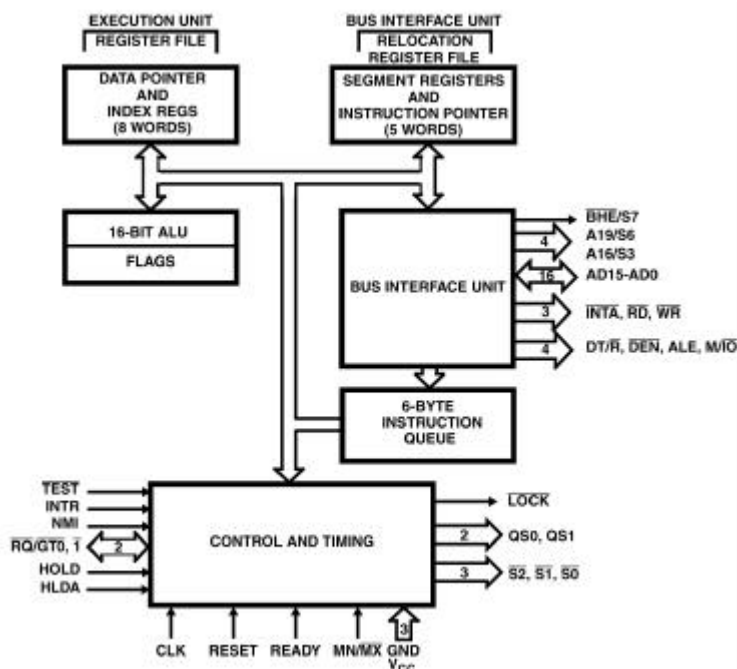
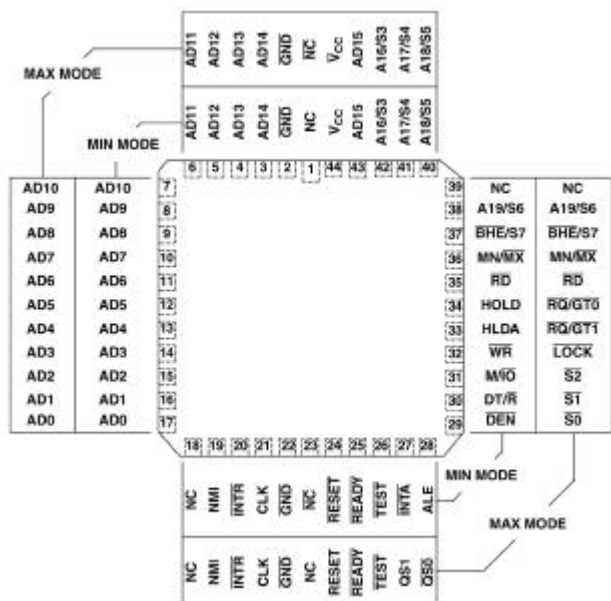




FEATURES:

- 16-bit microprocessor
- RAD-PAK® radiation-hardened against natural space radiation
- Total dose hardness >100 Krad (Si); dependent upon orbit
- Package:
 - 44 pin RAD-PAK® quad flat pack
- Fully static design with frequency range from D.C. to 8 MHz
- Low power consumption:
 - Active mode: $I_{CC} = 10 \text{ mA/MHz}$
 - Standby mode: $I_{CCS} = 500 \text{ uA max}$
- Bus-hold circuitry eliminates pull-up resistors
- Direct addressing capability of 1 Mbyte of memory
- Designed for powerful assembly language and efficient high level languages
- Byte, word, and block operations
- 24 operand addressing modes
- 8 and 16-bit signed and unsigned arithmetic
 - Binary or decimal
 - Multiply and divide

DESCRIPTION:

Space Electronics' 80C86RP (RP for RAD-PAK®) high speed 16-bit microprocessor features a typical 100 krad(Si) total dose tolerance; dependent upon orbit. The 80C86RP offers two modes of operation: Minimum for small systems and Maximum for large systems, such as multiprocessing. Internal registers, counters, and latches are static and require no refresh as with dynamic circuit design. This eliminates the minimum operating frequency restriction placed on other microprocessors. The 80C86RP can be singled stepped using only the CPU clock, and such state can be maintained as long as is necessary. The microprocessor is partitioned into two processing unit: Bus Interface Unit and Execution Unit. These units can interact directly but for the most part perform as separate asynchronous operational processors. The bus interface unit provides the functions related to instruction fetching and queuing, operand fetch and store, address relocation. The overlap of instruction pre-fetching provided by this unit serves to increase processor performance through improved bus bandwidth utilization. Up to 6 bytes of instruction stream can be queued while waiting for decoding and execution. The patented radiation-hardened RAD-PAK® technology incorporates radiation shielding in the microcircuit package. Capable of surviving in space environment, the 80C86RP is ideal for satellite, spacecraft, and space probe missions. It is available with packaging and screening up to Class S. For a complete data sheet, contact Space Electronics Inc.