

Flexible T1 / Fractional T1 DSU/CSUs

- ✓ *T1 and Fractional T1 support with 1- or 2-independently configurable Nx56/64 Kbps data ports*
- ✓ *DSX-1 drop & insert port (Models 3160, 3161, 3162)*
- ✓ *Enhanced ASCII (VT-100) user interface*
- ✓ *ASCII (VT-100), Telnet, SNMP, SLIP & PPP management*
- ✓ *Front panel display & keypad for configuration and status (Models 3160 & 3165)*
- ✓ *Remote operation and automatic dial-out alarm condition through integral V.22bis modem (Models 3160 & 3165)*
- ✓ *Flexible loopbacks, Integrated BERT and Bantam jacks*



Zhone's ACCULINK 3100 Series of Data Service Unit/Channel Service Units (DSU/CSUs) are the ideal solution for reliable, cost-effective, high-speed shared access to network-based services, Local Area Network (LAN)/Wide Area Network (WAN) interconnection, and Fractional T1 (FT1) network applications.

Flexible and powerful, the 3100 Series DSU/CSUs provide an interface between T1/FT1 digital networks and a customer's Data Terminal Equipment (DTE), with speeds ranging from nx56/64 Kbps up to 1.544 Mbps. They deliver affordable access to the high-bandwidth requirements of LAN internetworking, videoconferencing, CAD/CAM, and image applications and provide access to public network services or private backbone networks.

The 3100 Series DSU/CSUs are available in single or multi-port standalone configurations as well as rack-mount nest cards that can be used in Zhone's COMSPHERE® 3000 Carrier System in applications requiring higher port density at a single site. The 3100 Series DSU/CSUs can be configured for point-to-point or point-to-multipoint applications, and they support a variety of both in-band and out-of-band management methods for the utmost in flexibility.

Product updates are easy to implement with the 3100 Series DSU/CSUs software-downloadable architecture. A menu-driven LCD front panel (available on some models) simplifies local control of setup, diagnostics, and management. For comprehensive networks that require a standard and open network management architecture, Simple Network Management Protocol (SNMP) is standard on all models, while an integrated V.22bis dial modem for remote configuration and operation is provided on many of the 3100 Series models. For T1 networks, end-to-end management can also be accomplished via an in-band Facility Data Link (FDL).

MODELS 3160 and 3162 CSU/DSUs (STANDALONE UNITS)

The ACCULINK 3160 and 3162 DSU/CSUs offer two (2) data ports on EIA-530-A interfaces (optional V.35 and RS-422/449 cables are available) and a DSX-1 port that can be used for nxDS0s drop and insert to support voice channels to a digital PBX. The ACCULINK 3160 and 3162 devices each provide a COM port and a 10Base-T port for SNMP or Telnet management. A DB-15 connector is also provided for external clocking, allowing for optimum network synchronization. The 3160 provides a modular RJ11 connector for connecting a phone line to the internal modem as well as a menu-driven front panel LCD for simple setup, configuration and testing. The 3162 is a lower cost version of the 3160, and therefore does not include an integrated V.22bis modem or front panel LCD.

MODEL 3165 CSU/DSU (STANDALONE UNITS)

The ACCULINK 3165 DSU/CSU offers one (1) DTE port on an EIA-530 interface (optional V.35, X.21 and RS-422/449 cables are available). The 3165 model provides a 10Base-T port for connection to an SNMP management system. It also provides a COM port for connection to a PC for front panel emulation software, access to the user friendly ASCII interface for local configuration and management, connection to a printer, or a router port. The 3165 also includes an integrated V.22bis modem port for remote management support and a front panel LCD.

MODEL 3161 CSU/DSU (NEST CARD)

The nest-mounted ACCULINK 3161 DSU/CSU provides two (2) data ports and a DSX-1 port. It is designed to operate in the 16-slot COMSPHERE 3000 Series Carrier. This provides a port density of 32 data ports and 16 DSX-1 ports in a single COMSPHERE 3000 Series Carrier.

