

Hewlett-Packard's Family of Data Terminals

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2631A Printer



2631A prints inventory control documents



Clean, modular design allows easy ribbon cartridge replacement

- 180 characters per second
- Smart bidirectional printing
- Three different print modes
- 128-character ASCII set
- High resolution dot matrix characters
- Long-life (10 million characters), easily replaceable ribbon cartridge
- Either table-top or pedestal-mounted

The 2631A is a high-performance 180 character-per-second dot matrix impact printer. Optimized for throughput and print versatility as well as user convenience, the 2631A is designed for a wide variety of general purpose printing applications.

With its advanced silicon on sapphire (SOS) microprocessor design, the 2631A increases its total throughput by high speed skipping at 45 inches per second over 10 or more spaces in a row. Also, leading and trailing spaces are suppressed.

"Smart" bidirectional printing is another advance which allows the printer to "look ahead" to the next line and print right-to-left or left-to-right, whichever provides the faster path between print lines. This further optimizes throughput.

Three different print sizes can be selected (normal, expanded, and compressed), by either the operator or the software program. The 2631A prints 136 characters per line in normal mode, 227 characters per line (132 characters in 8-1/2") in compressed mode.

The nine-wire print head allows character formation within a 7x9 dot matrix. Thus lower-case character descenders can be printed as they normally appear in printed text, and a true continuous underline can be printed under program control.

Horizontal tabbing and 8-channel fixed VFU are standard features. Seven different program-selectable vertical spacings (1, 2, 3, 4, 6, 8, and 12 lines per inch) permit high quality print-out of subscripts, superscripts, etc.

A full 128 upper and lower case ASCII set is standard with an additional 128-character set available as an option. Two character sets can be used concurrently and printed on a character by character basis. Control characters can also be displayed instead of executed in "Display Functions" mode for program development activities.

A unique, long-life (at least 10 million characters), easily replaceable ribbon cartridge takes all the mess and trouble out of changing ribbons.

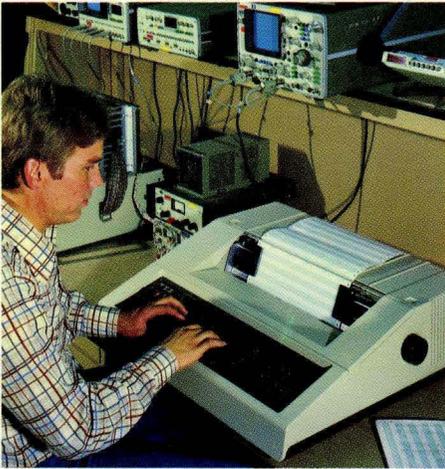
The 2631A can be mounted on either a table top or pedestal. Two paper feed paths, bottom or rear, are standard. Adjustable forms tractors permit using any paper width from 1.22 inches to 15.75 inches. Up to six-part forms can be used.

The following optional foreign language character sets are available: French, Swedish/Finnish, Norwegian/Danish, Spanish, German, and U.K. Pound Sterling.

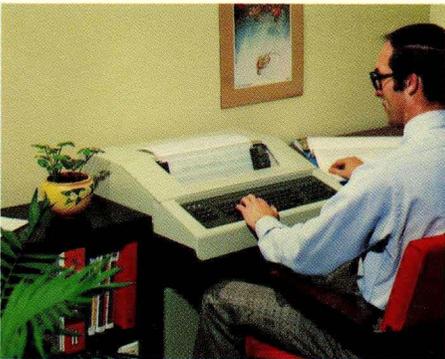
The 2631A supports a wide variety of interfaces including: 8-bit parallel differential, 8-bit parallel TTL, HP-IB, RS232C and 20ma current loop. Baud rates from 110 to 9600 can be used.

A self test feature allows the user to easily and quickly verify proper printer operation.

