



IPITEK Product News

IMTRAN Digital Transport Systems

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HBR-2502 Transport Systems Voice and Data Networking Services Supported



IPITEK's New HBR-2502 Digital Transport Multiplexer provides all kinds of services for Video, Voice and Data Networking.

This article will focus on the wide choice of voice and data services supported today

HBR isn't just for video and audio any more. With the march to digital services and the expanding market for business digital services, digital transport systems require a lot of flexibility to carry a wide variety of signals.

To meet the industry's many requirements, IPITEK offers solutions for all types of digital formats. These include products especially designed to transport data, telephony, IP and video services.

The HBR-2502 Digital Transport Platform provides a highway for carriage of private voice and general data networks, Operators today have the need to provide data

interconnects for outside users as well as for use within their own systems.

Utilizing the newly designed Virtual Cross-Connect (VCX) system, HBR-2502 efficiently carries more traffic. This system eliminates wasted bits and assures the maximum flow of traffic, using only the amount of bandwidth required for the signal being transported.

The **DS1/E1 Module** provides users with the ability to support TELCO standard TDM services, including PBX voice, private line fractional DS-1 data, cell-tower backhaul, frame relay and PPP WAN routing service.

The module includes transmit and

receive for two DSX based signals, complies with ANSI standards and offers AMI and B8ZS line coding.

The **DS3/E3 Module** features full support of standards based DS3 or E3 bi-directional signals.

Digital Transport Solutions for all types of Traffic:

- **TELCO TDM Services**
- **analog Video or digital Video Transport**
- **Pro-Video Conferencing**
- **Fractional and ISDN Data Services**
- **ATM over DS-1, DS-3 or OC-3**
- **10/100BASE-T Ethernet/IP**
- **IP/PPP over DS-1, DS-3 or OC-3**
- **SONET/SDH OC-3 Tributary**

The DS3 module is designed for full support of either voice or data services. In addition to the ANSI standards based signals, the module's transparent design provides simple extension between two locations or drop and continue one-way links.

The module provides full transport of channelized voice circuits. In addition, it supports LAN interconnections, ATM and other data services or Ethernet/IP signals when encapsulated into DS-3. The module can also be used to transport the signals from a Video DS-3 Codec.

The HBR-2502 also includes an **OC-3/STM-1 Module**. This unit is an optical in/optical out multi-mode or single mode optical repeater which integrates within the overall HBR-2502, OC-48c system.

The module is used to transport OC-3/STM-1 SONET/SDH tributary signals within the OC-48c/STM-16c backbone. It may be used for tributary aggregation or for telephony applications. The tributary signals may either use their own system clock or use the HBR's clock which can be locked to BITS via DS-1 input to the new VCX module(s).

A newly designed dual OC-3 module equipment protected mode is now supported by the new HBR-2502 chassis

IPITEK's Ethernet Switch Module provides 3 independent Ethernet ports, for use with 10BaseT or 100BaseT Ethernet signals. The ports include an auto negotiate feature, which configures the port for the speed of the services being transported. The design of the unit allows service providers to transport IP over SONET traffic within the overall HBR-2502 system. The system design presents higher throughput than ATM networks while providing the sub-50 milli-sec self-healing capabilities of a SONET system.

Each port of the module creates a separate network segment with dedicated bandwidth to connected services. The unit provides a layer2 MAC learning filtering capability, eliminating the need for a stand alone Ethernet switch. The Ethernet bandwidth is mapped directly to a 27Mb/s channel within the total payload of the HBR-2502 system. The aggregate channel bandwidth is programmable from 27 Mb/s to 108 Mb/s.

The system features automatic address learning, aging and migration capability which insures source addresses are identified, stored and updated in the MAC address table. The switch module can be activated with minimum user configuration.

A very large volume and growing volume of data traffic exists within private and public transport

systems. stream traffic is often added and dropped at multiple locations in a system and is still most easily handled in native format.

The HBR-2502 Serial Communications Module

provides an optimized method for carrying asynchronous data traffic. The module provides 16 interface ports, each of which is independently configurable for operation with RS232, RS-422 or RS-485 data. Conforming to EIA standards, the SCM module provides a full range of configurations for point-to-point, add/drop and multi-drop architectures.

The unit is ideal for use in remote terminal connections, SCADA applications or any variety of communications that require low speed data. In RS-232 applications requiring additional control lines, a second port can be assigned to carry excess lines.

When used with RS-485, the unit is designed to connect busses over large geographical areas without the use of repeaters.

The unit is designed to operate with an external expansion unit which provides the equivalent of a data patch panel, assuring smooth system management.

Additional Information about any of the data modules is found on the IPITEK web site or is available from IPITEK.

For additional product or ordering information related to the featured products or any of IPITEK's family of transmission products, visit our web site www.ipitek.com or send a message to sales@ipitek.com.



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