Software Product Description

DESCRIPTION

StrataCom IPX 12 System Software is produced by StrataCom, Inc. and distributed and warranted by Digital Equipment Corporation. The StrataCom IPX 12 System Software provides operating system support for the StrataCom IPX 12 System Unit. Together, the hardware and software provide the functionality described below.

The StrataCom IPX 12 is a digital network processing system that is used to interconnect computers, PBXs, and other communications equipment in a private corporate network environment. The IPX 12 is used to build digital networks, integrating data, voice, video, and FAX over high speed digital transmission services.

The IPX 12 is the smallest member of the StrataCom family of FastPacket® bandwidth management systems. It offers a cost-effective solution for smaller network locations. The IPX 12 is a single-shelf system available in both table top and rack mount configurations. Each IPX 12 System Unit has twelve card slots, one or two processor cards and one or two AC power supplies with integral cooling. This unit supports up to two T1 trunk lines and up to two T1/D4 circuit lines. Up to nine card slots are available for voice and data ports, allowing up to 48 voice connections and up to 72 data connections.

Packet Trunk Interfaces

The IPX trunk cards, which provide the FastPacket switching layer of an IPX network, provide T1 and Fractional T1 interface options.

The Digital Trunk Interface Group (DTI) provides a DSX interface to T1 trunks in conformance with AT&T® Publication 62411, Accunet™ T1.5 Service Description. D4 framing is provided.

The Digital Trunk Interface Group consists of two card types: the T1 Transmitter/Receiver module (TXR) and the Protection Interface Module (PIC). There are two DTI configurations available for the IPX 12: the DTI3 and the DTI6. The DTI3 configuration has three slots, allowing space for one Processor Control Card (PCC), one TXR, and one PIC. The DTI6 configuration has six slots, allowing space for two PCCs, two TXRs, and two PICs.

The Network Trunk Card and T1 Back Card Pair support T1 Extended Superframe Format (ESF) and conform to AT&T Publication 54016. There is no support for Facility Data Link (FDL). B8ZS line coding is implemented as specified in AT&T Publication 62411.

The Network Trunk Card and T1 Back Card Pair provide interfaces to Fractional T1 trunks. The T1 interface conforms to AT&T Publication 54019B, Accunet Spectrum of Digital Services-Intermediate Bit Rates. The following line speeds are supported: 256 kbps, 384 kbps, 512 kbps, 768 kbps, and 1344 kbps.

Network Interface Ports

An adaption layer at the edge of the FastPacket network provides standard interface ports to devices serviced by the network, including circuit mode interfaces for both voice and data devices. These interfaces generate packets from information presented to the interface ports and deliver streams of packets to the system bus for transmission over the FastPacket network. Interface options include T1 digital voice ports, and RS232/V.24, V.35, and RS422/449 data interface ports.

The Digital Trunk Interface (DTI) card group provides for up to four active T1/D4 ports. The DTI Interface Group provides a DSX interface to T1 circuit lines in conformance with AT&T Publication 62411. D4 framing is provided.

The Synchronous Data PAD (SDP) supports various back card physical interfaces including RS232C, RS232D, RS422/RS449 and V.35. The SDP supports line speed rates up to 1.344 Mbps.

The RS2323/V.24 Back Cards provide RS232/V.24 data ports that conform to CCITT V.24, EIA RS232-C, and EIA RS232-D.

The RS422/RS449 Back Cards provide RS422/RS449 data ports that conform to EIA RS422/RS449.

The V.35 Back Card provides V.35 data ports that conform to CCITT V.35.

The Low Speed Data PAD (LDP) supports RS232C and RS232D back card physical interfaces for low speed data applications. The LDP supports line speed interfaces up to 19.2 kbps.

All Data Port Interfaces transmit data transparently at the bit, byte, and protocol level. Protocols that are transmitted transparently include, but are not limited to: X.25/HDLC, DECnet/DDCMP, SNA/SDLC, BISYNC, LAT, DECnet/HDLC, and TCP/IP.

Voice Functions

The Voice/Data Processor Model D (VDP/D) supports u-Law PCM. The VDP/D controls the assembly and disassembly of voice and data samples, performs speech detection and echo suppression, and determines whether specific voice channels are used to transmit modem-type traffic. Typically, each VDP can handle up to 47 voice channels or 20 voice-band data channels or a combination of both.