2635A Printing Terminal



2635A keyboard



2635A used for interactive problem solving or timesharing

- 180 characters per second
- 110, 150, 300, 1200, or 2400 baud switch-selectable. With internal switches, up to 9600 baud
- Full or half duplex operation
- Long-life (10 million characters), easily replaceable ribbon cartridge
- Either table-top or pedestal-mounted
- Numeric cluster includes TAB and ENTER keys
- Parts commonality with 2631A
- RS232C or 20ma current loop

The 2635A Printing Terminal is a powerful interactive hard-copy terminal with high-speed printing capability. It uses the newly-developed HP SOS microprocessor to optimize throughput, data manipulation and other control functions.

Using the same print mechanism and much of the same microprocessor-based electronics as in the 2631A printer; the 2635A Printing Terminal prints at 180 characters per second and skips at high speed (45 inches per second) over 10 or more successive spaces.

“Smart” bidirectional printing is another advance which allows the printer to “look ahead” at the next line and print right-to-left or left-to-right, whichever is faster, further optimizing performance.

In addition to the printing features of the 2631A, the 2635A also has as standard a typewriter-like keyboard and an accounting-type numeric keyboard including TAB and ENTER keys.

Further, if no key is pressed within 0.6 second after the previous key stroke, the print head automatically moves to a print-viewing position 6 characters to the right and moves back to the current position when the next key is pressed. If desired, this feature can be disabled by entering an escape code at the keyboard.

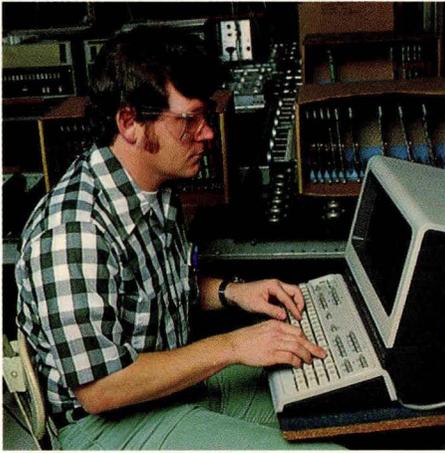
Three different print sizes can be selected (normal, expanded, and compressed), by either the operator or the software program. The 2635A prints 136 characters per line in normal mode, 227 characters per line (132 characters in 8-1/2”) in compressed mode.

The 2635A can be mounted on either a table top or pedestal. Two paper feed paths, bottom or rear, are standard. Adjustable forms tractors permit using any paper width from 1.22 inches to 15.75 inches. Up to six-part forms can be used.

The full 128-character upper and lower case ASCII set is standard. For program development and debugging, control characters can be printed (instead of executed) in DISPLAY FUNCTIONS mode.

EIA RS232C and 20ma current loop interfaces are available. For RS232C operation, baud rates from 110 to 2400 bps can be selected on the front panel of the 2635A. With internal switches, transmission rates up to 9600 bps can be selected. Full or half-duplex operation is switch-selectable. The user may optionally add 202-type modem control to the RS232C interface.

2640B Display Terminal



Interactive solutions for manufacturing

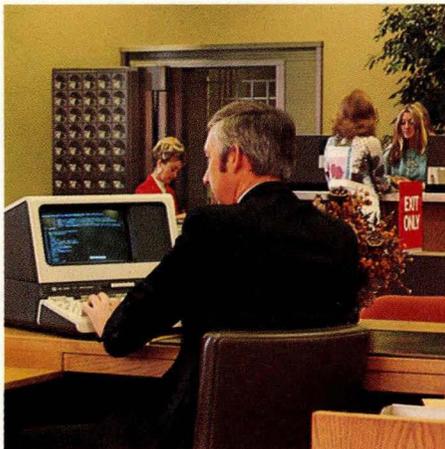
- Enhanced high resolution display.
- Inverse video with optional half bright, underline and blinking.
- Character mode or block mode.
- Full editing capability.
- Off screen storage.
- Up to four independent plug-in character sets.
- Flexible data communications
- Modular architecture with self-test

The 2640B Interactive Display Terminal offers a new dimension in display technology. A large 5" x 10" screen presents up to 1920 characters in 24 lines by 80 columns. Optimized for easy interactive computer sessions, the 2640B employs

a 9 x 15 dot matrix for crisp, precise characters and a multitask detachable keyboard to solve many varied application problems.

