



# UM82450 / UM8250

## Asynchronous Communication Element (ACE)

ADVANCED PRODUCT DESCRIPTION

### Feature

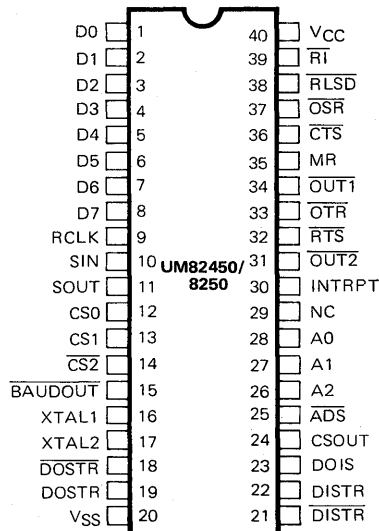
- Adds or deletes standard asynchronous communication bits (Start, Stop, and Parity) to or from serial data stream
- Full double buffering eliminates need for precise synchronization
- Independently controlled transmit, receive, line status, and data set interrupts
- Programmable baud rate generator allows division of any input clock by 1 to  $(2^{16} - 1)$  and generates the internal 16x clock
- Independent receiver clock input
- Modem control functions (CTS, RTS, DSR, DTR, RI, and carrier detect)
- Single +5 volt power supply
- Fully programmable serial-interface characteristics
  - 5-, 6-, 7-, or 8-Bit characters
  - Even, Odd, or No-Parity bit generation and detection
  - 1-, 1½-, or 2-Stop bit generation
  - Baud rate generation (DC to 56K baud)
- False start bit detection
- Complete status reporting capabilities
- Easily interfaces to most popular microprocessors
- Line break generation and detection
- Internal diagnostic capabilities
  - Loopback controls for communications link fault isolation
  - Break, parity, overrun, framing error simulation
- Full prioritized interrupt system controls

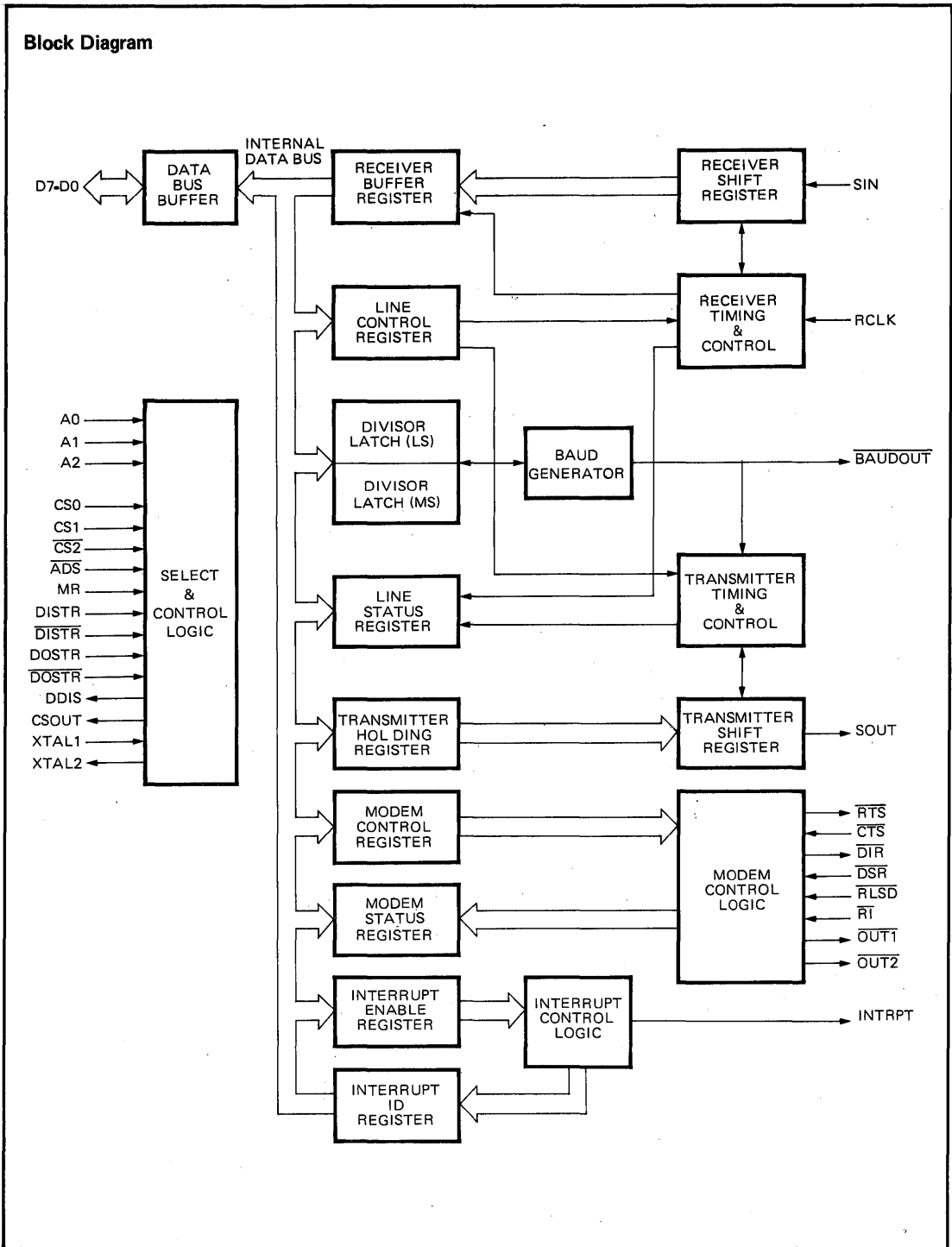
### General Description

UM82450 and UM8250 are programmable Asynchronous Communication Element (ACE) chips fabricated with Si-Gate NMOS process. The UM82450 is an improved specification version of the UM8250. These two products perform serial-to-parallel conversion on data characters received from the CPU. The CPU can read the complete

status of the ACE at any time during the functional operation. They also includes a programmable baud rate generator that is capable of dividing the timing reference clock input by divisors of 1 to  $(2^{16} - 1)$ , and producing a 16x clock for driving the internal transmitter logic.

### Pin Configuration



**Block Diagram**


Peripheral IC