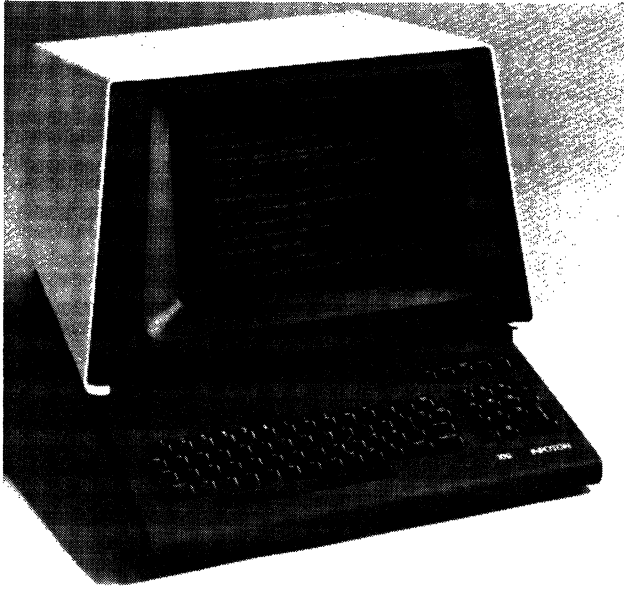# Infoton 100, 200, and 400 Display Terminals

The Infoton 100 shown above is a low-cost, microprocessor-based display terminal offering screen formatting and editing, paging, and line drawing features.

Teletype-compatible keyboard/display terminals offering capabilities ranging from basic Teletype replacement to data entry and editing.

Standard features include switch-selectable transmission rates, modem and current loop interfaces, cursor addressing, 64 or 128 displayable symbols, and, on some models, format protection and editing. Options include a buffered printer interface, a variety of keyboards, paging, and answer-back.

The terminals are sold to OEM's and distributors. Suggested list prices are $995 for the basic Model 100, $1,000 for the basic Model 200, and $1,500 for the basic Model 400.

MANAGEMENT SUMMARY

The Infoton 200 and 400 were introduced in 1977 as the first members of a family of Teletype-compatible display terminals. The Infoton 200 is a Teletype replacement terminal, while the Infoton 400 is a microprocessor-based terminal with additional features for data entry applications. The Infoton 100, the newest member of the family, offers features that place it between the Infoton 200 and 400 in terms of capabilities. It is, however, the least expensive of the three models.

The Infoton 100 features Zilog Z-80 microprocessor control, character or optional block transmission, and 96 displayable ASCII characters plus 32 line drawing symbols. The keyboard is equipped with separate numeric/edit and cursor control clusters. Eight program function keys are optional. Edit functions include line insert and delete and, in Block Mode, character insert and delete and protected and unprotected fields. Emulation of the Lear Siegler ADM-3A, ADDS Consul 520, Hazeltine 1500, and DEC VT-52 terminals is optional.

The Infoton 200 is available with any of four keyboards that range from a basic upper-case only arrangement to a sophisticated upper and lower case arrangement with numeric pad, cursor keys, and 12 program function keys. The terminal operates in scroll or page modes and transmits a character at a time. The standard terminal is restricted to 64 upper case only display symbols; however, 128 ASCII symbols including control code symbols can be displayed as an option. ▷

CHARACTERISTICS

VENDOR: Infoton, Inc., 2nd Avenue, Burlington, Massachusetts 01803. Telephone (617) 272-6660.

DATE OF ANNOUNCEMENT: Model 100—October 1978; Models 200 and 400—June 1977.

DATE OF FIRST DELIVERY: Model 100—November 1978; Models 200 and 400—August 1977.

NUMBER DELIVERED TO DATE: Information not available.

SERVICED BY: Distributors.

MODELS

Models 100, 200, and 400 are stand-alone, Teletype-compatible display terminals. Models 200 and 400 are equipped with a detachable keyboard. Models 100 and 400 are equipped with microprocessor control and provide an extended array of features. An RS-232C printer interface is standard for Model 100 and optional for Models 200 and 400.