Full editing capability with block mode data transfers substantially reduce your computer overhead on terminal communications. Off-screen storage further enhances the 2640B's formatting capability. Protected fields and the forms drawing character set provide unique data entry capabilities. Engineered for high reliability the 2640B features a special built-in self test function to ensure proper terminal operation. The 2640B also offers flexible data communications to meet your changing needs.

2645A Display Station



2645A used as a remote work station

- 9600 baud, full or half duplex
- Optional polling
- User defined soft keys
- Fully integrated dual cartridges (optional)
- Up to 11 kilobytes display screen storage
- Alphanumeric field checking
- Adjustable margins with character wraparound



Interactive for a wide variety of applications

The 2645A Display Station is a sophisticated and flexible interactive terminal providing substantial off-line capabilities with optional mass storage. It is a superset of the 2640B features with up to 9600 baud, character mode or block mode with a choice of communication capabilities. RS232C, serial ASCII is standard, in addition to optional 20ma current loop or polling.

Optional fully integrated dual cartridge tapes provide up to 110 Kbytes mass storage for each tape. Easy-to-use with fast search times, the dual cartridges can allow the user to perform many tasks off line. The stored data can then be later transmitted to a host computer. Data entry, text editing, and program preparation can all benefit from dual cartridge tapes.



Fully integrated dual cartridges

Protected fields, alphanumeric checking and the line drawing character set are just a few features that make data entry easy. Adjustable margins, line inserts or deletes, character wraparound and block moves provide a powerful tool for text editing or program preparation.

Soft keys allow the user to define up to 80 unique characters for each key. Useful in reducing repetitive keystroke sequences, the soft keys can transmit messages to a computer or control local functions, greatly simplifying terminal operation.

2649A Microprogrammable Terminal



2649A programmed to monitor weight distribution/center of gravity during ship loading activities



Typical screen display during load monitoring



Modular design allows flexible configurations

- Complete system in a single package
- Modular architecture
- Powerful central processor
- Graphic display capability
- Flexible memory options
- Easy to interface
- Simplified hardware/firmware development

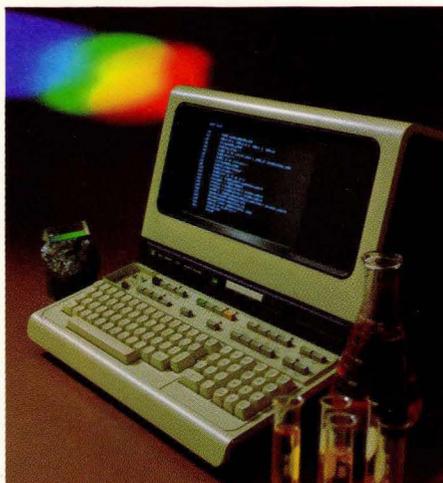
The 2649A Microprogrammable Terminal offers the OEM a reliable and cost effective solution to the need for an intelligent terminal/controller. Having all the desirable features of the 264X family of display terminals, it can be programmed to tackle

applications as a stand-alone controller or preprocessor in computer networks or anything in between.

Because of modular architecture and a wide choice of memory and interface options, the 2649A's configuration can be optimized to meet the needs of OEM's and provide an opportunity for 'value added'.

Sophisticated development tools are available which include a comprehensive hardware and firmware documentation package, cross assembler and source code listings and tapes.

2641A APL Display Station



Interactive APL with character verification

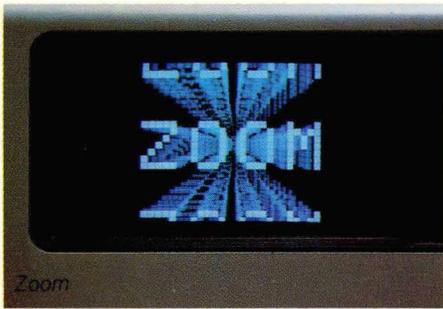
- Full 128 character APL set
- Full 64 character overstrike set
- Automatic verification of overstruck characters
- Both APL and ASCII operation
- Detachable bit paired keyboard
- Fully integrated mass storage (optional)

