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

<table>
<thead>
<tr>
<th>Feature</th>
<th>Benefit</th>
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<tr>
<td>Powerful and robust media processing capabilities</td>
<td>Allows the development of new innovative and legacy voice-based applications</td>
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<td>Integrates multiple protocols in a single system</td>
<td>Can accelerate time-to-market by shortening development time for communications applications</td>
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<td>Supports circuit- and packet-switched protocols and interfaces in a single platform</td>
<td>Allows the migration of services from legacy networks to next-generation networks and IP-based architectures, and protects carrier investment in legacy equipment</td>
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<td>Supports a single platform for signaling and for media</td>
<td>Reduces the cost and complexity of implementing new services</td>
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<td>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</td>
<td>Enables the secure and robust operating environment required in carrier-class installations that must meet rigorous 99.999% (“five nines”) reliability standards</td>
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<td>Allows a high degree of scalability by scaling from 96 to 14,000 IP and/or TDM ports</td>
<td>Enables network operators to deploy services cost-effectively, even at introduction, and to scale up as traffic grows</td>
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<td>Distributed signaling architecture that separates physical network interfaces from logical signaling operations, allowing the distribution of telephony services across service resources</td>
<td>Enables flexible configuration and seamless integration of IP and TDM signaling protocols</td>
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<td>Includes Dialogic® Programmable Protocol Language (PPL), a development tool that allows modification of a signaling protocol’s state machine</td>
<td>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</td>
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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
- 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-C22.2, 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](http://www.dialogic.com/warranties)