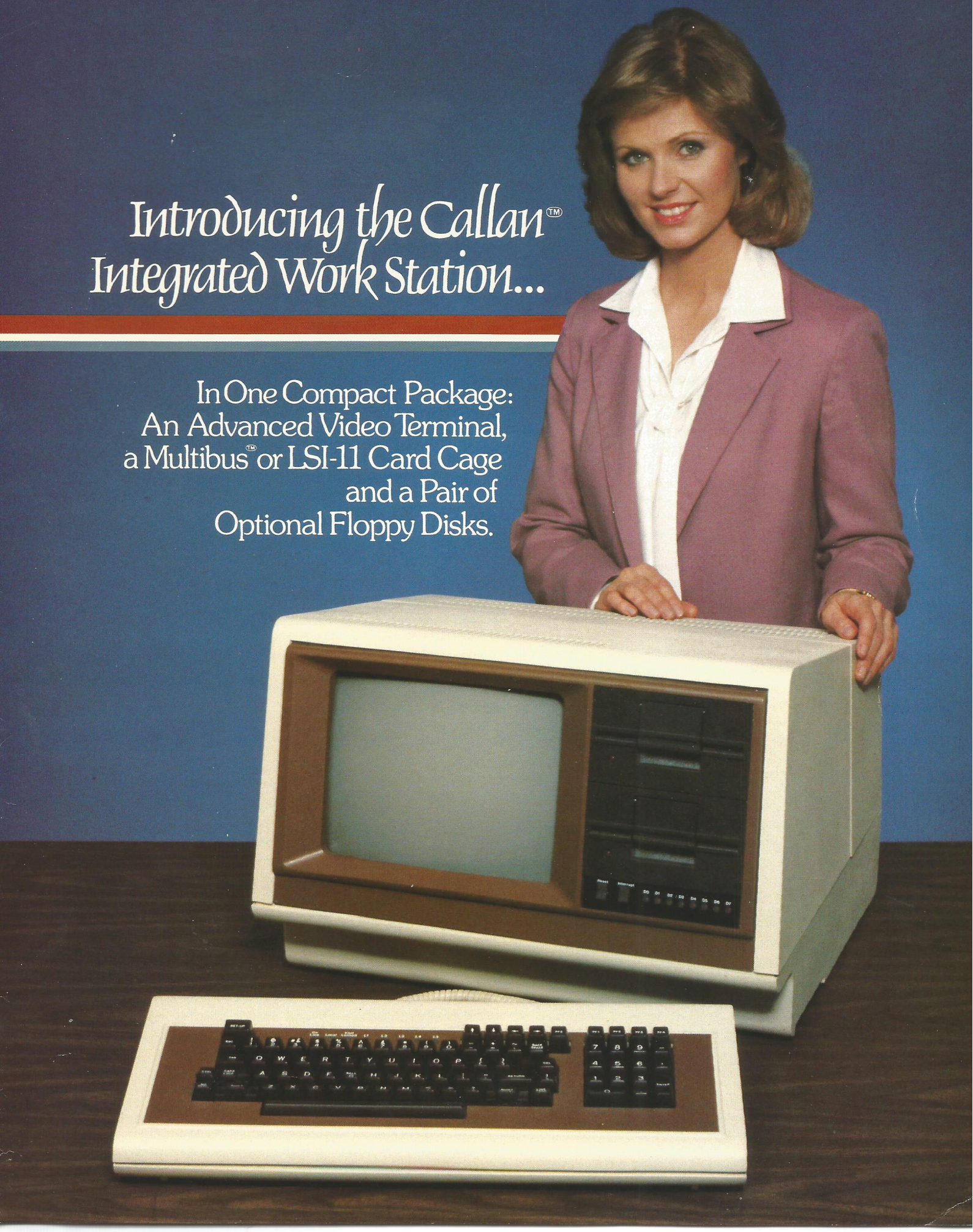
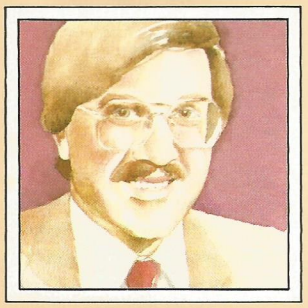
Introducing the Callan™ Integrated Work Station...