The 2641A APL Display Station retains all the 2645A features and offers a complete 128 APL character set with overstrike and automatic overstrike verification. The high resolution display makes the overstruck characters easy to read. The detachable

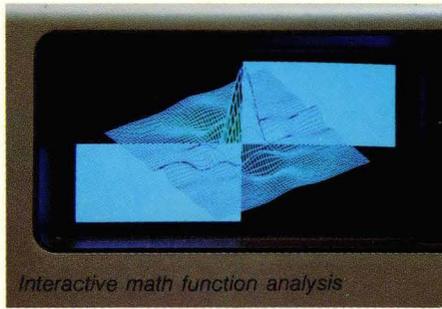
bit paired keyboard has both ASCII and APL legends making it easy-to-use as an APL terminal, or as an ASCII interactive display station. Inverse video, half bright, underline and blinking are standard display enhancements.

Also, the 2641A will optionally support bit-pairs or typewriter-paired local line printers and fully integrated dual cartridge tape.

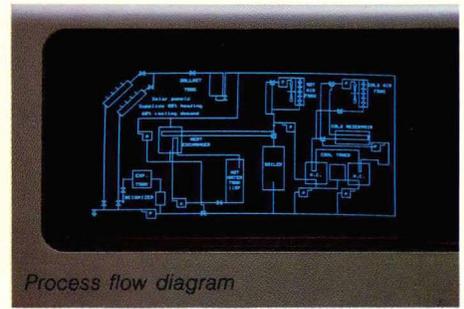
2648A Graphics Terminal



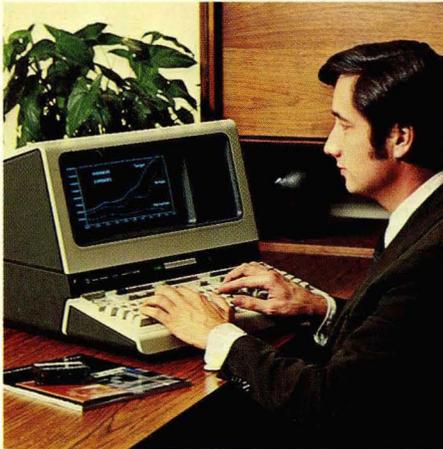
Zoom



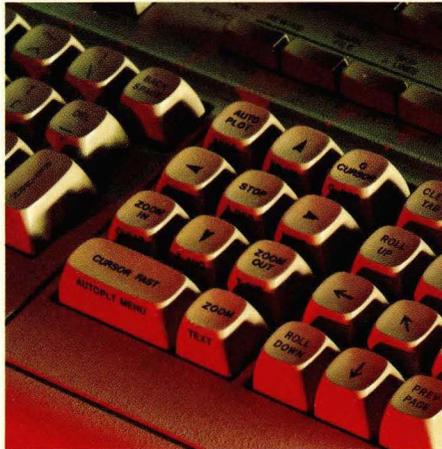
Interactive math function analysis



Process flow diagram



Easy graphs of tabular data with autoplot



Graphics keypad

The 2648A Graphics Terminal offers high performance capabilities normally found in larger CPU based systems to users requiring low cost graphics terminals. Raster scan technology offers a new level of picture clarity and brightness reducing eye fatigue and allowing use in high ambient light areas.

The 2648A can be used in computer aided design; scientific, engineering and business data plotting; business management information; computer aided artwork and many other application areas.

Easy plots of tabular data can be obtained without any host CPU graphics software. Only fill out a simple menu and with a few keystrokes the 2648A will plot the data with the axes automatically scaled and labeled.

If you also need interactive alphanumeric, the 2648A is your solution. Retaining all the features of the 2645A Display Station, you can perform text editing, data entry and program preparation in addition to graphics.

Raster Scan — Bright easy-to-read display in high ambient light areas.

Auto-Plot — Plot tabular data without CPU graphics software.

Zoom and Pan — Magnify portions of display up to 16 times and view any portion of entire display.

Rubber Band Line — Perform trial graphics off-line without host CPU intervention.

