

SOFTWARE DATA SHEET

The Wang X.25 Packet Network Interface provides a 2200LVP or MVP system with a means of access to packet networks that are compatible with Recommendation X.25 of the Consultative Committee for International Telephone and Telegraph (CCITT). The interface, in turn, depends upon a 2228D Data Communications Controller to provide a suitable physical connection to a network.

Applications suited to communication via packet networks can capitalize on the foreground/background, multiple-partition operation of a 2200LVP or MVP system. Through a single physical connection to a network via a 2228D controller, the Wang X.25 Packet Network Interface provides multiple, full-duplex, logical channels (virtual circuits) for communication with other 2200LVP and MVP systems attached to the same packet network. Each virtual circuit is a point-to-point logical connection between one local and one remote application program. Virtual circuits may be either switched (call procedure required for each session) or permanent (call procedure not required for each session, by agreement with the common carrier). Independent virtual circuits allow the concurrent execution of tasks involving batch file/document transport, data inquiry/retrieval, and interactive communications.

A user-written application program can initiate a virtual circuit, communicate with another 2200LVP or MVP, and interact with an application running in that system. When data transfer is completed, the application program can initiate termination of the virtual circuit without affecting communication on other coexistent virtual circuits.

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WANG X.25 PACKET NETWORK INTERFACE

- Supports multiple, full-duplex, logical channels through a single physical connection to a network
- Allows concurrent execution of tasks involving batch file/document transfer, data inquiry/retrieval, and interactive communications
- Enables attended and unattended operation
- Provides user-programming capabilities
- Communicates with Wang and non-Wang systems



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The flow-control and error-recovery techniques of the Wang X.25 interface allow multiple sequential packets to be sent into the network before acknowledgment is required. Because data sent earlier can be acknowledged while subsequent packets are being transmitted, the Wang X.25 software is well suited to batch transmission applications.

Furthermore, the Advanced Batch Communication software supplied with the Wang X.25 Packet Network Interface provides utilities that simplify user communication within a packet network. An initialization utility allows users to specify the characteristics of particular packet networks, including packet window size, packet size, time-out values, and retry count. Another utility can be used to queue files/documents for transmission; a third utility can be used to print received information.

Since Recommendation X.25 is defined by the CCITT and not by computer manufacturers, the Wang X.25 Packet Network Interface enables a 2200LVP or MVP system to communicate with non-Wang systems as well as with other Wang systems connected to the same packet network.

WANG X.25 STRUCTURE

Wang X.25 software is multilevel, having several major elements: (1) a set of communication utilities customized for X.25 applications, (2) a Telecommunications Interface (TCI), which may be engaged by user-written online communication utilities as well as by Wang-written application software, (3) a Communication Control Task (CCT) functioning as a user-transparent interface between the TCI and the data-transport mechanism, and (4) the data-transport mechanism that includes the X.25/HDLC Communication Protocol Task (CPT) and the Data Terminal Equipment (DTE) interface logic.

Communication Utilities

Wang supplies Advanced Batch Communication utilities for the X.25 Packet Network Interface. These BASIC language programs enable users to prepare communication sessions offline and to have online access to 2228D communication facilities. Table 1 contains a description of each utility.

Users may create their own online communication utilities or application programs to work in conjunction with the TCI and offline utilities of the Advanced Batch Communication software.

Telecommunications Interface

The TCI is a set of communications-access subroutines that can be called by either Wang-written (Batch File Driver) or user-written online communication utilities. The TCI subroutines can initiate the opening of a session over a network connection, the transfer of information from the 2200 central processor to the 2228D communications controller, the transfer of received data from the communications controller to the central processor, and the termination of a session. The subroutines can also accept calls from other 2200 systems and read session status information.

Communication Control Task

TCI subroutines engage the Wang X.25 micro-code and DTE interface logic by way of the user-transparent CCT, located in the central processor. The CCT accepts information conveyed by TCI subroutines and also retrieves stored remote-connection parameters, data-translation tables, and data records. The CCT passes connection/call parameters, translation tables, and data to the 2228D controller; connection procedures, line protocol exchanges, and actual data transmission are delegated to the X.25 CPT and DTE interface logic of the controller. For incoming messages, the CCT accepts a call, engages the Batch File Driver (or user-written equivalent program), and passes all received data to that program.

