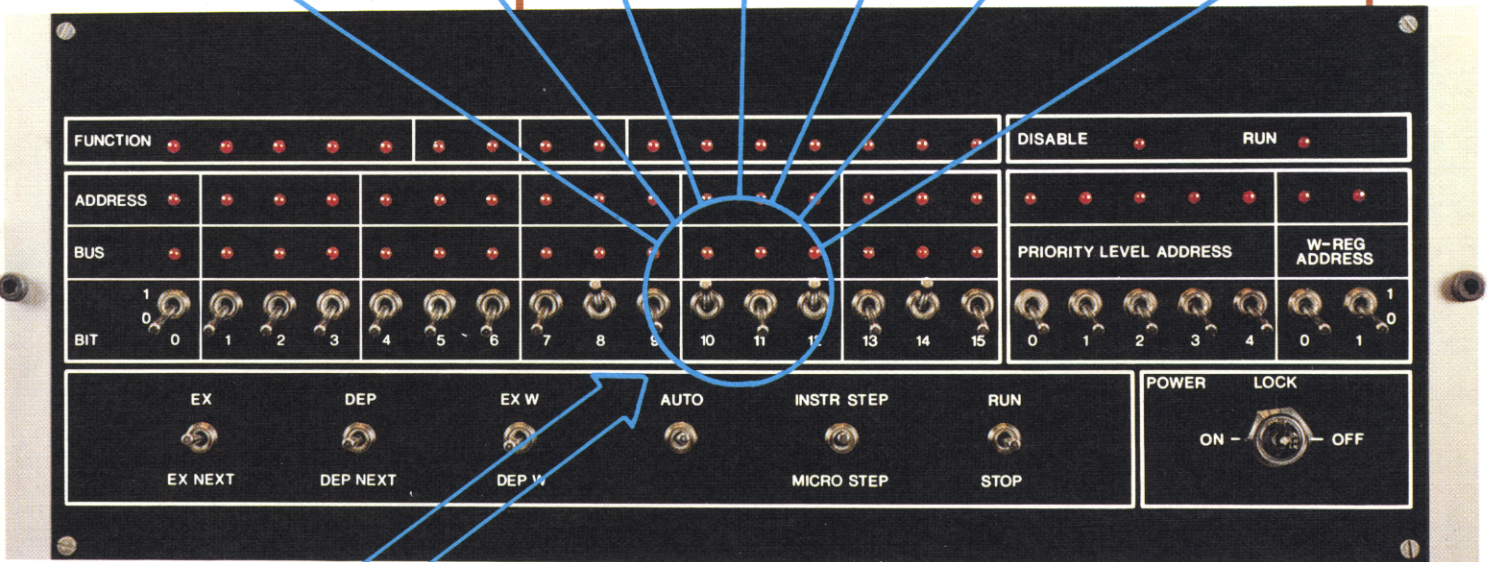
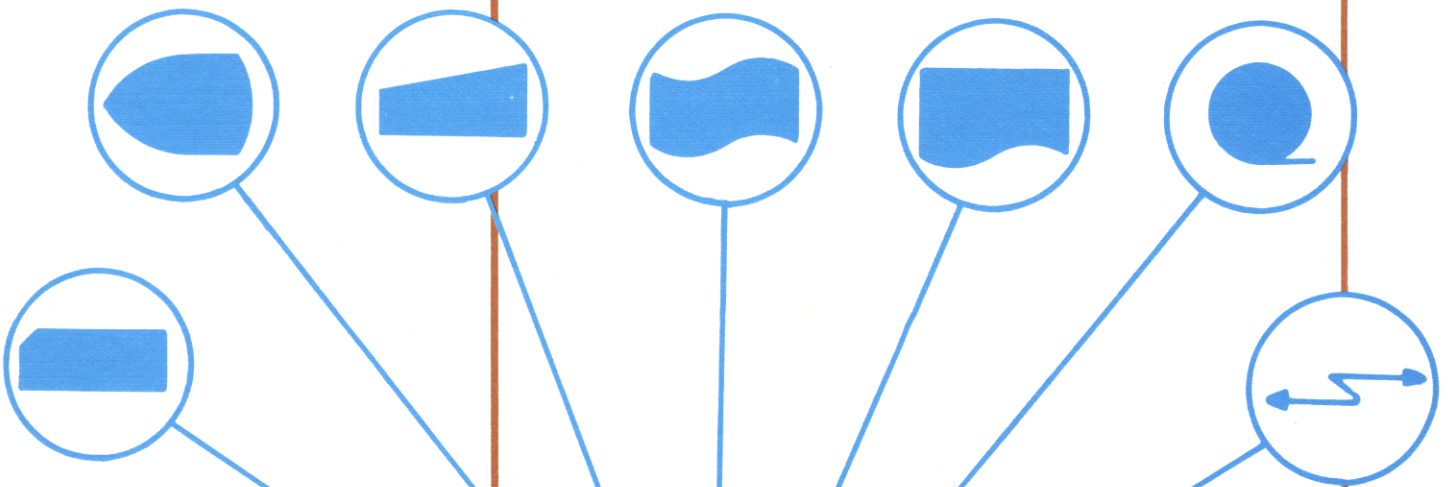