The VDP Card provides a selectable Voice Activity Detection (VAD) feature. The VAD feature distinguishes between silence and speech on voice channels. This allows the IPX to not utilize trunk bandwidth for the transmission of silence. The VAD feature provides a user-programmable voice volume threshold, below which inputs are treated as "silence."

The VDP Card sends voice samples to the Voice Compression Detection Card (VCD) for Adaptive Differential Pulse Code Modulation (ADPCM). The VDP and VCD operate as a pair via a utility bus. The VCD converts voice samples from the standard 64 kbps PCM format to the compressed 32 kbps format and back again using the industry standard ANSI T1/Y1 ADPCM algorithm. This is a user-selectable feature.

The VDP Card automatically disables ADPCM when it detects analog data transmission at rates higher than 4800 bps, such as required for high-speed FAX or modem connections.

Network Configuration Guidelines

StrataCom IPX 12 System Software, Version 5.1 must be loaded to all IPX 12 System Units within a given IPX network.

IPX 12, IPX 16, and IPX 32 System Units may coexist in the same IPX network, but all must be operating with Version 5.1 System Software.

Two IPX System Units must be connected via a T1 trunk line to form a minimum IPX network.

Voice connections in an IPX network requires at a minimum two VDPs or VDP/VCD pairs, one at each end of the connection. Each VCD Card in a system unit must be paired with a corresponding VDP Card.

Interoperability of the StrataCom IPX 12 with various types of ancillary equipment is determined by conformance to specific interface specifications. Interoperability of the StrataCom IPX 12 with specific OEM equipment, including but not limited to PBXs, echo cancelers, and channel banks, is explicitly not warranted by Digital Equipment Corporation.

INSTALLATION

Digital recommends that StrataCom IPX 12 hardware and software installation services be purchased with the product. These services provide for installation of the hardware and software by an experienced Digital specialist. Installation service for the IPX 12 and value-added services including NetPlan, NetStart, and Net-Support must be quoted separately by Network Site Services. Contact your local NWSS account representative for additional information.

Customer Responsibilities

Before product installation can be done by Digital, the customer must:

- Install, and demonstrate as operational, the necessary synchronous communication line(s).

- Obtain, install, and demonstrate as operational any modems, CSUs, channel banks, echo cancelers, or other equipment and facilities necessary to interface to Digital's communication equipment.

- Make available for a reasonable period of time, as mutually agreed to by Digital and the customer, all hardware, communication facilities, and terminals that are to be used during installation.

HARDWARE REQUIREMENTS

One of the following system hardware units is required to run the StrataCom IPX 12 System Software Product.

DIXSA-AA   StrataCom IPX 12 System Unit, supports DTI3 Digital Trunk Interface Card Group, Processor Control Card Model E, 120V, 600W power supply, StrataCom IPX 12 System Software License

DIXSA-AD   StrataCom IPX 12 System Unit, supports DTI6 Digital Trunk Interface Card Group, Processor Control Card Model E, 120V, 600W power supply, StrataCom IPX 12 System Software License

Other Hardware Requirements

As part of Digital's set of software product services, remote diagnostic support of the StrataCom IPX 12 may be available from a Digital Support Center. To receive this remote diagnostic service, a Bell™ 212A compatible modem is required to be connected to the Auxiliary port of the Processor Control Card located in the StrataCom IPX 12 System Hardware Unit. The customer must maintain a dial-in communications line to the modem.

OPTIONAL HARDWARE

The StrataCom IPX 12 can be uniquely configured to fit the requirements of the customer's network. The following hardware options can be ordered individually depending on the configuration of the customer's network:

Processor Group Modules

Processor Control Card W/Flash EPROM (redundant): DIXCA-CA

Digital Trunk Interface Group Modules

Network Trunk Card Model B: DIXTA-AA
T1 Back Card/Single Port: DIXTA-BB
Transceiver Card Model D (TXR/D): DIXTA-CA
Protection Interface Card/8 Port (PIC): DIXTA-DA

FastPacket Voice PAD Group Modules

Voice Compressor Decompressor (VCD): DIXVA-BA
Utility Bus (VDP-UB): DIXVA-CA
Voice Data Pad u-Law (VDP/u): DIXVA-DB

