Dialogic® Diva® V-xPRI Modem Boards

The Diva V-xPRI Media Boards are available in 1, 2, 4 and 8 E1/T1 variants, and offer the scope to build high-density modem banks with up to 240 ports in a single server. The wide range of modem protocols make them well suited for a variety of applications ranging from point of sale termination and M2M modem applications, network and protocol test equipment to monitoring and termination of utility metering devices.

Supported under both Windows and Linux, the V-xPRI Boards enable COM port or TTY port emulation in the operating system, allowing for transparent support of existing modem / COM port applications.

Support for V.22FastConnect, V.22bisFastConnect and V.29FastConnect minimizes training and connect time, to beneficially increase overall data acquisition and transfer rates per channel.

**Modem standards supported**
Bell 103, Bell 212A, V.21, V.22, V.22 fast connect, V.22bis, V.22bis fast connect, V.29, V.29 fast connect, V.32, V.32bis, V.34, V.90 V.42, V.42bis, MNP4, MNP5, V.110, V.120

eCall PSAP - supporting IVS (in vehicle systems)
Modem with extension: V.18, V.21, Bell 103, V.23, EDT, Baudot45/47/50 incl. DTMF, V.42, V.42bis

**B-channel protocols supported**
Transparent HDLC, Transparent Voice, Synchronous PPP and MLPPP, X.75 (LAPB)
X.75/V.42bis, LAPD, T.90NL, T.70NL, X.25, X.31, Rate adaption (56 kbps), PIAFS 1.0 / 2.0, SDLC

<table>
<thead>
<tr>
<th>Features</th>
<th>Benefits</th>
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<tbody>
<tr>
<td>Onboard CPU with large RAM and powerful FPGA chip for fast data streaming between the host CPU, the DSPs, the phone line, and the other active components onboard</td>
<td>Can remove performance bottlenecks by offloading key real-time tasks that would ordinarily place an excessive burden on the host server, allowing Quality of Service (for data integrity and connection speed) to be more consistent</td>
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<td>Sophisticated hardware design</td>
<td>Operates with low power consumption</td>
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<td>Conforms to plug-and-play standards</td>
<td>Permits easy installation and operation</td>
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<td>Supports the same programming interfaces as other Dialogic® Diva® Media Boards, including Dialogic® Diva® APIs, CAPI, TTY, COM port, and others</td>
<td>Reduces porting efforts and time to market by making Diva Media Boards compatible with notable standard telephony and communications applications</td>
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<tr>
<td>Up to four or more Diva V-xPRI Media Boards of the same or different capacity can operate concurrently in a single server, depending on the application and performance of the server hardware</td>
<td>Easy scalability and flexibility to address an organization’s fixed and GSM modem needs in diverse environments</td>
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<tr>
<td>Enable modem ports via license</td>
<td>Cost effective way to scale</td>
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</table>
Example Deployment Scenarios

Technical Specifications

Quick Reference
- Max boards per server: 4 (QA tested by Dialogic); more than 4 may be possible, depending on factors such as the type of application and the performance of the server hardware.
- Form factor: PCIe: Half Size (1, 2, 4 trunks)/Full Size (4, 8 trunks).
- Resource bus Connection: 2.5GHz PCIe Gen 1, Half Size: x1 lane, PCIe Rev 1.1 compliant; Full Size: x4 lane, PCIe Rev 1.0a compliant, 3.3/12 V.
- PCIe: 4 RJ-45 connectors.
- Network interface Signaling: E1/T1/J1 and ISDN PRI (Primary Rate Interface) in TE and NT Mode.
- Volts: 3.3 and 5.
- Required accessories: 1, 2, 4, or 8 shielded RJ-45/RJ-45 cables; V-8PRI requires 4 RJ45 Y-Cables.

Hardware
- 64-bit RISC CPU, 466 MHz, 1070 MIPS with 64 MB SDRAM.
- 16/32-bit DSPs, 600 MHz, 1200 MIPS with 32 MB SDRAM per installed DSP.
- PCIe (Half Size): 12 DSPs (Diva V-1PRI, Diva V-2PRI, Diva V-4PRI).
- PCIe (Full Size): 24 DSPs (Diva V-4PRI, Diva V-8PRI).
- 384, 448, 704, or 896 MB onboard SDRAM.
- Physical dimensions:
  - PCIe: 167.65 mm x 111.15 mm (PCB).
  - PCIe: 180.96 mm x 126.31 mm (including bracket and retainer).
  - PCIe: 352.17 mm x 126.31 mm (including bracket and retainer).
Dialogic® Diva® V-xPRI Modem Boards

Datasheet

Diva Media Boards

• I/O addresses, memory, and interrupt allocated automatically
• Plug-and-play interface
• Production quality: ISO 9002

Power Consumption and Environmental

• Power consumption:
  — PCIe Half Size: V-1PRI, V-2PRI, V-4PRI: 0.91 A @ 3.3 V (maximum), 1.00 A @ 12 V (maximum)
  — PCIe Full Size: V-4PRI, V-8PRI: 1.38 A @ 3.3 V (maximum), 1.57 A @ 12 V (maximum)
• Operating temperature: 10°C to 50°C
• Storage temperature: 0°C to 70°C
• Maximum tolerance in voltage fluctuation: According to PCI Express specification

Dialogic® Diva® System Release Software

• Supported operating systems: Windows and Linux. Details at www.dialogic.com/systemreleases
• SNMP support:
  — Windows: v2c
  — Linux: Net-SNMP v1, v2c and v3
• Application interfaces (provided by Diva System Release Software and Dialogic® Diva® SDK Software):
  — Microsoft: Diva API, Diva API for .NET, Diva Component API (VB.NET), COM Port, WAN Miniport, CAPI 2.0, extended CAPI,
  — Linux: Diva API, TTY, CAPI 2.0, extended CAPI,

Features – Signaling

• DSS1 (Euro-ISDN), NI-1 (North America National ISDN 1), 5ESS (North America), ITR6 (Germany), INS Net 64 (Japan), VN3 (France), CT1 (Belgium), QSIG

Approvals, Compliance, and Warranty

Hazardous substances - RoHS compliance information: http://www.dialogic.com/rohs
Country-specific safety and telecom approvals: http://www.dialogic.com/declarations
Warranty information: http://www.dialogic.com/warranties

Ordering Information

<table>
<thead>
<tr>
<th>Board size</th>
<th>Model Type</th>
<th>Part number</th>
<th>Concurrent calls up to V.32 14.4kbps</th>
<th>Concurrent calls up to V.90 56kbps</th>
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<tbody>
<tr>
<td>Half length</td>
<td>Diva V-1PRI HS</td>
<td>306-398</td>
<td>30</td>
<td>30</td>
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<tr>
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<td>306-397</td>
<td>60</td>
<td>60</td>
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<tr>
<td>Half length</td>
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<td>120</td>
<td>60</td>
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<tr>
<td>Full length</td>
<td>Diva V-4PRI HS</td>
<td>306-403</td>
<td>120</td>
<td>120</td>
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<tr>
<td>Full length</td>
<td>Diva V-8PRI HS</td>
<td>306-404</td>
<td>240</td>
<td>120</td>
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<thead>
<tr>
<th>Modem License</th>
<th>Part number</th>
<th>Item name</th>
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<tr>
<td></td>
<td>G01-033</td>
<td>Diva data modem 1 CH SW license</td>
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