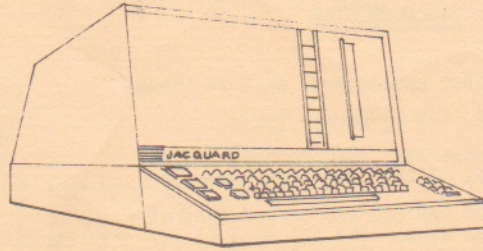


INTRODUCING THE JACQUARD 100 VIDEOCOMPUTER,



SUMMARY

Jacquard's newest product consists of a micro-processor video keyboard computer. The system is a complete small computer with peripheral controllers, programmable memory, integrated floppy disk and flexible communication capability. Applications for the J100 range from source data entry on a large terminal network to stand-alone data collection with once-a-day call up and replay requirements. Since the system price starts at approximately \$~~4200~~ ⁴²⁰⁰ new applications become not only feasible but highly economical on this computer system.

The Jacquard 100 VideoComputer represents the latest in solid state monolithic technology. This is reflected in all phases of the Jacquard design from the central processing unit and main storage, to the advanced secondary storage (floppy disks) and other I/O devices; and communications.

The J100 is a general purpose computer system that can readily be tailored for a variety of applications. A standard instruction set which is expanded from the industry conventions of today, is utilized.

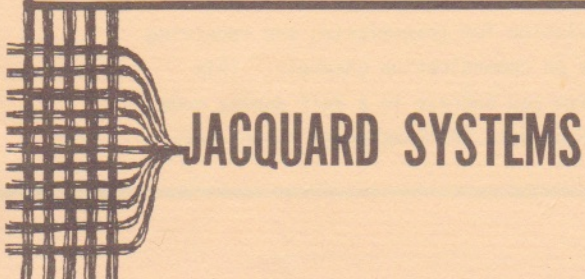
The system has the capability of addressing main storage of 128,000 bytes. This main storage may be monolithic memory, core or a combination of PROM and ROM.

The Jacquard 100 VideoComputer can be a standalone, fully operational computer system or it may be connected to a host computer over communication lines, point-to-point, multi-dropped, or in a clustered configuration.

The J100 possesses all the capabilities that a powerful central processing unit may afford the user.

HIGHLIGHTS

- Control for 9 and 7 track and phase encoded IBM compatible tape drives.
- Control for magnetic disk drives. 6Mb
- Control for 1500 line/minute printers.
- Full line of communication facilities from TTY, RS232 Asynchronous to 50KB synchronous.
- 12" diagonal 1920 character CRT.
- Full keyboard with 10 key pad and cursor control.
- Integrated floppy disks.
- A fast processor, 1.5 us cycle time.
- 2 to 128K bytes main memory (monolithic and/or core).
- Uniscope 100 plug compatible replacement capability.
- RJE Station replacement (2770, 2780 type) capability.
- Small business computer replacement.



1505 ELEVENTH STREET SANTA MONICA, CALIFORNIA 90404 (213) 393-3711

STANDARD FEATURES FOR THE JACQUARD 100
VIDEOCOMPUTER

1. CRT, 12", 1920 characters, 80 x 24 lines.
2. CPU, 16 bit, 1.5 us Memory Cycle.
3. Character generator, CRT refresh memory and keyboard control logic and memory.
4. Keyboard, 10 key pad and cursor control and function keys. The keyboard is detachable.
5. 2K bytes of **REFRESH** memory.

OPTIONAL FEATURES

1. RS232 Communications: Bisynchronous, Asynchronous, 110-50,000 baud.
2. Memory - RAM 4-128K bytes.
3. Master option, up to 32 Slaves (J105) per Master (J100).
4. Peripherals - See price list for floppy disks, line printers, card readers/punches, 9 track tape drives and removable disk drives.
5. CRT options - See the "J100 Functional Characteristics", for options, such as character and line blink, split screen, tab, formatting, editing, character insert, etc.

STANDARD FEATURES FOR THE JACQUARD 105
VIDEO TERMINAL

1. CRT, 12", 1920 characters, 80 x 24 lines.
2. Character generator, CRT refresh memory and keyboard control, logic and memory.
3. Keyboard, 10 key pad and cursor control and function keys. The keyboard is detachable.
4. Hardware connector for Master connection.

