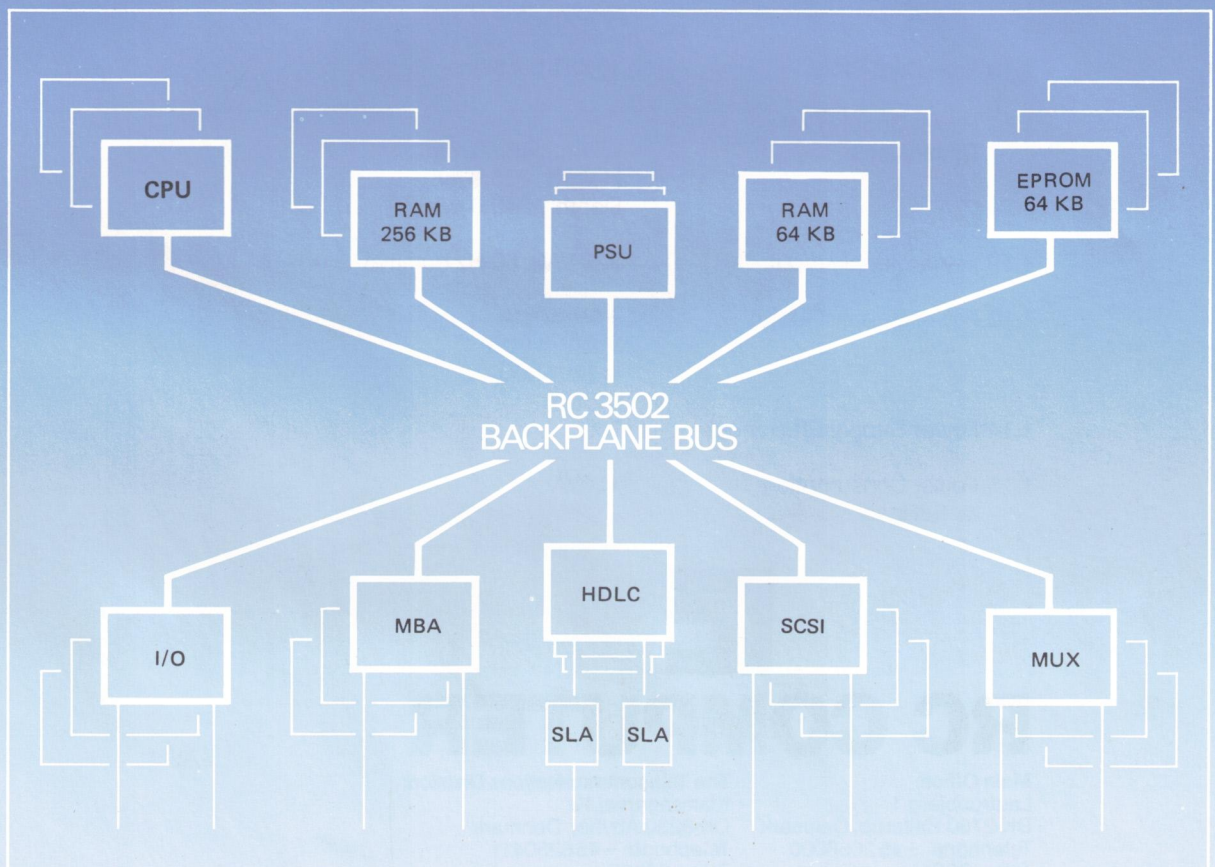


# RC3502 DATASHEET

## PROCESSING UNIT RC3502/2

- 16 Bit Processor
- 4 Mbyte Adressable Memory
- 128 Priority Interrupt Levels
- Instruction Prefetch
- Stack Oriented Instruction Set
- Run Time Error Detection
- 128 Register Sets and 128 Hardware Stacks
- Modular Power Supply

The processing unit is built around a 16 bit ALU supported by a prefetch unit, a control microprocessor and scheduling logic. A number of 128 priority interrupt levels are available, each interrupt level may be assigned to a register set. The instruction set is stack oriented and supports communicating parallel process incarnations. A maximum of 4 Mbytes memory is adressed by the processor, which also features run time error detection, autodiagnosics, bus parity checking and power supply status monitoring. The processing unit of the RC3502 system is installed in a 19 inch cardcrate made in accordance with DIN 41494. The processing unit occupies 3 of 19 available slots in the cardcrate. A maximum of 2 modular power supply units may be installed in a second 19 inch crate.





## 1. Specifications:

- 1.1 Microprogram: 2kx60 bit self diagnostic, extensive debugging facilities.
- 1.2 Memory Addressing: The CPU can address a total of 4 Mbytes memory.  
1 Mbyte from address 80.0000 to address 9E.FFFF is reserved for software drivers using byte access. 3 Mbyte is configured during power up sequence.  
System requirements are: a boot program in module E0 and RAM memory in module C0.  
Memory cycle parity check for full 4 Mbyte memory, or reduced check for address 80.0000 to 9E.FFFF and C0.0000 to DE.FFFF.
- 1.3 Cycle Time: Microprogram step: 217 ns  
instruction time  
non interruptable  
instructions: min. 1 us  
max. 20 us  
mean 2.8 us
- 1.4 Error Control: Parity check on memory data transfers.  
Errors and watch-dog functions handled by control microprocessor.
- 1.5 Console: Asynchronous 300 baud or 1200 baud.
- 1.6 Power Consumption, Processing Unit: +5V/10.0A  
+12V/0.02A  
-12V/0.02A
- 1.7 Heat Dissipation: 43 kcal/h = 180 kJoule/h
- 1.8 Panel Width Processing Unit: 3x15.24 mm (9T)
- 1.9 Card Crate Dimensions: Width: 482.6 mm  
Height: 235.9 mm  
Depth: 345.0 mm
- 1.10 Free Card Slots: 16x3T positions
- 1.11 Power Supply Crate Dimensions: Width: 482.6 mm  
Height: 235.9 mm  
Depth: 240.0 mm
- 1.12 Power Supply Input: 220 VAC, 50 Hz nominal
- 1.13 Power Supply Output: +5V/40.0A  
+12V/4.00A  
-12V/4.00A
- 1.14 Power Supply Efficiency: 70%
- 1.15 Power Consumption: 450VA  
at full load



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