

INTRODUCTION

The 8051 is the original member of the MCS[®]-51 family, and is the core for all MCS-51 devices. The features of the 8051 core are:

- 8-bit CPU optimized for control applications
- Extensive Boolean processing (single-bit logic) capabilities
- 64K Program Memory address space
- 64K Data Memory address space
- 4K bytes of on-chip Program Memory
- 128 bytes of on-chip Data RAM
- 32 bidirectional and individually addressable I/O lines
- Two 16-bit timer/counters
- Full duplex UART
- 6-source/5-vector interrupt structure with two priority levels
- On-chip clock oscillator

The basic architectural structure of this 8051 core is shown in Figure 1.

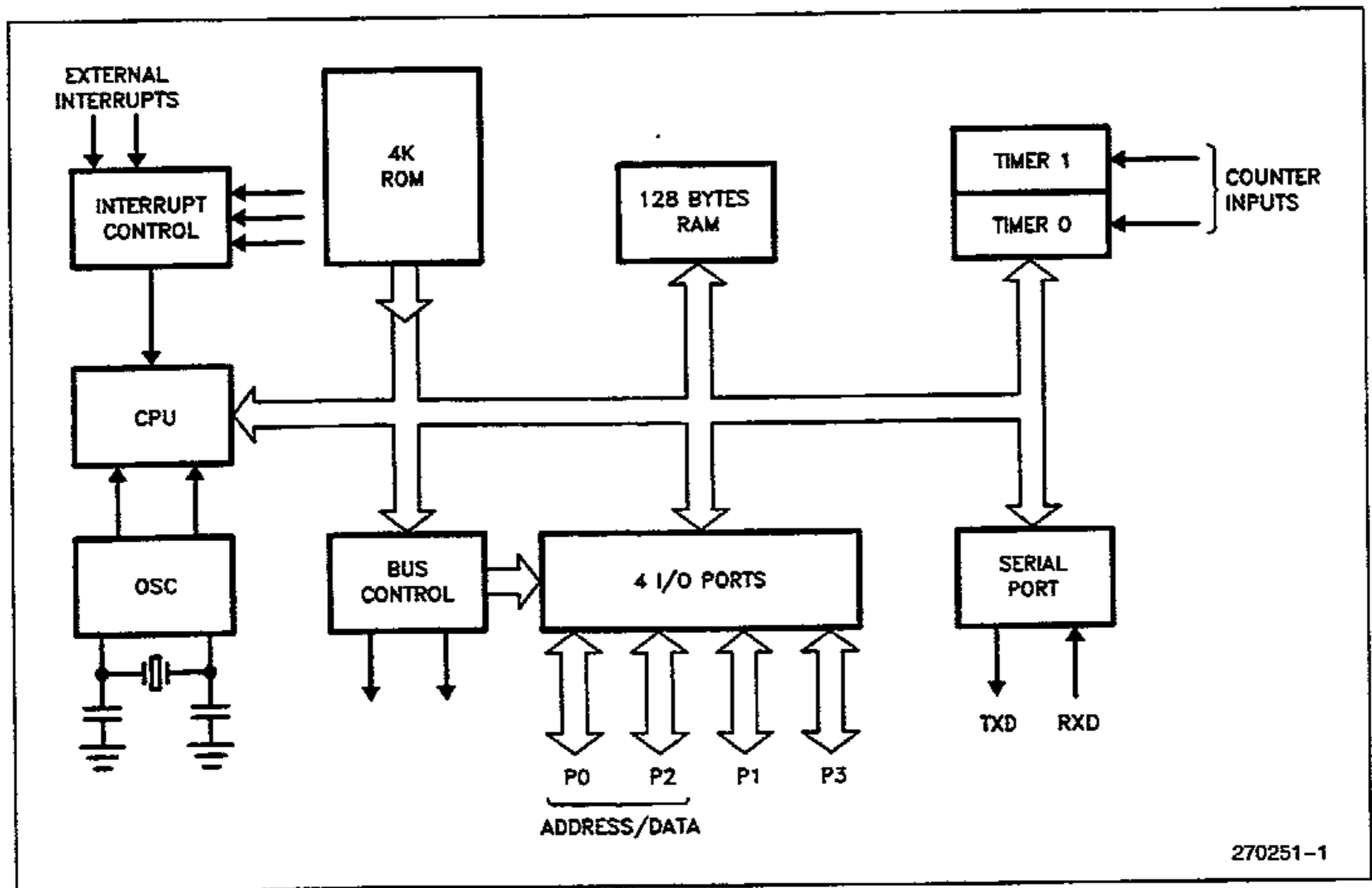


Figure 1. Block Diagram of the 8051 Core