STANDALONE OPERATION

The J100 VideoComputer System is capable of operating in a standalone mode. This means that the unit includes a CPU and comes equipped with a sophisticated assembler language compiler. The user, or Jacquard, may write standalone applications which require printers, tapes, disks, etc., to operate applications such as accounts

receivable, aging, invoicing, inventory control, data editing and others. For example, the unit may be connected to various Mag Strip Badges, to collect data from a plant floor, such as work in progress, time and attendance and security data, then process or transmit the data to a host computer.

Since the system is a complete computer system, it need not be connected to a host computer. However, it can function in a standalone mode to collect key to disk data, compile this information at different times during the day and/or week, and transmit it in a burst over a high-speed communication line at specific times.

The benefits of using the system in this mode, is the timely transmission of information at greatly reduced line costs, versus operation of a non-intelligent terminal on a dedicated communication line. It also affords the user the ability to edit check and verify the information before it is transmitted to a central computer facility, thereby saving significant cost in error correction at a later date.

Typical Single Unit Operation with
Communications

For single terminal applications, the Jacquard 100 can be utilized in a variety of communication modes.

In remote point-to-point installations, the usual communication channel consists of a leased set of full or half duplex telephone lines dedicated to the use of that specific channel. Modems or data sets are installed at the CPU site and the terminal site to perform the necessary modulation and demodulation for transmitting and receiving data on communication channels. This system can operate in a half duplex mode, whereby data is transferred in only one

direction at a time or in full duplex (two ways): (1) "echo-back" where characters generated by the terminal keyboard are transmitted to the host CPU and immediately retransmitted to the CRT for display or, (2) the terminal transmits a message to the CPU while simultaneously receiving different data on the CRT. Full duplex circuits (4 wire) are recommended for the half duplex mode to reduce data set turn around time.

In a "dial-up" application, which is particularly useful in a time-sharing environment, many terminals can gain access to the CPU complex through use of any ordinary telephone handset and an acoustic coupler. When interaction between any terminal and the central computer is required, the operator dials a prearranged telephone number, places the handset on the coupler when contact has been made, and enters the necessary identification characters to allow access to the CPU. When interaction is completed the telephone handset is returned to its cradle, thereby disconnecting the circuit. With this type of network, terminals from any distant point, can operate on-line as required and no dedicated circuitry is required.

For point-to-point current loop applications, 4 wire circuitry either installed by the user or by Western Union is required. The J100 can be modified to provide the necessary internal battery for short distances (up to 5 miles) or, if Western Union circuits are utilized, they will provide the external 20 ma or 62.5 ma battery. Current loop applications can operate in either half or full duplex modes. Internal or external battery must be specified when ordering.

Typical Cluster Operation

The Jacquard 100 comes in two basic models. The first model is the J100 Model M, stand-

ing for Master. This Master Unit can control up to thirty-two (32) slave units connected directly to the Master via a multi-conductor telephone-type wire. The Master Unit may be connected to a Host Computer via a hardwire or using the Jacquard Communications Controller, to communicate to the communications controller on the Host CPU. This teleprocessing connection may be current loop, RS232, asynchronous or bisynchronous. The speeds range from 110 baud to 50,000 baud.

If this teleprocessing connection is in a local mode, no modems are required. However, going on to a common carrier line or over great distances or both, would require the addition of a 4 wire full duplex-type modem at each end. The communications channel may be point-to-point (one controller) or multi-dropped (several controllers at different locations).

In the cluster environment, the Host CPU sees only the single Jacquard Master Unit. The Jacquard Master Unit then controls all slaves connected to it and handles all addressing of these slave units. This also allows the user to take full advantage of the intelligence of the Jacquard Master Unit by only tying up a single communications port to the Host Computer, while allowing each slave clustered to the Master, to be operating simultaneously.

