

SOLUTIONS

SUPPORTING LEGACY X.25
INTERFACES IN AN IP WORLD

THE FUTURE IS HERE



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INTRODUCTION

Datatek Applications, Inc. has designed, developed, and manufactured data communication products, both hardware and software, based on worldwide, accepted standards. These products allow the migration from the older legacy networking products, based on a wide range of protocols, to modern standards-based IP networks. The Datatek products can inter-work with the legacy networks and today's modern router-based networks or work solely in modern networks. For the past ten years, the various telephone companies such as AT&T, Verizon, FairPoint Communications and Qwest (now part of CenturyLink™) have been utilizing the migration strategies and products developed by Datatek as they upgrade their networks.

Below is a subset of these capabilities and how they pertain to the issue of X.25 migration to IP.

MIGRATION PRODUCTS RELATING TO THE X.25 PROTOCOL

DT-4180 – AN ENHANCED, MULTI-PROTOCOL, INTER-NETWORKING, INTEGRATED, ACCESS DEVICE

The NEBS 3+ certified, SNMP enabled, DT-4180 is a multi-protocol, integrated, inter-networking access device. The current, primary use of the DT-4180 is to mediate a myriad of legacy protocols with the ubiquitous IP protocol suite.

KEY FEATURES OF THE DT-4180

- Mediation and termination for X.25, BX.25, and other X.25 variants
- Sixteen asynchronous/synchronous ports supporting speeds up to 115.2 Kbps (asynchronous) or 57.6 Kbps (synchronous)
- Multi-protocol Support (including X.25, BX.25, Bisync, HDLC, SDLC, etc.)
- Standalone or mountable in 19" and 23" equipment racks
- Remote (telnet) and/or local console access
- Central Office compliant (NEBS 3+)
- 110-240V AC or -48V DC powered
- Extensive diagnostic and measurement capabilities
- Remote software upgrades of field units and while in service
- Closed User Group (CUG) security -- Protects sensitive endpoints in a corporate-wide network without the burden of special "security servers"
- Peer-to-Peer Data Encryption per Port
- Hunt Group Support -- A set of ports, arranged to receive calls to a common address
- DNS Host Name/IP Address Resolution Table Support
- Alarm Relay Unit and Alarm Grid Interface used to gather alarm messages from itself and connected network elements (NEs)
- A Time-Slot-Router capability that can replace a Data Channel Bank.

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The DT-4180 also includes an integrated application processor. Popular protocols such as Asynchronous, various Bi-Synchronous variants; HDLC, SDLC and X.25 (X.25 includes several variants, such as BX.25 and RBP) are all supported interchangeably on a per-port basis. Vertical services typically found on an embedded Network Processor for X.25 and its many variants have been incorporated. This allows the DT-4180 to directly mediate X.25 to IP. Each virtual circuit (VC) on each X.25 port is individually addressable by the IP host. On the other hand, the X.25 port experiences no change in the handling of the X.25 protocol. The networking change is transparent to the NE.

The DT-4180 physically connects up to sixteen X.25 NE ports where each NE connection supports up to thirty-two X.25 VCs for a total of 512 X.25 VCs per DT-4180. Figure 1 shows a typical scenario in which some of the ports of the DT-4180 are connected to X.25 ports on the NEs. The DT-4180 has the vertical service called the X25PAD Feature Package.

IP Telnet Access to X.25 NE VCs

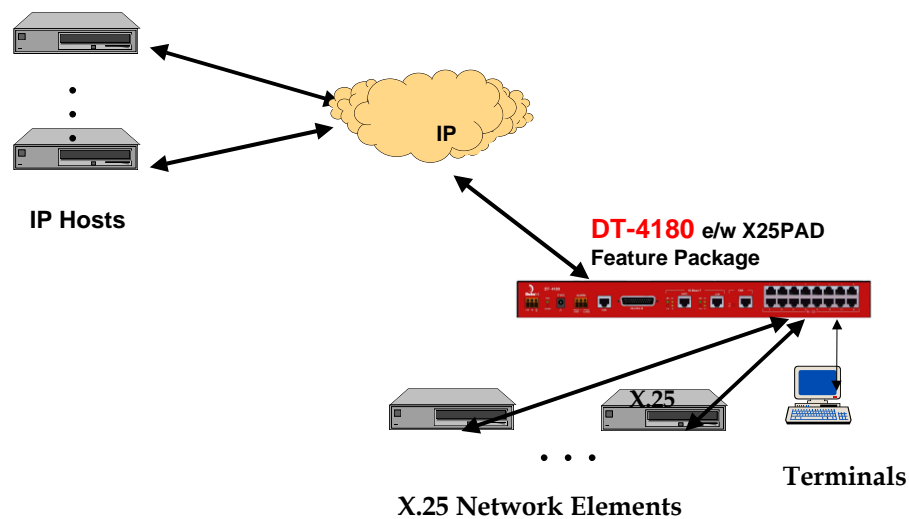


Figure 1

DT-4284 - SMALLER MULTI-PROTOCOL, INTER-WORKING, INTEGRATED ACCESS DEVICE

The DT-4284 has the same software functions and vertical services as the DT-4180 with respect to X.25. The DT-4284 has four ports, so the maximum number of X.25 VCs supported is one hundred twenty-eight. The DT-4284 is a small desktop unit and can stand alone or use rack mounting hardware. The NE now looks like an IP endpoint to the network instead of an X.25 endpoint. Due to its

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size, the DT-4284 does not have an alarm grid interface or alarm relay unit because there is no room for them in the unit.

NETWORK MIGRATION SERVICES

With Migration Services from Datatek, companies are assisted in the design and transition to next generation technologies with enhancements that extend the capabilities of their current infrastructure. Whether the need is to preserve legacy systems over a new infrastructure or to use existing infrastructure to deploy new technology, Datatek has been sought after by major communications carriers to provide these services.

Service Offerings

- Hardware Products
- Software Products

Obtaining maximum value from a client's investment is among Datatek's top goals. Through network consolidation, offering lower operational costs with custom hardware and software solutions, Datatek is able to build special purpose products and to provide network migration strategies that offer clients the freedom to retain embedded interfaces and critical applications at the edges of their networks

Customers of Datatek's Network Migration Services Receive:

- Alternate approaches based on customer needs and business since every migration project is unique
- A migration testing laboratory to ensure that elements work together as planned
- No outages except when planned and scheduled

Datatek's product development capability facilitates migration and allows us to offer customers an effective migration path as they transition their networks to other technologies.

For Example:

For its customers, Datatek has provided a unique migration product for a proprietary network host interface. Where the original host interface uses a fiber optic cable to connect the host computer to a proprietary data switch, the new network host interface software allows the same host to communicate over a 10/100Base-T LAN interface.

The new software package runs on many different computer platforms (i.e. Sun, HP, NCR, IBM, etc.), while existing application software does not have to be changed or re-compiled. The functionality of the original software suite remains intact but with the ability to access an IP network via a standard 10/100 Base-T interface. All these changes are invisible to the host applications and the network.

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Datatek's experience as outlined, offers customers multiple solutions to support their X.25 migration needs. With existing products, custom products or a combination of both, Datatek's migration services team provides the critical skills needed to effect a smooth transition from X.25 to IP.

ABOUT DATATEK

Based in Somerset, New Jersey, Datatek Applications is comprised of a responsive, experienced team in all facets of communications services. Our team has a broad background in data and telecommunications, network security, network design, network development and support for NEs. With decades of experience, many of our engineers have played key roles in the design and development of dozens of communications products and networking solutions for some of the largest and most complex networks worldwide.



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