HiPer DSP CARD

TOTAL CONTROL™

High-Performance, Fully Programmable DSP Engine

Total Control HiPer DSP Card is a high-performance, high-capacity card for the Total Control Remote Access Concentrator that processes a T1/E1 span's worth of channels in a single network interface card (NIC)/network application card (NAC) set. The HiPer DSP Card delivers the utmost in functionality and flexibility in a minimal amount of space––allowing per-port densities of up to 336 domestic channels or 420 international channels in just 8.75 inches.

U.S. Robotics' core DSP technology allows the HiPer DSP Cards to be both multi-functional and easily upgradable, eliminating the need for involved hardware upgrades when new technologies become available. The HiPer DSP Card can be reprogrammed to serve more than one function, and for easy migration to future applications, such as multimedia gateways and voice-over-IP. HiPer DSP is the most cost-effective choice when planning significant modem port growth for the future.

FEATURES

High Performance/High Density enables a single T1 HiPer DSP Card set to support 24 channels or an E1 HiPer DSP Card set to support 30 channels, which translates to a single, Total Control chassis being able to support up to 336 calls via T1 or up to 420 calls via E1.

Multiple Modem Sessions, ISDN Processing and PPP Co-processing All on a Single DSP is an industry first, allowing for more than a seven-fold increase over the existing Total Control system configurations (based on the Quad Modem Cards), while actually reducing the per port power requirements.

SNMP (Simple Network Management Protocol) allows users to monitor, control and manage network equipment from a central or remote location either directly, or through the Network Management Console Card via U.S. Robotics Total Control Manager/SNMP software or any SNMP-based management host.

Hot Swappability means you can configure or update a Total Control chassis, or replace individual cards without interrupting system power and without having to take live traffic out of service.

A Fully Programmable Digital Signal Processing Engine is key to system flexibility. The HiPer DSP Cards are more than a modem card; based on a programmable DSP, they can be readily reconfigured for new modem technologies and future applications (such as multimedia and voice applications) via software, rather than requiring customers to make costly hardware upgrades.

Award-Winning V.Everything® and x2™ Technologies support 56K* and the most common communications standards, including ITU-T V.34, ITU-T V.32 Terbo, ITU-T V.32, ITU-T V.32*bis*, as well as other ITU-T and Bell standards and rates.

3Com®

Primary Rate Interface Compliance

-Compliant to AT&T technical publication TR41459 and compatible with AT&T ISDN PRI services per AT&T

Laboratories Testing

-ISDN data link layer ITU-T Q.921
-ISDN call control signaling ITU-T Q.931/I.451
-Provides ANI and DNIS digits via Q.931 D-channel signaling
-Supports NonFacility Associated Signaling (NFAS)

E&M Type II Signaling (T1 interfaces)

-Channelized T1 robbed bit signaling
-Loop Start
-Ground Start
-E&M wink start
-E&M immediate
-E&M FGD
-E&M FGB
-T1 CR22 (Hong Kong)

Central Office Switch Signaling Support (ISDN)

-AT&T 4ESS Custom
-AT&T 5ESS Custom
-Northern Telecom DMS-100 Standard
-Northern Telecom DMS-250
-INS 1500 (Japan)
-ER11 (Hong Kong)
-National ISDN 2 (NI2)

Digital Data Compatibility

For end-to-end transmission over ISDN
-Sync PPP
-ITU-T V.120/I.462
-ITU-T V.110/I.463
-64 Kbps and 56 Kbps clear channel HDLC
-X.75

TI Interface

-Metallic interface per ANSI T1.403
-CSU to T1 per AT&T Pub 62411
-PRI interface per ANSI T1.408
-D4 or ESF frame formats
-B8ZS line coding
-Auto equalization for data and clock recovery (36dB)
-Supports local and remote loopbacks

E1 Interface

-Metallic Interface per ITU-T G.703
-PRI Interface per ETS 300 011
-HDB3 Line Coding
-ITU-T G.704 Framing with and without CRC-4

Modulation Support

-x2 (56 Kbps*)
-V.34 (33.6 and 28.8 Kbps)
-V.32 Terbo at 19.2 Kbps
-V.32 at 9600 and 4800
-V.32bis at 14.4 Kbps, 12 Kbps, 9600bps, 7200bps and 4800bps
-V.22 at 1200bps
-V.22bis at 2400bps
-V.25
-Bell 212A at 1200bps

Error Correction

-ITU-T V.42
-MNP 2-4

Data Compression

-ITU-T V.42bis
-MNP 5

Hybrid DSP/Trunk Interface Cards (NICs)

-One RJ45 T1/E1 port
-One RJ45 console
-One RJ45 debug port (non-customer use)

Power Requirements

-T1 NIC + 24 channel HiPer DSP NAC: 4.8A typical (24 Watts)
-E1 NIC + 30 channel HiPer DSP, NAC 5.2A typical (26 Watts)

Regulatory/Agency Approvals
FCC Approved (Part 15 and Part 68)
UL Listed
CSA Approved

Model Numbers/Part Numbers

SKU#   **Description**

002092-0   24-Port/T1 HiPer DSP Card Set
24-port HiPer DSP Network Application Card (NAC) and T1/T1-PRI Network Interface Card (NIC) set.

001914-0   24-Port/T1 HiPer DSP NAC
For spares use; to be used in conjunction with the 24-port/T1 HiPer DSP NIC.

001826-0   24-Port/T1 HiPer DSP NIC
For spares use; to be used in conjunction with the 24-port/T1 HiPer DSP NAC.

002267-0   30-Port/E1 HiPer DSP Card Set
30-port HiPer DSP Network Application Card (NAC) and E1/E1-PRI Network Interface Card (NIC) set.

Warranty

Two-year limited warranty; factory repair or replacement.

Services

Total Control customers are backed by a full range of services including toll-free technical phone support, product specification assistance, installation services, educational training programs, electronic information services, plus a variety of repair and service options. For more information on any service and support programs, call 800.550.7800.

*All x2 products are capable of 56 Kbps downloads; however, due to FCC rules which restrict power output of service providers' modems, current download speeds are limited to 53 Kbps. Actual speeds may vary depending on line conditions. Uploads from end users to service providers travel at speeds up to 28.8 Kbps. An x2-capable modem, an x2-compatible analog phone line and an x2-capable service provider are required for these high-speed downloads. See www.usr.com/x2 for details.

Total Control. From the leader in networking.   3Com