FastPacket Data PAD Group Modules

Synch Data Pad: DIXDA-AA
SDP Back Card/4 Port/RS232C: DIXDA-AB
SDP Back Card/4 Port/RS232D: DIXDA-AC
SDP Back Card/4 Port/V.35: DIXDA-AD
SDP Back Card/4 Port/RS422/499: DIXDA-AE
Low Speed Data PAD (LDP): DIXDA-BA
LDP Back Card/4 Port/RS232C: DIXDA-BB
LDP Back Card/8 Port/RS232C: DIXDA-BC
Utility Bus (SDP-UB): DIXDA-CA

Frame Relay PAD Group Modules

Frame Relay PAD (FRP): DIXFA-AA
FRP Back Card/4 Port/V.35: DIXFA-BA

Power Supplies

Power Supply IPX 12 600W 110VAC: DIXPA-AA
Power Supply OEM 600W 110VAC: DIXPA-CA

Miscellaneous

IPX Installation Kit (TYPE II): DIXSA-XA
IPX 12 Rack Mount Kit 19": DIXSA-XB
IPX 12 Rack Mount Kit 23": DIXSA-XC
IPX OEM Equipment Cabinet: DIXSA-XD

SOFTWARE REQUIREMENTS

None

OPTIONAL SOFTWARE

Application Software

IPX 12 DFM Software License, V5.1: QL-GKUAX-AA
IPX 12 Frame Relay Software License, V5.1:
    QL-GKWAX-AA

Network Management Software

StrataView/DOS License, Media, and Documentation
    Kit, V5: QB-GKZAA-W7

SOFTWARE LICENSING

A separate software license is required for each StrataCom IPX 12 System Hardware Unit. This license is included with each purchase of a StrataCom IPX 12 System Unit, including the following variants: DIXSA-AA, DIXSA-AD. The software may be copied in its entirety solely for back-up or archival purposes, or for downline loading to all properly licensed StrataCom IPX System Hardware Units within a network.

This software is furnished under the licensing provisions of Digital Equipment Corporation's Standard Terms and Conditions. For more information about Digital's licensing terms and policies, contact your local Digital office.

ORDERING INFORMATION

The StrataCom IPX 12 System Software is factory installed in Flash EPROM, which resides on the Processor Control Card within the StrataCom IPX 12 System Hardware Unit. Additional System Software media and documentation kits for back-up purposes are available as follows:

System Software

IPX 12 System Software Media and Documentation:

QA-GKTAA-H7

IPX 12 System Software Documentation only:

QA-GKTAA-GZ

SOFTWARE PRODUCT SERVICES

Standard Software Product Services are available that include:

Software Product DECservice System Service (SSS/OS):

QT-GKTA9-A9

Software Product DECservice Node Service (SNS/OS):

QT-GKTA9-N9

The components of these services include the following:

Telephone assistance (24 x 7)

Critical on-site software support

Right-to-use new version

The following additional SPS services are available:

Media and Documentation Distribution Service (MDDS):

QT-GKTAA-E7

Software Update Installation Service (SUIS):

QT-GKTA9-R9

Software Documentation Update Service:

QT-GKTAA-KZ

SOFTWARE WARRANTY

Warranty for this software product is provided by Digital with the purchase of a license for the product. The software product is warranted to conform to the Software Product Description (SPD). Digital will remedy any non-conformance when it is reported to Digital by the customer during the warranty period.

The warranty period is one year. The warranty period begins when the software is installed or thirty days after delivery to the end-user, whichever occurs first, and expires 360 days later. All warranty related support for this software will end 180 days after release of a subsequent version.

Warranty is provided in the country of purchase in accordance with the provisions of Digital's Standard Terms and Conditions of Sale. Digital will provide the following services if the customer encounters a problem when using licensed software under normal conditions as defined by the SPD:

a. If Digital also determines the problem to be a defect in the Software Product, Digital will provide remedial service on site if necessary to apply a temporary correction or make a reasonable attempt to develop an emergency bypass if the software is inoperable,

b. Assist the customer in preparing a Software Performance Report (SPR). If a customer diagnosis indicates the problem is caused by a defect in the Software Product, the customer may submit an SPR to Digital.

Digital will respond to a problem reported in an SPR that is caused by a defect in the current, unaltered release of the Software Product. The response will provide temporary corrections, useful emergency by-passes and/or notice of the availability of the corrected software code.

Telephone support may be available from the Digital Telephone Support Center. Please contact your local Digital office for information on the provision of telephone support as part of the warranty.

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