In One Compact Package:
An Advanced Video Terminal,
a Multibus™ or LSI-11 Card Cage
and a Pair of
Optional Floppy Disks.

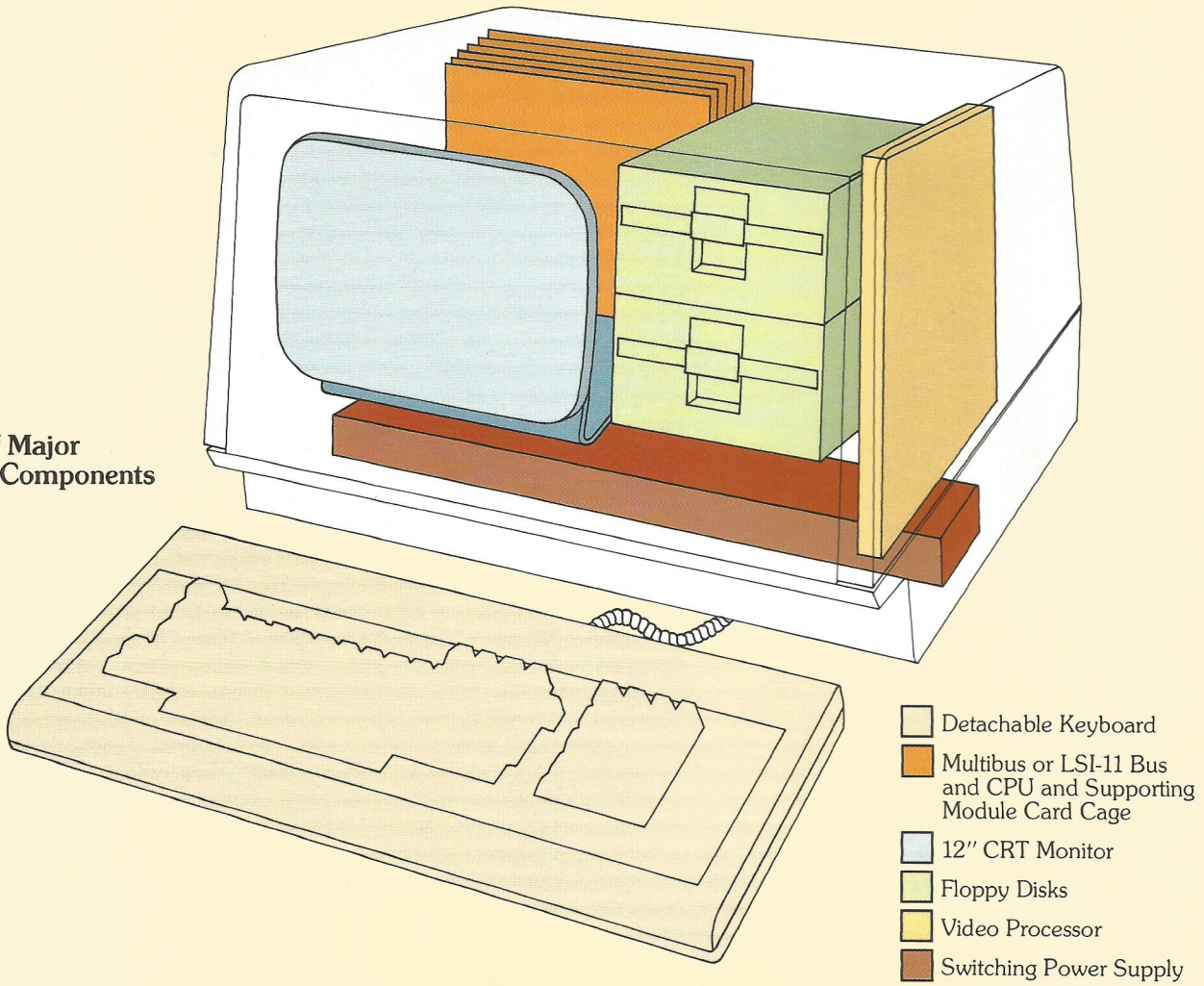




BILL POHLMAN
Vice President, Engineering

"The CD100's integrated package is an attractive solution to a rapidly expanding range of micro processor based applications."