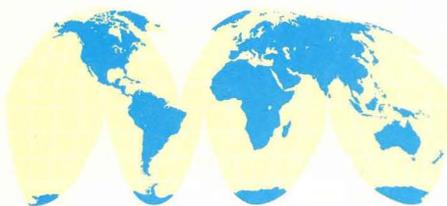
Independent Alphanumeric and Graphic Memories — Computer dialogue and graphic output can be viewed independently or together.

Pattern Generation — Fill rectangular areas of bar charts with user defined patterns for differentiation where color is normally used.

Compatibility Mode — Use with most terminals having a 1024 x 780 dot resolution.

Interactive Alphanumerics — Retains all alphanumeric capability of 2645A.

International Terminals



A full line of international terminals is also offered. Each presents a character set and keyboard unique to a particular language.

Model 2640C — Cyrillic (Russian): Bilingual switch selectable Roman or Cyrillic operation.

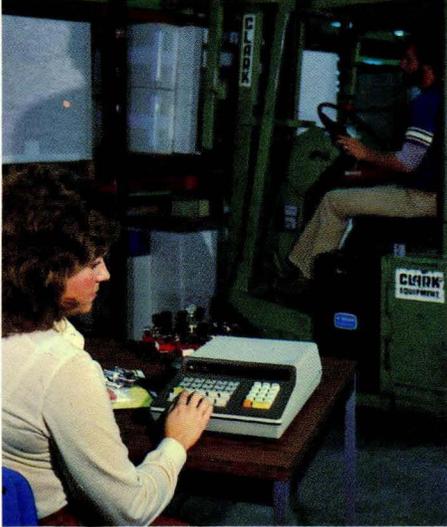
Model 2640N/2645N — Danish/Norwegian: Unilingual terminal for Danish and Norwegian.

Model 2640S/2645S — Swedish/Finnish: A 2640B-based and a 2645A-based unilingual terminal. Each containing the Swedish and Finnish character sets.

Model 2645K — Katakana: (Japanese) Bilingual switch selectable Roman or Katakana operation.

Model 2645R — Arabic: Bilingual switch selectable Roman or Arabic operation.

3071A Numeric Data Entry Terminal



- Numeric keyboard and display
- Special-purpose function keys
- Prompting lights
- Custom labels
- RS232C/CCITT V24 communications

The 3071A Numeric Data Entry Terminal enables people with no computer knowledge to communicate easily with a computer system. By using the numeric keyboard and display, substantial amounts of information can easily be transmitted to the host computer. By using convenient keyboard definition labels, the special function keys and prompting lights can be tailored to individual application requirements.

Data entry is accomplished via nine special function keys (plus a shift key, providing 18 possible combinations) and a numeric keypad. Fifteen prompting lights, a large, bright, 16-digit display and a buzzer provide convenient, on-line prompting and verification of entered data.

Applications for the 3071A include: shipping/receiving transactions, inventory control, order processing, process control, labor vouchering.

The terminal is equipped with an EIA RS232C interface to allow use with full duplex asynchronous modems from 110 to 300 baud with selectable parity.

Interactive shipping/receiving transactions

7260A Optical Mark Reader



- Supports user-designed forms
- Two reading modes: Hollerith or binary
- Buffered output
- Optional select hopper
- Two RS232 interface connectors
- Easy to interface

The 7260 Optical Mark Reader is a low-cost terminal that enables data marked on cards, using an ordinary pencil, to be read and transmitted to a remote computer. The card forms may be completed as desired (at home, in a car, etc.), and the data can subsequently be transmitted at high speed to a remote computer.

The 7260A can be used as a stand-alone remote device, or it can share the same communication line with another RS232C device, thanks to its unique interface design with two RS232C connectors.

In addition to on-line applications, the 7260A can be used on an off-line basis providing local editing and storage of data.

The device can read cards in single or continuous pick mode at up to 300 cards per minute. Two input buffers and one output buffer enable software programmable retransmission of each card in case of transmission error. Two standard reading modes are available: binary image of each column or Hollerith code. Other reading modes are available on request.

Also the 7260A can receive nine software commands and send six possible status codes. Non-standard codes available on request. An additional output hopper can select cards under program control.

