up to 14,000 channels with seven nodes that provide the capabilities of a large logical switch.

The CSP 2040 is a multi-board chassis with seven slots. It uses the same boards as the CSP 2090 and the same system software. It supports up to 1,024 physical voice channels for TDM, IP, or TDM/IP combined solutions.

Using the CSP Platforms, developers can create applications with both IP and TDM call control protocols, media processing, and IN signaling that enable feature-rich, network-based converged service implementations. Because of the high degree of flexibility built into their design, the CSP Platforms deliver an open, programmable architecture that can meet the demands of a wide variety of carrier-class communications services from unified messaging to web-based services over many different types of networks.

Optional products that can be used to enhance the CSP Platforms include:

- **Dialogic® IP Network Interface Series Cards** — Offer connectivity to IP networks and a comprehensive set of features for transcoding PCM-coded voice traffic to IP-based coders.
- **Dialogic® Digital Signal Processing Series Cards** — Supply rich, integrated media processing.
- **Dialogic® Line Cards** — Provide connectivity to legacy networks over E1, T1, J1, and DS3 interfaces.
- **Dialogic® Signaling Cards** — Support multiple signaling protocols for legacy and IP networks.
- **Dialogic® Call Agent Mode Software** — Allows the bearer (voice) path for SIP-based calls to bypass the CSP Platforms physically so that service providers can reduce both their equipment and operating costs.
- **Dialogic® SwitchKit® Software** — Provides a development environment, which can speed up application creation, and a set of integrated software tools for operations, administration, maintenance, and provisioning.

Technical Specifications

System Features

Multi-function platform: PSTN/IP service node, media server, media gateway
Standards-based, NEBS compliant, carrier-grade architecture
Scalable from 96 to thousands of non-blocking ports
T1/E1/J1/DS3/RTP network interfaces
Multi-protocol (TDM and IP)
Dual 10/100 Ethernet LAN interfaces per VoIP card (IP Media)

System Redundancy Features

All components hot-swappable
No single point of failure
1+1 CPU active standby
N+1 (T1, E1, J1, DS3) card redundancy
1+1 SS7 and ISDN active standby
1+1 power supply, load sharing, dual power feeds
DSP load sharing
IP Media load sharing

OAM&P Features

Windows NT®, Windows® XP, Windows Server® 2003 GUI (LLC also supported in Linux, HP/UX, and Solaris)
Real-time alarm monitoring via SNMP
Local and remote management
Resource utilization reporting

IP Signaling Protocols

SIP: RFC2543 and RFC3261 (partial)
H.323 v2: H.323 devices and endpoints, (H225.0, Q.931, H225.0 RAS, H.245)

TDM Signaling Protocols

SS7 MTP: ISUP ANSI (T1.113) and ITU-T (White Book 1993), ISUP-ETSI with country variants, TUP, SCCP, TCAP
IN and wireless protocol stacks: MAP, ANSI-41, CAMEL, WIN, INAP
ISDN PRI Q.931, Euro ISDN, National ISDN, other international variants programmable by GUI
R1/R2 with international variants

IP Network Interface Coders

Selectable coders; G.711, G.723.1, G.726, G.729
Group 3 Fax Relay via ITU T.38
DTMF digit relay via RFC2833
RTP redundancy via RFC2198
Adaptive jitter buffer
Echo cancellation (G.168 compliant)
Silence suppression
Comfort noise generation

Media Processing

Dynamic recording and playback
Conferencing (includes conference-in-conference)
Tone generators and receivers
Fax T.30
Echo cancellation
Positive voice detection and answering machine detection
Support of NFS server for network file storage

Technical Specifications (cont.)

Physical Specifications CSP 2040

Height: 17.8 cm (7.0 in.)

Width: 43.5 cm (17.125 in.)

Depth: 48.2 cm (19.0 in.)

Weight: 18 kg (40 lb) (loaded chassis)

Power Requirements CSP 2040

Maximum power capacity: 250 W

Power ratings: -48 VDC @ 10 amps rated

Environmental Requirements CSP 2040

Environmental: 0°C to 50°C, 32°F to 122°F operational

Physical Specifications CSP 2090

Height: 39.9 cm (15.7 in.)

Width: 43.8 cm (17.25 in.)

Depth: 48.6 cm (19.125 in.)

Weight: 30 kg (65 lb) unloaded; 45 kg (100 lb) loaded

Power Requirements CSP 2090

Maximum power capacity: 450 W

Power ratings: -48 VDC @ 25 amps rated

Environmental Requirements CSP 2090

Environmental: 0°C to 50°C, 32°F to 122°F operational

Approvals and Compliance

For information about RoHS compliance and global approvals, contact your Dialogic sales representative.

EMC/EMI

United States/Canada: FCC Part 15, ICES-003

European Union: EN55022: 1998/A1:2000/A2:2003, EN55024: 1998/A1:2000/A2:2003, EN300386: 2001 Ver. 1.3.3

Australia/New Zealand: AS/NZS CISPR 22:2002

Japan: VCCI

CB Scheme

International CB Scheme IEC 60950-1

Telecom Approvals

United States: FCC Part 15; CSA 60950-1

Canada: ICES 003; CAN/CSA-CSS.2, No. 60950-1-03

Australia/New Zealand: AS/ACIF S-016 and S-038

NEBS: NEBS Level 3 Approval (GR 1089 and GR 63)

European Union: CE Mark

Reliability/Warranty

MTBF information available upon request.

Warranty information at <http://www.dialogic.com/warranties>

To learn more, visit our site on the World Wide Web at <http://www.dialogic.com>

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