View of Major CD100 Components



Advances in VLSI density and the storage capacity of both 5¼ inch mini floppies and 5¼ inch rigid Winchester disks has made possible the CD100, an advanced system for OEMs and sophisticated end users.

The large variety of microprocessors, memories and peripheral controllers available in the Multibus and LSI-11 standard board families permit the designer to configure a system for virtually any application. While these standard boards have been available for some time, the CD100 provides, for the first time, an attractive low cost fully integrated package.

Here are just a few of the applications for the CD100: ■ Low cost personal development system ■ Communications terminal or network station (e.g. SNA, X.25, ETHERNET) ■ Cluster terminal controller ■ Configurable laboratory computer ■ IEEE instrument controller, or data collector ■ Test system supervisor ■ Small business system ■ Medical system manager ■ Process control supervisor station ■ Distributed processing work station

"The CD100 has a multitude of features important to the OEM."

RS232 serial interface to front terminal at middle bulkhead. Connect up as if it were an external terminal. ANSI compatible. Option switches select:
- 115V/230V
- Baud rate
- 7/8 data bits, parity
- Auto wrap
- Auto LF
- Local, self test/on line
- Other modes

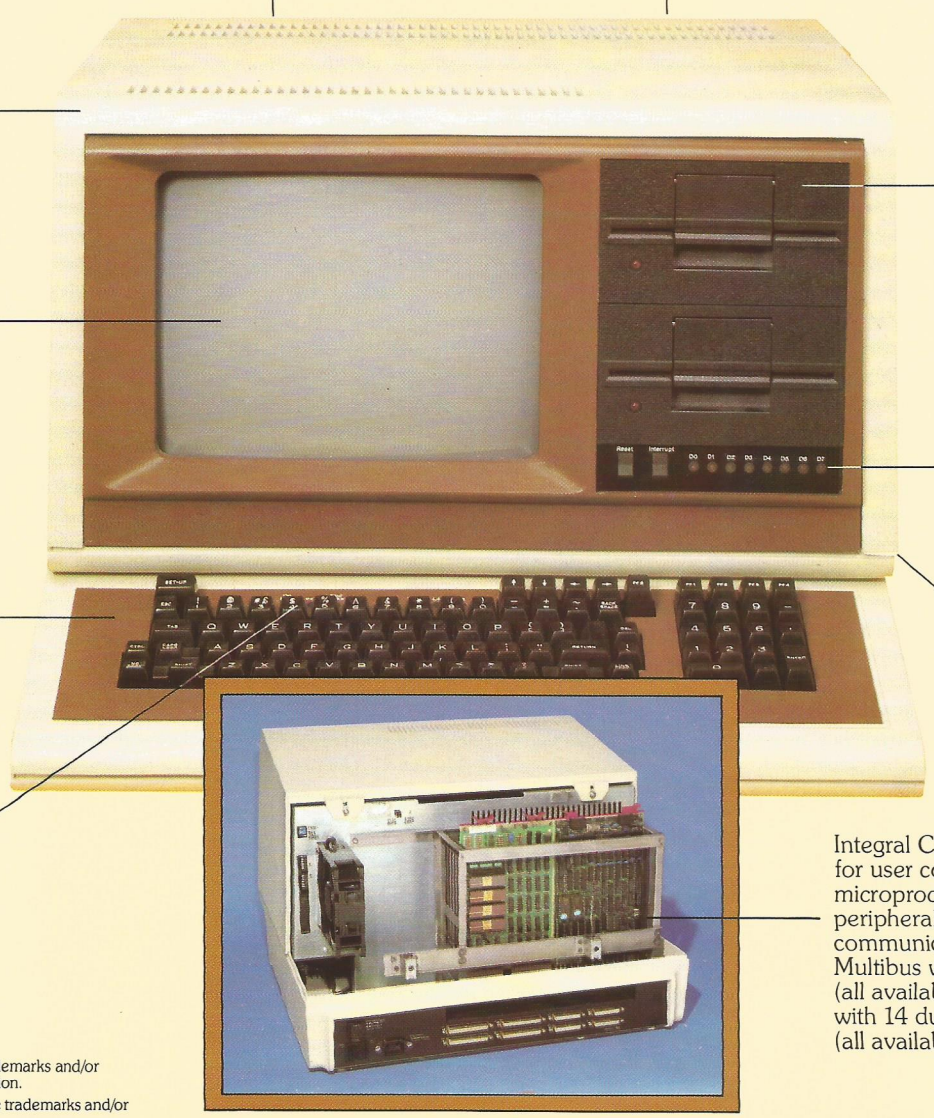
Rear cover removable for CPU access. Cooling provided. 200 watt switching power supply. Will operate with cover removed.