To send data to a specific terminal, the Host CPU addresses that terminal with the applicable command. The address, as far as the Host Computer is concerned, is a single address to a single Master. Embedded in that address is a decoding sequence that will reroute the message to the particular slave in question. To send data back to the Host CPU, each slave communicates directly with its Master and then the Master buffers the message and waits to be polled or to interrupt the Host CPU, be-

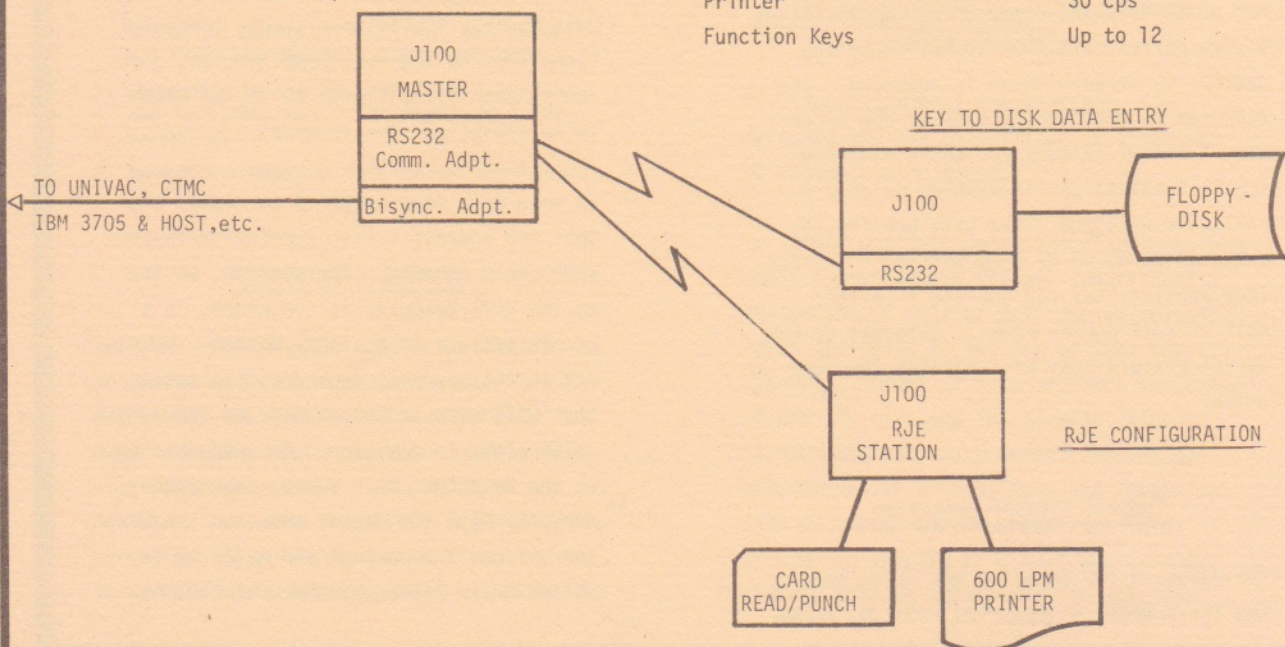
SPECIFICATIONS

fore it is allowed to transmit the message. Two different Jacquard Master Units may communicate with each other like this by processing messages through the high speed communications line. The Jacquard 100 Master Unit may be used as a Host CPU front end and may act as a message switching unit and process messages addressed directly to other Master Units without interrupting the Host CPU.

Each Master Unit in the communications network may be multi-dropped on the same communication line. In turn, each Master may operate up to thirty-two (32) slave units. Each slave, with proper buffering in the Master, may operate freely without being locked out on a contention basis.

The Jacquard 100 Master and the Jacquard 105 Slave Unit, from a physical characteristics standpoint, appear to be identical units. The Jacquard 105 Slave Unit may be field up-graded to become a Master Unit.

