UNIVAC 1108 DATA PROCESSING SYSTEM

Unique main frame, programming and peripheral equipment features, make the UNIVAC 1108 Data Processing System the most economical system now being offered for a broad range of data processing and computing applications.

The UNIVAC 1108 will operate with equal effectiveness in business, engineering, and scietific applications. The real-time and concurrent processing capabilities of the UNIVAC 1108 will enable it to apply simultaneously the full measure of its computing power to many different kinds of data operations.

THE CENTRAL PROCESSOR

The Central Processor of the UNIVAC 1108 provides a control store with a cycle time of 125 nanoseconds. It is used for input/output access, arithmetic and index registers, special controls and auxiliary storage.

Magnetic core storage is supplied in modules of 32,768, 65,536, or 131,072 words in two separately accessed banks. Dual bank operations provides an effective cycle time of 375 nanoseconds. Add time is 750 nanoseconds.

Load memory lockout, a feature of the UNIVAC 1107, has been augmented in the UNIVAC 1108 to permit lockout selection in gradations of 1024 words.

Both fixed and floating point operations are included in the 1108's fifteen double-precision operations. Double-precision fixed point arithmetic operations are addition and subtraction in a full 72-bit form. Double-precision floating point arithmetic operations are: addition, subtraction, multiplication, and division, with each operation using full 72-bit 1108 words.

In addition to all instructions normally available with the 1107, twenty six new instructions have been added to the software complement of the 1108. Execution time is about 5.3 times faster than the 1107.

Input/output logic in the 1108 is basically the same as the logic of the 1107. However input/output transfer rate capacity in the 1108 is about 5.3 times greater than the 1107. Addition of Externally Specified Index (E.S.I.) in the input/output makes it possible to operate on line many multiplexed communications and transaction devices.

THE PROGRAM LIBRARY

All UNIVAC 1107 programs can be run on the new UNIVAC 1108 without modification. No software or interpretation routines are needed for using these programs on the 1108 because the new system and its predecessor are completely compatible.

Features of the Executive System for the 1108 are: real-time capability, multiprogramming, control card and console keyboard control, communication based software, dynamic allocation of facilities, and hardware reliability testing.

Fortran IV can be interpreted by the 1108 Fortran Processor. This compiler generates a relocatable binary element which can be combined with other relocatable binary elements. It also produces a listing of Fortran statements and the corresponding generated machine code is expressed in pseudo assembly language. Extensive explanatory diagnostics appear on the listing when such information is necessary.

Relocatable binary elements from COBOL '61 language (as defined by CODASYL) can be generated by the 1108 COBOL Processor. In addition to implementing many electives and extensions, the 1108 COBOL processor provides a list of the source language vs. the object code produced. The object code portion is expressed in pseudo assembly language. Diagnostics messages are produced on the listing.

An unlimited number of data items can be sequenced according to specified keys by the 1108 Sort/Merge program. Sorting can be performed on FASTRAND and/or Magnetic tape units.

Mathematical, input/output, diagnostic and other miscellaneous subroutines which have proved to be useful in most advanced computer applications will be supplied as part of the extensive UNIVAC 1108 Software Library.

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