High strength structural foam case.

25 row × 80 character display, 7 × 9 character with 3 dot descenders, non-glare glass, 5 character attributes, powerful edit commands, split screen, separate scroll region, smooth scrolling (lines *roll* up for easy reading, rather than jump).

Detachable keyboard with coiled cord, 82 keys including accounting type keypad, auto repeat function keys, applications modes, typewriting pairing.

LED indicators on keyboard show on line/local, KB locked, keypad in applications mode. Three LEDs are user accessible through RS232 commands.



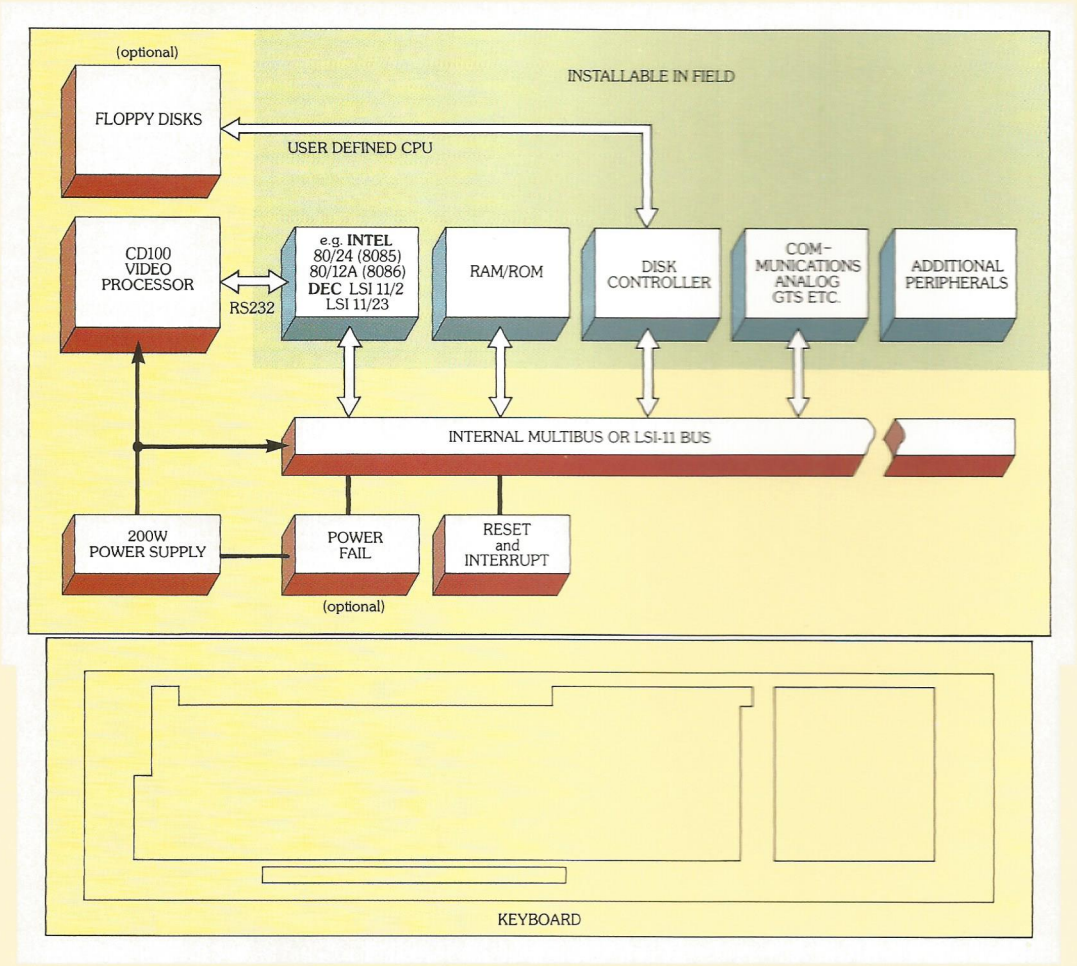
Dual 5¼ inch mini floppies (optional) provide up to 2 megabytes of storage. Disk controller is user selected and located in CPU card cage in rear. Single 5¼ inch Winchester disk can replace one mini floppy providing up to 5 megabytes of storage.