Technical Specifications

Dimensions

- **STANDALONE UNIT (HWD):**
 - 2.1 in. x 7.6 in. x 12.1 in.
 - 5.4 cm x 19.4 cm x 30.8 cm
- **CARRIER CARD (HWD):**
 - 7.1 in. x 0.9 in. x 13.4 in.
 - 18.1 cm x 2.3 cm x 34.0 cm
- **3000 SERIES CARRIER (HWD):**
 - 10.5 in. x 19.0 in. x 14.0 in.
 - 26.7 cm x 48.3 cm x 35.6 cm

Weight

- **STANDALONE UNITS:**
 - 4.1 lb. (1.86 Kg)
- **CARRIER CARD:**
 - 1.5 lb (0.68 Kg)
- **3000 SERIES CARRIER (16 cards+SDU+fan):**
 - 70 lbs. (31.8 Kg)

Power

- **STANDALONE UNITS:**
 - 115 VAC (104-132 VAC, 57-63 Hz); 12 watts; 41 BTU/Hr.
 - +24 VDC (20-32 VDC); 8.5 watts; 29 BTU/Hr.
- **CARRIER CARD:**
 - -48 VDC (-38 to -60 VDC) 8.5 watts; 29 BTU/Hr.

Interfaces

- **DTE INTERFACES:**
 - Synchronous Ports: Selectable V.35, RS449/V.11, EIA530A
 - DSX-1: D4 or ESF, AMI or B8ZS, Equalization: 5 ranges (0-655', 0-196.5m)
- **NETWORK INTERFACE:**
 - Format: D4, ESF
 - Line Code: AMI, B8ZS
 - Line Build Out: 0.0, -7.5, -15, -22 dB
 - ANSI PRMS: Selectable
- **CLOCKING INTERFACE:**
 - Internal: 1.544 MHz (± 32 PPM)
 - Sources: Network T1, DSX-1, DTE, Clock-in
 - Clock-In: RS422 or RS423, Rates: 2.048 MHz, 1.544 MHz, 8 KHz (± 32 PPM accuracy)

Standards Support

- FCC: Part 68, Part 15 Class A
- UL: UL1950
- CSA: CSA-22.2 Number 950-M89, CSA 108.8-M1983
- AT&T TR: 54016, 62411, 54019A (ACAMI Clear Channel)
- ANSI T1.403
- RFC 1213, 1229, 1317, 1406

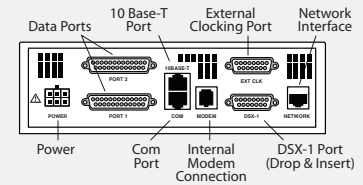
Management

- Front Panel LCD Management
- SNMP and Telnet
- Loopbacks:
 - V.54 (Type 2, 3)
 - AT&T 54016, 62411
 - ANSI T1.403-1989
 - DTE
 - Repeater
- Diagnostic Test Patterns:
 - QRSS
 - 1 in 8
 - 511 (Real-time Monitored)
- Optional PC Software emulating Front Panel LCD Management

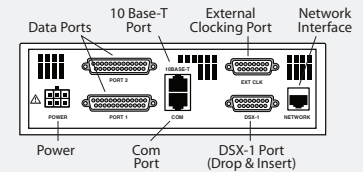
Operating Requirements

- Temperature: 32° to 122° F (0° to 50° C)
- Humidity: 95% (noncondensing)

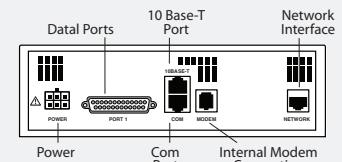
BACK - 3160 DSU/CSU



BACK - 3162 DSU/CSU



BACK - 3165 DSU/CSU



Ordering Information

3000-B1-201	Cosphere 3000 Carrier with 115 VAC
3000-F1-001	Cosphere 3000 Carrier Shared Diagnostic Control Panel (with ribbon cable)
3000-F1-002	Cosphere 3000 Carrier Shared Diagnostic Unit (SDU)
3000-F1-007	Cosphere 3000 Carrier Fan Module (115 VAC)
3000-F1-008	Cosphere 3000 Carrier Filler Panel
3000-F1-021	Cosphere 3000 Carrier Rear Connector Plate
3160-A4-210	2-Port DSU/CSU (Standalone Unit)
3161-B4-010	2-Port T1 DSU/CSU (Nest Card)
3162-A4-210	2-Port DSU/CSU w/Ethernet LANA (Standalone Unit)
3165-A4-210	1-Port T1 CSU/DSU (Standalone Unit)
3165-J4-310	1-Port CSU/DSU w/Internal LANA (Standalone Unit)



Zhone Technologies, Inc.

7195 Oakport Street
Oakland, CA 94621

1 510.777.7000

www.zhone.com

For more information about Zhone and its products, please visit the Zhone Web site at www.zhone.com or e-mail info@zhone.com

Zhone, the Zhone logo, and all Zhone product names are trademarks of Zhone Technologies, Inc. Other brand and product names are trademarks of their respective holders. Specifications, products, and/or product names are all subject to change without notice. Copyright 2011 Zhone Technologies, Inc. All rights reserved.