TRANSMISSION SPECIFICATIONS

Transmission is asynchronous in the half- or full-duplex mode. Models 200 and 400 provide 16 internally-generated switch-selectable rates of 50, 75, 110, 134.5, 150, 200, 300, 600, 1200, 1800, 2400, 3600, 4800, 7200, 9600, and 19,200 bits/second. The Model 100 provides 8 switch-selectable rates of 110, 200, 300, 1200, 2400, 4800, 9600, and 19,200 bits/second. External timing can be used. The 8-level, 10- or 11-unit ASCII code is used. Odd or even parity, marking, or spacing are switch-selectable. The terminal is equipped with an RS-232C and 20 or 60 mA dc current loop interface. Multipoint operation is optional for Model 400 via a polling feature.

DEVICE CONTROL

INFOTON 100: Transmission is on a character-by-character ▶

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▷ The Infoton 400 is controlled by a Z-80 microprocessor and is available with either of two keyboards. Both keyboards are equipped with a numeric pad and a cursor/edit keypad, but differ in the number of program function keys—8 with the standard keyboard and 24 with the optional. Infoton 400 features include format generation and protection and full editing, including character and line insert and delete. The Infoton 400 also features expanded highlighting functions over the 100 and 200. Selected fields can be displayed in reverse video (symbols in black) full- or half-intensity, underlined, or blinked. Program controlled cursor sensing and addressing are standard features. Character or block transmission modes are operator-selectable and the Infoton 400 displays all 128 ASCII symbols as a standard feature. The terminal can be used in a multipoint network when the polling option is incorporated.

USER REACTION

Datapro's 1979 survey of alphanumeric display terminal users yielded responses from two users of the Infoton terminals. In June 1979, we talked with three additional users whose names were supplied by Infoton's distributors. These 5 users had a total of 53 units installed: 20 Model 100's, 27 Model 200's, and 6 Model 400's. The ratings assigned by the users are summarized in the following table.

	Excellent	Good	Fair	Poor	WA*
Overall performance	1	4	0	0	3.2
Ease of operation	0	5	0	0	3.0
Display clarity	3	2	0	0	3.6
Keyboard feel & usability	1	2	2	0	2.8
Hardware reliability	2	2	0	0	3.5
Maintenance service	2	1	0	0	3.7

*Weighted Average on a scale of 4.0 for Excellent.

Advantages of the Infoton terminals cited by the users included cost, sturdiness, good keyboard layout, and ease of maintenance. One user commented that Infoton makes quality products that are more reliable than comparable equipment.

There were few negative comments. One user had found the Model 200 was incompatible with an older Infoton model, and another said the operators complained because there was no backspace key.

In regard to the lower ratings assigned to the Keyboard Feel & Usability category, an Infoton spokesman pointed out that the Infoton terminals use solid state keyboards, which might feel strange, at first, to persons accustomed to mechanically activated keyboards.□

▶ basis or, optionally, on a block basis. Line and keyboard command functions include carriage return, line feed, new line, line erase, page erase, cursor positioning, tabulation, columnar tabulation, and keyboard lock/unlock. Cursor addressing and sensing are standard features. Cursor controls move the cursor up, down, left, right, or home. Edit func-

tions include line insert and delete. Character insert or delete and format protection are provided in the optional Block Mode. Eight program function keys are optional.

INFOTON 200: Transmission is performed on a character-by-character basis as each character is keyed. Model 200 operates in one of two switch-selectable modes: Bottom Line Entry and Full Screen Entry (alternatively, the Infoton 200 can be equipped at the factory to operate in a non-scroll mode only). In the Bottom Line Entry mode, data is entered in the last line, from left to right, and all displayed data scrolls up by one line after the line is filled. In the Full Screen Entry mode, data is entered on the first line and scrolling begins only after the screen is full. In the Non-Scroll Page mode, data entry is performed from first to last lines, but scrolling is disabled. Received and keyed commands execute carriage return, line feed, line insert, line delete, line erase, screen erase, audible alarm (Bell), and keyboard lock/unlock functions. An addressable cursor is standard. An optional cursor control pad provides individual cursor control keys that move the cursor up, down, left, right, or home. An answerback option transmits a station identification message in response to a keyed "Here Is" or received ENQ. The optional program function keys generate a program-defined character code.