CPU reset and interrupt switches (Multibus). Interrupt vector is selectable. CPU halt/enable and LTC switches (LSI-11) (optional). CPU LEDs. Eight LEDs are addressable through RS232 commands. LSI-11 version indicates CPU Run/Halt (optional).

Contrast, brightness and key click controls.

Integral CPU card cage for user configured microprocessor, memory, peripherals, input/output, communications... etc. Multibus with six slots (all available). LSI-11 bus with 14 dual/7 quad slots (all available).

"Plug in your Multibus or LSI-11 cards and start running."



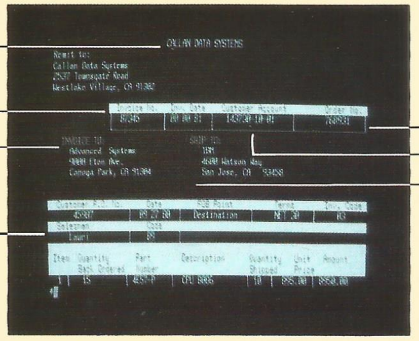
"The CD100 has many advanced video features."

7×9 Characters Plus 3 Dot Descenders

Reverse Video Characters

Half Intensity Characters

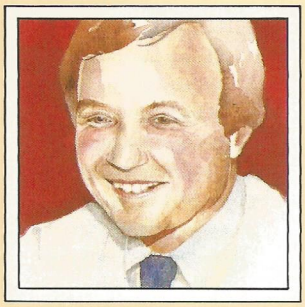
Separate Scrolling Regions



Forms Drawing Characters

Blinking Characters

Tab Controls

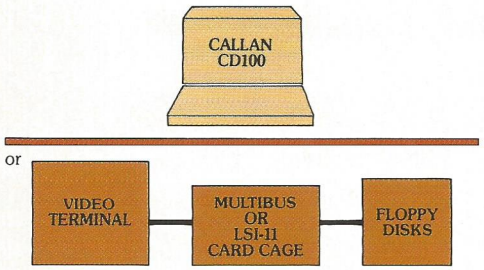


DAVE CALLAN
President

"The CD100 is the perfect package for anyone using Multibus or LSI-11 compatible cards."

"One Package Replaces Three or More...

The Callan CD100 is a compact, desk top Integrated Work Station, which includes a versatile intelligent terminal with advanced video features, a built-in card cage which holds a number of Intel™ Multibus or DEC® LSI-11 Q-Bus cards, a high capacity switching power supply, and as an option, two 5¼ inch mini floppy disk drives, or one floppy and one mini-Winchester rigid drive.



