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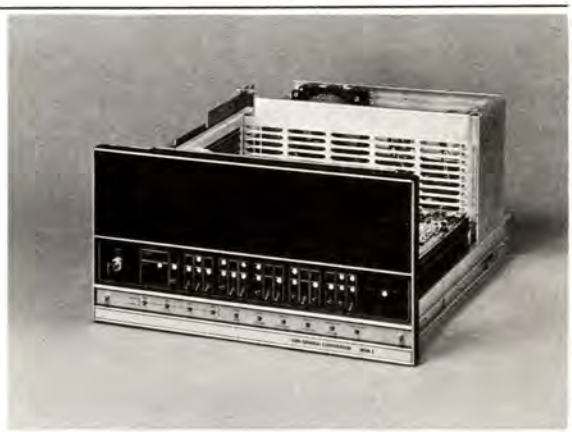
THE COMPUTER HISTORY MUSEUM
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DataGeneral

Nova 2 Computer Nova 2/10

FEATURES

- 4K, 8K, and 16K memories
- Compact, reliable packaging
- 16-bit, multi-accumulator architecture
- 16-bit, single-word, multi-function instruction set
- 10-slot, rack-mountable or table-top chassis
- High-speed Direct Memory Access data channel and 16-level priority interrupt structure standard
- Compatible options and peripherals
- Extensive software



DESCRIPTION

Data General's Nova 2 combines reliable Nova-line design concepts with new hardware and high-density packaging. The result is a computer that offers speed, throughput, compact subsystems, high-level software, and a wide range of peripherals, all at remarkably low cost. These features make Nova 2 well-suited for a variety of applications, including industrial control, data communications, scientific research, education, and business.

The Nova 2/10 is the larger Nova 2 model, with ten subassembly slots in its 10½-inch high chassis. It is useful in applications requiring numerous options, peripherals, and/or large amounts of memory.

MEMORY

Nova 2/10 is available with 4K, 8K, and 16K memory modules. Each memory module (including the 16K version) occupies only one subassembly slot. The 4K and 8K memories have an 800-nanosecond cycle time. The 16K memory has a 1000-nanosecond cycle time. Memories with different speeds can be used simultaneously in Nova 2/10. The effective cycle speed of the computer depends on the memory module being accessed. Nova 2/10 has a full memory capacity of 32K 16-bit words (64K bytes).

RELIABILITY

Nova 2/10 uses large- and medium-scale integrated circuitry, high-density packaging, and a minimum of interconnections. Each major subassembly (including central processor unit, and 4K, 8K, and 16K memories) is mounted on a single printed circuit board. The power supply is a ferro-resonant design, and highly reliable. A single etched back panel makes all interboard connections. Plug-in connectors are provided for commonly specified peripherals.

ARCHITECTURE

The Nova 2/10 central processor is organized around four 16-bit accumulators. Two can be used as index registers. The multi-accumulator architecture reduces the number of instructions necessary to execute a program, and simplifies programming.

INSTRUCTION SET

The Nova 2/10 uses 16-bit, single-word, multi-function instructions. For example, arithmetic and logical instructions, in addition to their eight basic functions, modify an operand, shift the result, and/or test the result. Altogether, a total of 256 variations can be performed on each arithmetic and logical instruction. Memory reference instructions move data between memory and accumulators, and modify program flow. Input/output instructions transfer data between accumulators and peripherals, and control those peripherals.

CONFIGURATIONS

The Nova 2/10 contains one central processor board, one or more memory boards, and space for additional memory and I/O subassembly boards. It is 10½ inches high, rack-mountable, or table-top.

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STANDARD FEATURES

The basic price of the Nova 2/10 includes programmer's console, an I/O system with a 16-bit word length, programmed data transfer, automatic interrupt source identification, a 62-device addressing capability, a 16-level programmed priority interrupt, a high-speed Direct Memory Access data channel, an external I/O bus connector, and a general-purpose I/O connector.

OPTIONS AND PERIPHERALS

Standard options include automatic program load, power monitor/auto restart, a turnkey console, hardware multiply/divide, a high-speed Floating Point Unit, and a real-time clock.
Standard peripherals include industry-compatible magnetic tape units, Nova Cassettes, fixed head Novadiscs, cartridge discs, disc pack drives, communications hardware, analog-to-digital and digital-to-analog converters, digital input/output units, line printers, a channel interface to IBM System 360/370 computers, plotters, card readers, paper tape equipment, teletypewriters, and Novadisplay terminals.

SOFTWARE

Software available for the Nova 2/10 computer includes standard relocatable assemblers, editors, cross assemblers (for IBM 360, Univac 1108, CDC 6600), diagnostics, and utility programs. Extended Fortran IV, Fortran 5, Extended Algol, and single-user and timesharing BASIC are language processors which can be used with Nova 2/10. Three compatible operating systems are available: a Real-time Disc Operating System (RDOS), a Real-Time Operating System (RTOS), and a Stand-alone Operating System (SOS).

SPECIFICATIONS

GENERAL

Word Length: 16 bits.

Hardware Accumulators: 4.

Index Registers: 2 hardware, 16 memory.

Address Modes: Direct addressing of 1024 words absolute, relative and indexed modes; multi-level indirect addressing of 32,768 words.

Memory Cycle Time: 800-nanosecond and 1000-nanosecond core memory.

Memory Capacity: 32K 16-bit words.

Memory Increments: 4K and 8K 16-bit words, 800-nanosecond memory; 16K 16-bit words, 1000 nanosecond memory.

High-Speed Direct Memory Access Channel: Standard; maximum word transfer rate, 1.25MHz.

Input/Output System: 16-bit word length, 16 priority interrupt levels, 62 devices addressable.

I/O Bus Levels: Ground and +3 volts.

Power Requirements: 115 volts (±20%), 10 amps, or 230 volts (±20%), 5 amps, 50Hz (±1Hz) or 60Hz (±1Hz) single-phase; max power dissipation, 725 watts.

Heat Generated: 2500 BTU/hr max.

MECHANICAL

Dimensions: 10½"H x 19"W x 24¼"D, 10 slots.

Weight: 115 lbs.

Power Cable: 6' long, wired to computer; other end Belden NEMA-type 5-15P molded vinyl grounding plug.

ENVIRONMENTAL

Temperature Range: 0 to +55°C operating; —35°C to +70°C storage.

Relative Humidity Range: to 90% operating; to 95% storage.

Altitude Range: to 10,000' operating; to 50,000' storage.

SALES AND SERVICE

Southboro, Massachusetts 01772, (617) 485-9100, TWX (710) 390-0309, TLX 94-8460, Phoenix AZ, El Segundo CA, Palo Alto CA, San Diego CA, Denver CO, North Haven CT, Orlando FL, Atlanta GA, Des Plaines IL, Louisville KY, Southfield MI, Minneapolis MN, Clayton MO, Saddlebrook NJ, Albuquerque NM, Commack Long Island NY, Rochester NY, Schenectady NY, Syracuse NY, Greensboro NC, Chesterland OH, Dayton OH, Tulsa OK, Blue Bell PA, Pittsburgh PA, Austin TX, Dallas TX, Houston TX, Salt Lake City UT, Falls Church VA, Renton WA, Calgary Alta., Edmonton Alta., North Vancouver B.C., Winnipeg Man., South Halifax N.S., London Ont., Mississauga Ont., Dollard-Des-Ormeaux P.Q., Hull P.Q., and in Australia, Austria, Costa Rica, Denmark, England, Finland, France, Hong Kong, Israel, Japan, Mexico, Netherlands, Scotland, Singapore, Spain, Sweden, Switzerland, West Germany

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