

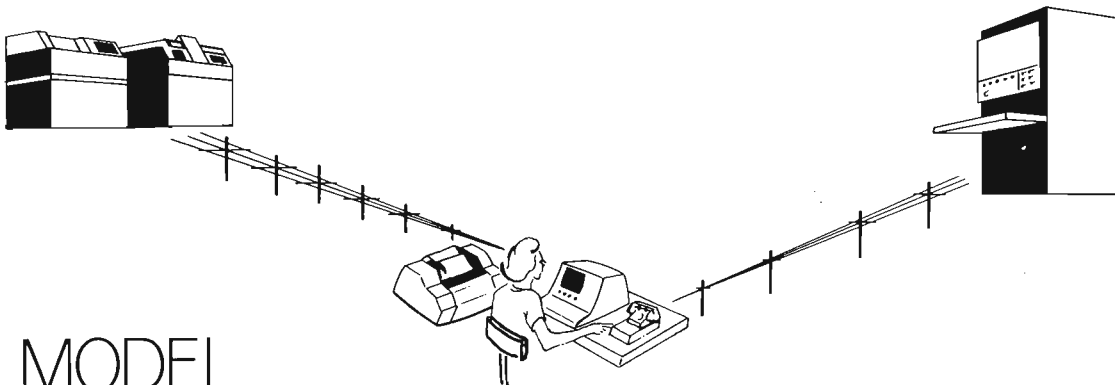
The Model 2228 Communications Controller adds wide-ranging data transmission/reception capabilities to the stand-alone computer capabilities of Wang systems. The controller's microprocessor, read-only-memory, random-access-memory, and multi-character input/output buffers are utilized fully by Wang Laboratories in efficient, turnkey programs developed for use with the controller. A communications program is loaded into the CPU from a cassette, a diskette, or a disk prior to online data transmission/reception.

Currently, three turnkey terminal emulator programs are available from Wang Laboratories for use with the Model 2228 controller. The programs emulate the binary synchronous communications (BSC) protocol of IBM 2780, 3780, and 3741 terminals, respectively. Each program automatically initializes the controller when the terminal emulator program is loaded into the CPU. With one of these programs, a System 2200 can serve as a remote batch work station in communication with an IBM 360/370 host computer system and require no changes in existing IBM 360/370 software.

With the controller and any one of the Wang-generated programs, a Wang computer system can transmit and receive data over dial-up telephone lines. The system can be linked to another comparably-equipped Wang system or to any host computer which customarily communicates with terminals having characteristics featured in the terminal emulator program.

Wang's terminal emulator programs permit great flexibility when selecting peripherals to serve as the terminal input and output devices. Each program supports data transmission from a cassette, card reader, diskette, disk, or nine-track tape, and supports data reception to a printer, cassette, diskette, disk, or nine-track tape.

Cost-effective transmission and reception of batched data is provided by a System 2200 equipped with a Model 2228 Communications Controller since the CPU with its comprehensive BASIC language can preprocess and postprocess communicated data for a wide range of data processing applications. Data can be generated, edited, and stored on the medium corresponding to the designated terminal input device (e.g., cassette, diskette, or disk) while the system is operating offline.



MODEL 2228 COMMUNICATIONS CONTROLLER

The Model 2228 Communications Controller can be plugged into an I/O slot in one of the following 2200 Series CPU models with 8K memory: the Model 2200T, the Model 2200S with Option 23 or 24, and the Model 2200B or C with Option 2 (the General I/O ROM). The System 2200 configuration must include a keyboard and a CRT since an operator uses special function keys on the keyboard to control the communications application and receives status information on the CRT

The modem connector on the Model 2228 Communications Controller uses the pin connections and voltage levels specified by EIA (Electronic Industries Association) Standard RS-232-C. The controller requires that the modem provide transmitter and receiver clock signals. Compatible dial-up modems and supported line speeds (in bits per second) are as follows:

Modem (Bell type or equivalent)	Line Speed
Bell 201A	2000 bps
Bell 201C	2400 bps
Bell 208B	4800 bps

Modems used at both ends of a communications line must be of similar type. The modem used with Wang's Model 2228 controller may be rented from the telephone company serving the locality where a Wang system is installed or may be purchased from any one of several modem vendors.

The Model 2228 Communications Controller buffers data and can perform specific emulation tasks related to data transmission and reception while the System 2200 CPU is performing I/O tasks with respect to peripheral devices. Wang Laboratories supplies turnkey software packages which provide both the System 2200 BASIC language program and the Model 2228 firmware required to operate the controller.

One copy of one Terminal Emulator Program (TEP) is included with each Model 2228 Communications Controller. The program can be chosen from the following available programs.

Program	Features
TEP-28-2780	Emulates the BSC protocol of an IBM 2780 terminal and supports horizontal format control, multi-record transmission, and transparency.
TEP-28-3780	Emulates the BSC protocol of an IBM 3780 terminal and supports horizontal format control, multi-record transmission, transparency, and compression/decompression.

TEP-28-3741 Emulates the BSC protocol of an IBM 3741 terminal and supports horizontal format control, multi-record transmission, transparency, compression/decompression, and terminal identification.

Each program is available on cassette or diskette.



MODEL 2228 SPECIFICATIONS

Size of Controller Board

Length	14 in. (35.6 cm)
Width	7.5 in. (19.1 cm)
Depth	1.2 in. (3.2 cm)

Weight

2 lb (0.9 kg)

Power Requirements

Supplied by the CPU.

Electrical Connection

A 25-pin RS-232-C, CITT V.24 compatible female plug facilitates hookup of a modem.

Cable

A 12-foot (3.6m) cable, equipped with 25-pin RS-232-C compatible male connectors on each end, is supplied as an accessory.

Standard Warranty Applies

ORDERING SPECIFICATIONS

An RS-232-C compatible communications controller with a microprocessor, memory, buffers, and transmitter/receiver circuits capable of performing specific tasks related to data transmission/reception via dial-up communications links when plugged into a System 2200 CPU and operating under program control provided by a terminal emulator program (including microcode) prepared by Wang Laboratories.



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Wang Laboratories reserves the right to change specifications without prior notice.

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