The Callan CD100 Replaces 3 or 4 Separate Units

Now, OEMs and large volume end users can purchase an Integrated Work Station in a single low-cost package, rather than connect up three or four separate units such as a terminal, floppy disks, card chassis, etc., or develop from scratch an integrated system which could cost $500,000 or more. The "make or buy" decision becomes easy when you consider that the unit price of the CD100 starts at just $3195, with substantial OEM discounts available."

"Card Cage Enhances Configurability...

An important design feature of the CD100 is the integral card cage which holds up to 6 Multibus cards, or 7 quad/14 double height LSI-11 modules.* Multibus compatible cards, available from numerous sources, allow the designer to choose from a variety of CPUs, including the 8080, 8085, Z-80, 8086 and Z-8000. Similarly, the LSI-11 CPU series permits a choice of the LSI-11/2 or the LSI-11/23. Both these popular microcomputer board families are well supported by a wide range of floppy and hard disks, printers, analog input/output devices, and industrial control interfaces. A removable rear cover allows full access to the card cage for both development and maintenance.

No doubt about it, the CD100 offers the ultimate in flexibility."

"Software Compatibility, Too...

Our work station is fully compatible with all Multibus and LSI-11 family cards, and existing software as well, which is available from a number of sources. These include DEC's RT-11™ and RSX-11™, CP/M™ and CP/M86™ from Digital Research, and Intel's RMX-80™ and RMX86™."

"Many Advanced Video Features...

The video terminal has a 12 inch CRT display, a number of front panel CPU control switches and LEDs, plus a detachable 82 key keyboard. The terminal's RS232 interface communicates with the user's CPU cards at speeds from 50 to 9600 bps using a subset of ANSI Standard X3.64-1979 protocol.

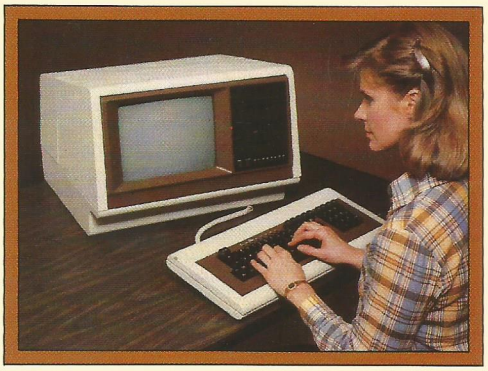
The versatile display is 80 characters by 25 rows, with split screen (effectively provides two "virtual" terminals) and separate scrolling regions. The system initializes to 24 rows for screen 0 and 1 row for screen 1. Video attributes include normal and faint intensity, blink, underline, insert/delete character or line, smooth scrolling, and a number of erase commands described in greater detail inside this brochure."

"Optional Floppies...

Two 5¼ inch mini-floppies can be mounted in the front of the cabinet, with the controller housed in the CPU card cage. A 5¼ inch Winchester disk can replace one of the floppies to provide 5 megabytes of fixed storage."

"That's why we say, the Callan CD100 Integrated Work Station is the perfect package for users of Multibus or LSI-11 cards..."

**Other microcomputer board sizes and types can be accommodated by new motherboard and card frame designs. Consult factory with your custom card cage requirements.*



Specifications.

Display Features

ANSI Compatible ANSI X3.64-1979 25 lines × 80 characters ■ 7 × 12 character in 9 × 13 fields, 3 dot descenders ■ Split screen capability (e.g. 7 rows for screen 0 and 18 rows for screen 1) ■ Separate scrolling regions within each screen (allows fixed column headers, etc.) ■ Smooth scrolling (lines go smoothly from bottom to top of screen ■ Tab controls ■ Insert/delete line ■ Insert/delete character ■ Erase to cursor (line or screen) ■ Erase from cursor (line or screen) ■ Erase line (on selected screen) ■ Move cursor commands ■ Cursor position report ■ LED commands ■ ANSI SET/RESET Mode commands ■ Alternate character ROM ■ Invisible character attributes including blink, half intensity, underline, reverse video and overstrike ■ Forms drawing characters ■ Monitor mode-displays all characters including control codes ■ Local/self test mode — runs diagnostics ■ 12 inch monitor with P4 phosphor ■ Non-glare glass