RC 3500

general purpose controller



computer

ABSTRACT

The RC 3500 is a 16-bit General Purpose Controller with an outstanding interruption and input-output system. The RC 3500 is especially suited for applications such as: Concentrator for and distributor to communication terminals (Datatransmission rates: DC up to 48 K bits/sec.) Front - end computer Data and media conversion General Controller of peripherals RC 800 terminal system etc.

general information

RC 3500 General Purpose Controller is essentially a minicomputer which combines a very fast Interrupt handling with an Input/output system featuring low-cost-cabling and great flexibility in physical placing of the attached peripheral devices.

RC 3500 operates with 32 interrupt levels each containing a set of 4 registers. One of the registers contains a program counter and a carry indication, where as the remaining 3 registers acts as accumulators or index registers.
A fixed priority of the interrupt levels secures suitable handling of high and low speed I/O devices.

RC 3500 makes it possible to switch from one program to another without wasting time.

RC 3500 contains 32 I/O channels which are capable of handling 32 medium speed I/O devices (< 100 000 char/sec.) or up to 256 low speed I/O devices (< 60 char/sec.) Direct Memory access (DMA) is optional.
Each of the 32 I/O channels can be connected to the most suitable interrupt level.

RC 3500 operates the 32 I/O channels in a STAR-coupling keeping all encodings and decoding of addresses internal in the computer.
Input and output is performed in serial mode (except for DMA) whether the device connected is a serial or a parallel device.
Transmission rate: 5 Mbit/sec.
The serial transmission is performed over a 4 pairs cable for each I/O channel using magnetic insulators at each end of the cable to ensure the great noise immunity.

characteristics

Memory: Fully integrated MOS memory.
Basic storage: 4096 words of 16 bits expandable up to 32768 words in modules of 4096 words.
Fully expandable within the basic frame. (Magnetic core optimal).
Cycle time: 950 nsec. (675 nsec., 450 nsec. optional).
Access time: 550 nsec. (450 nsec., 325 nsec. optional).

Memory addressing: 8-bit bytes and 16-bit words are directly addressable.

Arithmetic: Parallel 16-bit binary integers, two's complement arithmetic.

Interrupt levels: 32 interrupt levels are included in the basic version.

Working-registers: 32 sets of 4 register, fully integrated.
Access time: 60 nsec.

Instruction set: 50 instruction of which 30 refer to the memory.

Instruction form: 1, 2 or 3 consecutive words.

Input/output: Basic version 8 I/O channels expandable to 32 in modules of 8.
Mode of transmission: Serial.
Cables: 4 pairs, impedance: 100 Ohm nom.
Cable coupling: Magnetic insulators.
Cable length: 100 meters max.
(Direct Memory Access channel is optional available).

Standard interfaces: 48 Kbits/sec. synchronous interface.
1200 - 9600 bits/sec. synchronous interface.
0 - 1200 bits/sec. asynchronous multiplexer for 8/16 TTY compatible devices attached to one I/O channel.
RC 500, RC 2500 paper tape reader interface.
RC 4070 paper tape punch interface.
Matrix printers.
Line printers.
RC 804 low speed datatransmission display.
RC 810 high speed special display.
RC 811/RC 812 Display and Keyboard units.
Any other interface available on request.

Initial loading: An autoloading function is supplied enabling initial load or reload from a paper tape reader, a high speed data transmission line or any suitable source.

Dimensions 19" rack model: Height: 180 cm, width: 58 cm, depth: 73 cm.

Weight: 100 kgs incl. rack.

Power requirements: 220 VAC \pm 10%, 50/60 Hz, 600 VAC.

Temperature: 10° - 45° Celsius.

Relative Humidity: 90%.

Software: Assembler program for the RC 4000 (called SLAM).
Driver and monitor-programs for each standard interface.



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