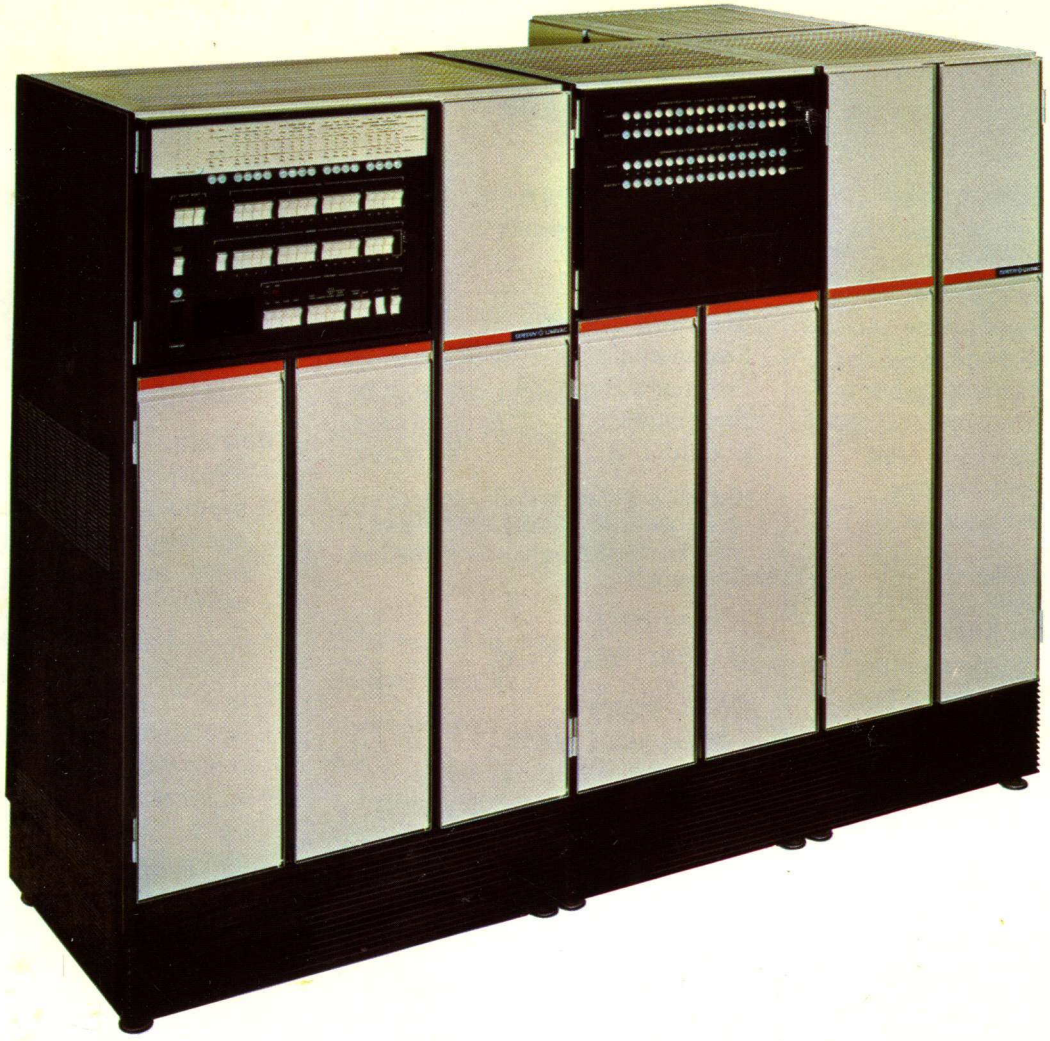
Communications/ Symbiont Processor



The SPERRY UNIVAC™ Communication/Symbiont Processor (C/SP) is a high performance, internally programmed subsystem designed to perform the combined symbiont functions of communications control and paper peripherals control.

Its high-speed internal operation and flexible input/output channels give high throughput rates and an excellent interface to the virtual world of communications facilities and terminals.

Assuming control of all symbiont operation, the SPERRY UNIVAC C/SP relieves the host processor of the need to allocate storage to peripheral driven programs and communications control programs. It also saves the time associated with interrupt processing, data formatting, data editing, data translation and other mundane tasks.

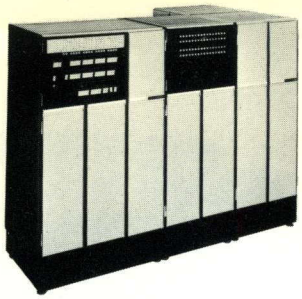
The design concept of the SPERRY UNIVAC C/SP is to unburden host processor software of the need for complex communications control programs and subroutine.

The C/SP offers economy, efficiency and flexibility with features such as:

- Modular design, thus incremental growth.
- Software that is communications oriented.
- 16K to 131K bytes storage.
- 630 nanoseconds read/write storage cycle.
- Storage protection.
- Multi-level interrupts, designed to minimize the interrupt service time.
- Multiprogramming capability for parallel processing of input/output data and program execution.
- Variable internal timer.
- Automatic tabling of communications channel interrupts.
- Dynamically alterable priority structure.
- Automatic program switch by interrupt type.