INFOTON 400: Transmission can be performed on a character-by-character basis or on a block basis. Received and keyed commands execute carriage return, line feed, cursor positioning, tabulation, and keyboard lock/unlock functions. Cursor controls are provided that move the cursor up, down, left, right, or home. Cursor addressing and sensing are standard features. Edit functions include line and character insert and delete. Format protection, a standard feature, restricts data entry to unprotected fields. In Block Mode, a variety of transmission parameters can be defined to permit transmission of different portions of the display, including unprotected fields, protected fields, an entire field, or an entire page. Protected or unprotected fields can be highlighted by reverse video, half- and full-intensity, blinking, and underline functions. Fields can be designated as alphanumeric or numeric only. Tabbing can be performed between fields. Erase functions include field erase and page erase. Eight program function keys are standard for execution of program-defined functions; 24 are optional.

COMPONENTS

MODEL 100 CRT DISPLAY UNIT: A 12-inch (diagonal measurement) CRT with a display arrangement of 24 lines of 80 characters each for a total screen capacity of 1920 characters. Model 100 provides a character set of 96 ASCII symbols plus 32 line drawing symbols. Each character is formed by a 5-by-9 dot matrix. Data is displayed in white (P4 phosphor). Highlighting features include reverse video and dual intensity.

MODEL 200 CRT DISPLAY UNIT: The screen size, display arrangement, and total screen capacity are the same as on the Model 100. Model 200 provides a character set of 64 upper case ASCII symbols; a set of 128 displayable ASCII symbols is optional with the appropriate keyboards. Each character is formed by a 9-by-9 dot matrix. Data is displayed in white (P4 phosphor) or, optionally, in green (P31 phosphor). Reverse video is switch-selectable.

MODEL 400 CRT DISPLAY UNIT: A 12-inch (diagonal measurement) CRT that displays 25 lines of 80 characters each for a total screen capacity of 2000 characters. A character set of 128 displayable ASCII symbols is provided. Each character is formed by a 9-by-9 dot matrix, and data is displayed in white (P4 phosphor) or, optionally, in green (P31 phosphor). Highlighting features include reverse video, half- and full-intensity, blink, and underline. ⟩

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▶ MODEL 100 KEYBOARD: A typewriter-style keyboard with cursor control and numeric/edit key clusters. Eight program function keys are optional. Key functions include Line Feed, Return, Break, Tab, Back Tab, Caps, Block, Insert Line, Delete Line, Insert Character, Delete Character, Erase Line, Erase Field, Erase Page, and Print. N-key rollover and repeatable keys are standard features.

MODEL 200 KEYBOARDS: Four models are available:

- Model 200/1—Typewriter style; ASCII upper case only.

- Model 200/2—Typewriter style with separate numeric pad; ASCII upper case only.

- Model 200/3—Typewriter style with separate numeric pad; ASCII upper and lower case.

- Model 200/4—Typewriter style with separate numeric pad, cursor key cluster, and 12 program function keys, ASCII upper and lower case.

Key functions for Models 200/1 and 200/2 include Here Is, Line Feed, Return, Rub Out, Repeat, Break, Escape, Shift and Control Shift. Key functions for Models 200/3 and 200/4 include Backspace, Break, Line Feed, Return, Repeat, Tab, Escape, Line, Page, Caps Only, Shift, and Control Shift.

MODEL 400 KEYBOARDS: Two keyboards are available. Models 400/4 and 400/5 are typewriter-style keyboards with separate numeric pad, cursor-control and edit key cluster, and a row of function keys. Model 400/4 provides 8 program function keys; Model 400/5 is equipped with 24 program function keys. Key functions include Backspace, Break, Line Feed, Return, Repeat, Escape, Tab, Erase Page, Erase Field, Print Page, Print Field, Back Tab, Transmit, Line, Block, Caps Only, Shift, and Control Shift. The cursor/edit key cluster includes five cursor and four edit keys.

PRICING

The Infoton terminals are available for purchase by OEM's and distributors only. The prices listed below are suggested list prices; actual prices will vary according to the options selected and the prices set by the distributors.

	Purchase Price
Infoton 100	$995
Infoton 200	$1,000 to $1,300
Infoton 400	$1,500 to $1,700■