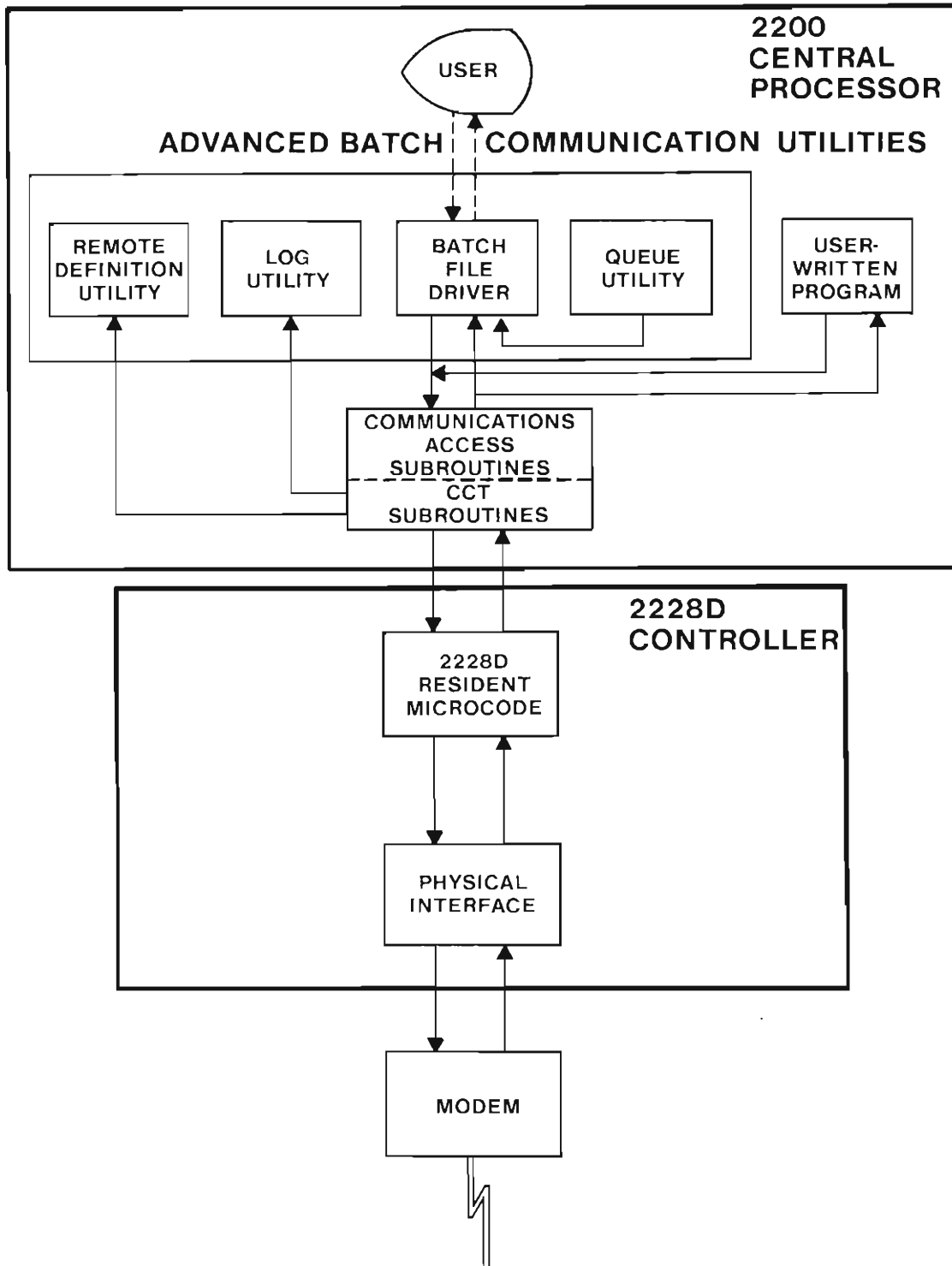


Table 1. Advanced Batch Communication Utilities

Utility	Purpose
Remote Definition	Enables the user to define a connection profile (i.e., parameters/characteristics of the link) for each remote system. Stores parameters on disk or diskette for subsequent automatic recall by the Communication Control Task (CCT).
Communications Queue	Defines jobs (sets of related files) and places them in a job queue for transmission. Also allows jobs to be displayed, modified, or deleted.
Communications Log	Allows inspection of the Communications Log file, which contains the activity record for a particular job.
Communications Print	Supports printing of received jobs.
Batch File Driver	Initiates connection sequence; sends transmission data from the central processor to the communications controller; accepts received data from the controller; stores data on disk for subsequent use/printout; initiates a connection-clearing sequence. When executed in foreground, permits communication on user demand; executed in background, permits automatic transmission and reception of files/documents.

Microcode and Protocol

The CCT loads and initializes the 2228D communications controller with the necessary microcode and, whenever a session is required, loads translation and connection parameters for the particular packet network protocol. Call/call-acceptance procedures and data transmission/reception are supervised by the microcode.

PHYSICAL INTERFACE

Physical connection requirements vary with the specific packet network. The 2228D Data Communications Controller is available with one of three physical interfaces: RS-232-C/V.24, RS-449, or X.21. Autodial capability (RS-366/V.25 compatible) is included with the RS-232-C/V.24 or the RS-449 interface.

PRODUCT CHARACTERISTICS

Package Number

- 195-2195-3 (single-sided single-density diskette)
- 195-2195-5 (double-sided dual-density diskette)

Modem Requirement

Synchronous Data Communication Equipment (DCE) is required.

Communications Controller Requirements

A 2228D Data Communications Controller is required. For RS-232-C/V.24 and RS-366/V.25 connectors, order a 2228D-4 controller. For RS-449 and RS-366/V.25 connectors, order a 2228D-4A controller. For an X.21 connector, order a 2228D-4X controller.

Line Protocol

HDLC/LAPB

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