SPERRY UNIVAC

Released February 1975



The SPERRY UNIVAC C/SP consists of processor cabinets, general purpose communication cabinet, operator console, storage cabinet and paper peripherals such as card reader, punch, disc unit and magnetic tape unit, and can connect to the SPERRY UNIVAC 418-III/494 and 1100 series processors through a channel adapter.

The SPERRY UNIVAC C/SP can control up to 64 full-duplex or 128 half-duplex lines, when two general purpose communications cabinets are used. The communication speed can handle from 45 bps to 50,000 bps. Different speeds, different codes and different communication control procedures are easily accommodated.

The C/SP can control up to eight SPERRY UNIVAC 8425 disc storage units via a selector channel. Data queuing, data collection, etc., are some of the functions which are possible.

The C/SP can control up to sixteen UNISERVO® 16 magnetic tape units via the multiplexer channel. Both 7 and 9 channel tapes are supported. It can be used for error logging and audit trails.

The C/SP provides an operator console, which consists of a SPERRY UNIVAC DCT 500 data communication terminals, keyboard-send-receive (KSR) configuration, attached to the C/SP via the special device channel. The DCT 500 allows for conservation with user software and for monitoring or changing the system status.

Communications/ Symbiont Processor

COLORS

Standard Colors[1]

Frame and Skirt . . . . . slate gray
Front and Rear . . . . . pale gray
End Panel . . . . . twilight blue
Accent . . . . . red ocher

[1]Definition of these colors is given in the Color Selection Guide, U5329, which your Sperry Univac representative has available.

FUNCTIONAL CHARACTERISTICS

C/SP Processor

- 32 bit word length
- Internally stored program
- Eight or sixteen 32 bit (word) general purpose registers
- Repertoire of 52 instructions
- Internal timer
- Storage protection
- Maximum of seven I/O channel
- 1100/400 series channel adapter

Storage

- Storage is a semiconductor system with a random access cycle time of 630 nsec., as read/write and refresh.
- Each 18 bit storage location is subdivided into byte 0 and byte 1.
- Each byte has 8 data bits and one parity bit.
- Storage capacity can expand up to 131K bytes, basic is 16K bytes.

Communication Line Terminators (CLT)

AVAILABLE FEATURES

Kinds of CLT	Kind of Interface*	Adaptable Modem	Functions
ASYNCHRONOUS	EIA RS-232B	103, 104F, 202C, 202D & 811B	• 5, 6, 7 or 8 bit character codes
	MILL Std. 188B		• Bit serial 45 to 1200 BPS
	CCITT		• Ring indicator, loss of carrier & data overrun detection
	TELEGRAPH I	20 ~ 75MA Neutral telegraph line	• Test
	TELEGRAPH II	20 ~ 40MA Polar telegraph line	
SYNCHRONOUS	EIA RS-232B	201 Series	• 6, 7, or 8 bit character codes
	MILL Std. 188B	205	• Bit serial up to 50 KBPS
	CCITT		• Ring indicator, loss of carrier & data overrun detection
	Direct Wire		• Test
	TELEPACK	UP TO 50 KBPS	
DIALING	Dialing Adapter	801A1 and 801C2	
	Dialing Adapter Double		

All specifications subject to change without prior notice.

8425 Disc Subsystem

8425 Control Unit
- Controls up to eight units

8425 Disc Storage
- Provides a single disc drive using removable disc packs
- Capacity—58 million 8 bit/bytes
- Transfer rate—312 K bytes/sec.
- Access time—30 ms

UNISERVO 16 Subsystem

UNISERVO Control
- controls up to sixteen UNISERVO 16 tape units

UNISERVO 16 Tape Unit
- 9 track phase encoded
- Density—1600 ppi
- Transfer rate—192 KB

UNISERVO 16 Tape Unit
- 7 track NRZI
- Density—200,556, and 800 ppi
- Transfer rate—24 KB, 66 KB and 96 KB

Operator Console
- Print speed—30 ch/sec
- Print positions —132
- Number of characters — 63

PHYSICAL CHARACTERISTICS

	Height (inches)	**Depth** (incnes)	**Width** (inches)	**Weight** (pounds)
C/SP Processor Cabinet	64	36	24	1,200
General Purpose Communication Cabinet	64	24	24	800
7026 Storage Cabinet	64	24	24	600

POWER REQUIREMENT

	Power (KVA)	**Nominal Voltage** (v)
C/SP Processor Cabinet	2.7	208 or 240 for 60 hz
General Purpose Communication Cabinet	1.9	
7026 Storage Cabinet	1.8	220 or 240 for 50 hz

ENVIRONMENTAL REQUIREMENTS

	Temperature (°F)	**Humidity** (%)	**Cooling** (BTU/HR)
C/SP Processor Cabinet	54 to 90	25 to 80	7,250
General Purpose Communication Cabinet			5,200
7026 Storage Cabinet			5,500

U5735

7502 Printed in U.S.A.