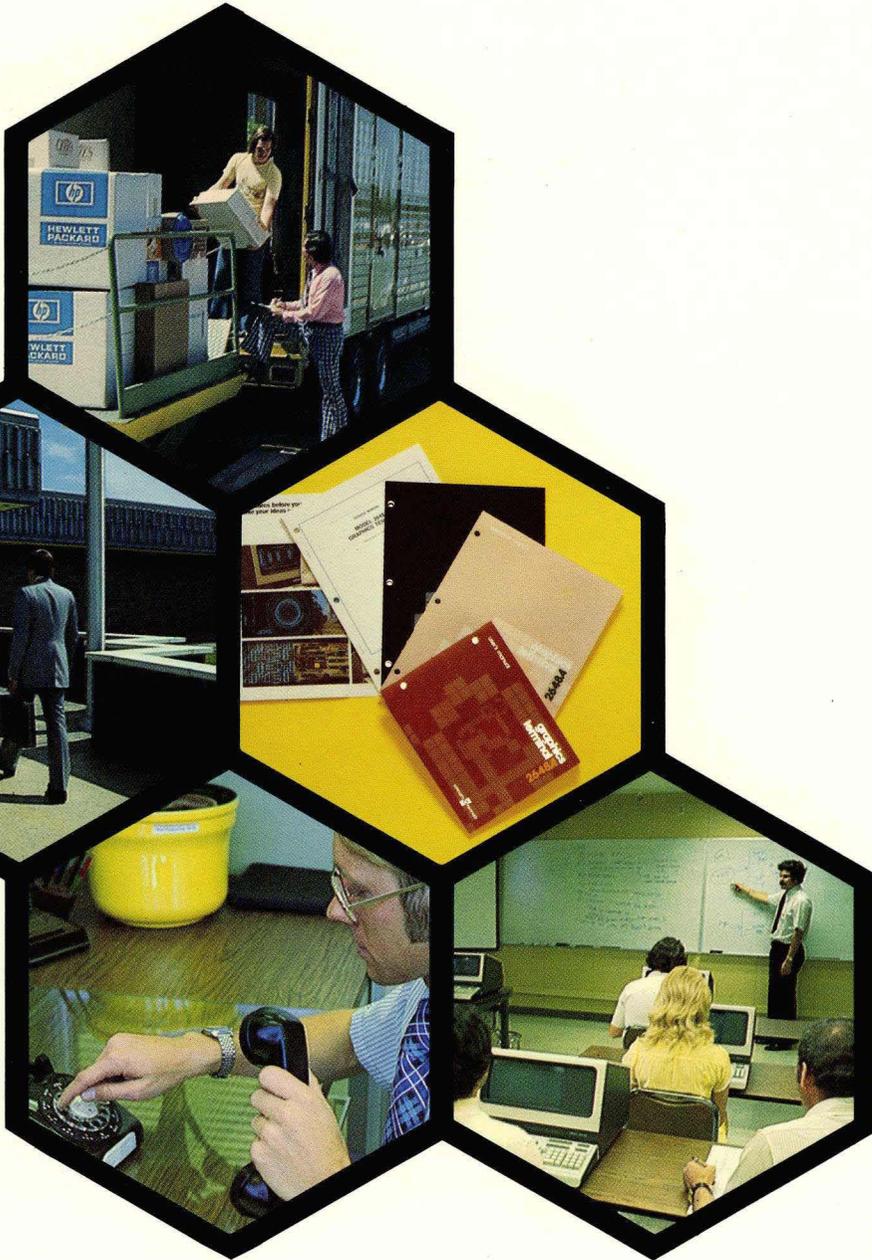


The 7260A is ideal for turn-around document applications where a line printer is used to print information on card stock. Additional information is manually marked on the cards and then using the 7260A reader, the information is transmitted to the host computer. Hewlett-Packard can provide documentation and support to the user for turn-around document design.

The interface is EIA RS232C, with baud rates from 110 to 2400.bps, full or half-duplex, switch-selectable.

Inventory control using turn-around documents

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