Operator Indicators

Online Keyboard Display LEDs: ■ On line, Local (on line or local is always on when power is applied) ■ Keyboard locked ■ Keypad application ■ Three CPU programmable indicators ■ Front Panel Display LEDs: *Multibus:* Eight CPU programmable LEDs. *LSI-11:* Run — Indicates CPU in run mode, requires DEC KPV11-A module. Spare — Spare LED addressable through KPV11-A module ■ Six CPU programmable LEDs

Keyboard Features

Detachable with five foot (extended) coil cord ■ 82 sculptured keys with typewriter pairing ■ 18 key numeric pad includes 0-9, period, comma, minus, enter and four function keys. Keypad can be put into applications mode for 14 more function keys ■ Auto repeat ■ N key rollover ■ Escape, delete, control, tab and caps lock functions ■ Cursor control keys ■ Smooth scroll control key

Communications Interface

RS-232 serial interface to CPU through Cannon 25D type female ■ Baud rate selectable 50 to 9600 baud ■ 7 or 8 data bits ■ One start bit, one stop bit (two bits below 300 baud) ■ *Parity:* Odd or even. *Parity:* Enabled or none

Internal Controls and Switch Options

Reverse video intensity (trim pot) ■ Reduced intensity brightness (trim pot) ■ Auto line wrap ■ Auto line feed after carriage return ■ Monitor mode enable ■ Cursor type ■ Xon/Xoff enable

Operator Terminal Controls

Video intensity ■ Video contrast ■ Keyclick enable/disable

Operator CPU Controls

Multibus: Reset-momentary switch re-starts CPU using INIT/signal ■ AUX RESET/optional ■ INTR-Momentary switch causes CPU interrupt with jumper selectable interrupt identifier ■ *LSI-11:* Enable/halt — Two position switch, interfaces to KPV11-A board power-fail/line time clock/terminator — causes CPU to RUN or HALT ■ LTC On/Off — Two position switch allows/disables line time clock interrupts from KPV11-A card

CPU Card Cage

Accessible by removing rear panel, fan cooled ■ System power: 200W switching power supply, +5V @ 25A, ±12V @ 4A, −5V @ 4A ■ *Multibus:* Six standard Multibus card slots, P1 motherboard with terminators, parallel (with arbitor) or serial priority interrupt, interrupt vector, front panel restart and interrupt. 1MByte addressing (P2 extends to 16 MByte). P2 motherboard (optional) with power fail detection and interrupt plus provisions for battery backup. P2 wirewrap kit (optional) ■ *LSI-11 Bus:* Seven quad or 14 dual height card slots with serial interrupt priority, provisions for line time clock, power fail detection, terminators, front panel halt/enable switch, LTC on/off switch and RUN indicator

Disk Memory Provisions

Two 5¼ inch floppy disks can be optionally mounted in the system providing up to two MBytes (unformatted) storage ■ 5¼ inch mini Winchester drives can also be accommodated providing up to 10 MBytes of fixed storage ■ The disk controller (user specified) will be located in the CPU backplane

External Cabling Provisions

Rear panel allows mounting of four Cannon D type 25 pin connectors and four D type 37 pin connectors plus flat cable access

Power

115V at 60 Hz, 4 AMPS or 230V at 50 Hz, 2 AMPS, switch selectable ■ VDE filtering ■ AC on/off located in rear ■ Designed to meet UL, VDE requirements

Physical Data

20½" wide × 19¼" deep × 14½" high (52 × 49 × 37 cm) ■ With keyboard nested: 25½" deep (64 cm) ■ Weight 50 pounds (22.7 kg)

Callan
DATA SYSTEMS

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