Characters per CRT Display	1920 (80 x 24 lines)
CRT Displays per Controller	32
Remote Data Rates (bps)	1200 to 9600
Remote Comm.	Bi-synch (BSC) or Asynch.
Remote Code	ASCII
Local Data Rates (cps)	250,000
Local Code	ASCII
Screen Size	12" Diagonal
Non-Destructive Cursor	Standard
Cursor Size	Underline
Tabbing	Standard
Character Addressing	Standard
Character Insert	Standard
Character Delete	Standard
Erase Display	Standard
Erase Field	Standard
Format Protect (control)	Standard
10 Key Numeric Pad	Standard
Key Rollover	n-Key
Refresh Rate	60 Cycle
Character Matrix	7 x 9
Distance Display to Controller	2000'
Distance Controller to CPU	200'
Keyboards	66-78 Key
Badge Reader	Optional
Keylock	Optional
Audible Alarm	Optional
Dual Intensity	Optional
Numeric Lock	Optional
Printer	30 cps
Function Keys	Up to 12



PRODUCTS & SERVICES

Jacquard Systems began four years ago as a computer software and systems organization and now manufactures several electronic products and produces five major turnkey systems.

The company employs approximately fifty people and occupies over 20,000 square feet of office and manufacturing space.

PARCS

PARCS is an automated turnkey parking and revenue control system which includes all the elements for manual or computer operation. The system includes ticket dispensers, gate and light actuators, ticket readers, cashiers terminals, space control signs, and a centralized computer. The system can be configured for large airport parking lots and multiple deck parking structures, as well as for small single entrance and exit parking lots.

CCS

CCS is a multiple purpose communications control system. The system includes multiple low speed line controllers, multiple high speed line controllers, disk and tape storage units, printers, remote and/or local CRT monitors. It can be a large dual processor message switching system or a small multiple terminal communications and line concentration controller. CCS can handle mixed types of terminals on low speed lines operating from 110 or 1800 baud and communicate with multiple and mixed large and small host CPU's such as IBM's 370/360 series, Univac 494/1108 computers or any one of the minicomputer manufacturers products.

AES

AES is a computerized plastic card (credit card type) embossing and encoding machine. Using minicomputer control, Jacquard's Automatic Embossing System embosses from computer compatible magnetic tape, keyboard input, from communication lines and several other types of

input. The system is also capable of encoding mag strip cards, either separately or at the same time as they are being embossed.

REGIS

REGIS provides automated registration services for trade shows and conventions. It consists of a computerized plastic card embosser and mag tape storage unit which produces embossed badges and stores show attendee information on tape. Quick name and address identification badges are then used at the exhibitors' booths for information requests. All information concerning the registrants that is kept on the computer compatible mag tape can be used to provide complete statistics and reports. These are available to exhibitors by any desired cross indexing scheme.

J100 VIDEO COMPUTER

Jacquard's newest product consists of a micro-processor video keyboard computer. The system is a complete CRT display, keyboard and small computer with peripheral controllers, programmable memory, and flexible communication capability. Applications for the J100 range from source data entry on a large terminal network to stand alone data collection with once-a-day call up and replay requirements. Since the system price is very competitive new applications become not only feasible but highly economical on this fifth generation computer system.

COMMUNICATIONS AND PERIPHERAL CONTROLLERS

Jacquard manufactures a full line of Data General Nova and DCC compatible peripheral and communication controllers. These units consist of printer, CRT, mag tape and disk controllers for the peripheral line, including one single controller which will control up to four tapes and four disks. Other controllers consist of multiplexing equipment for eight low speed lines, high speed line controllers and remote digital switch sensors and controllers. These controllers operate asynchronously, bisynchronously or synchronous start stop. They have a capability for audio-dial and auto-answer options.

Jacquard utilizes these controllers in all our turnkey systems.

PRICE SHEET

<u>Type/Feature</u>	<u>Description</u>	<u>Price</u>
J100	VideoComputer	\$4,200.
J100 - 004M	4K bytes RAM	1,250.
4200	Flexible Disk Controller	2,400.
4210	Flexible Disk Drive	1,200.
5200	Asynchronous Communications Controller RS232, 1200 baud	600.
5210	8-Line Asynchronous Communications Controller RS232, 1200 baud	2,000.
- 107	Auto Answer Feature	1,000.
6100	Printer Controller To 160 CPS	900.
6110	Printer 160 CPS, 80 Column	2,900.
6120	Printer 160 CPS, 132 Column	4,500.
6130	Printer 15 CPS, 80 Column	1,600.

Installation Charges are extra.

The prices stated here are for your information only and are subject to change. Applicable taxes and shipping charges are not shown. All shipments are F.O.B. Santa Monica, California.