## Elements of Bus Design

Type Bus Width

Dedicated

Multiplexed

**Method of Arbitration** 

Centralized

Distributed

**Timing** 

Synchronous

Asynchronous

Address

Data

**Data Transfer Type** 

Read

Write

Read-modify-write

Read-after-write

Block

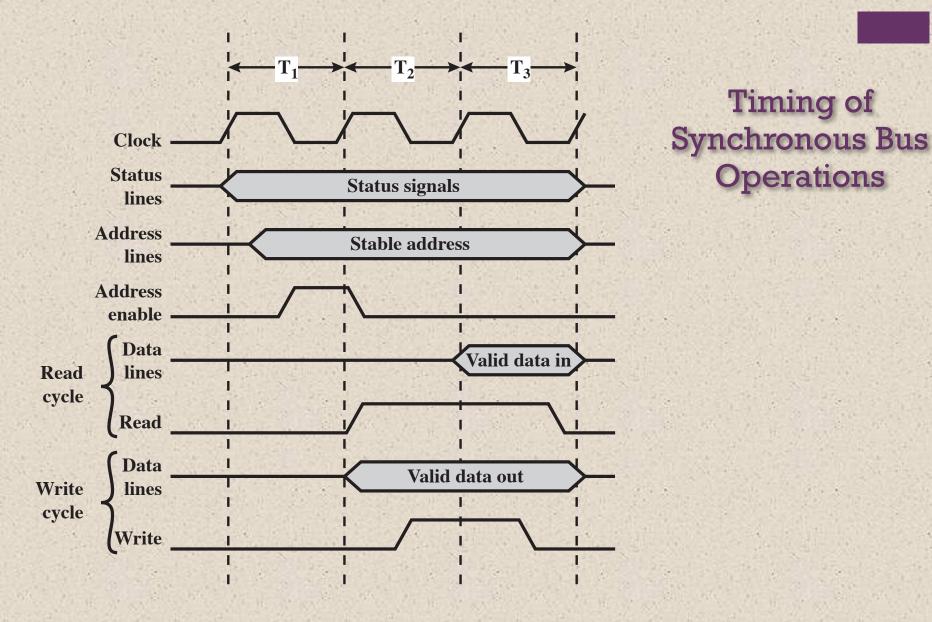


Figure 3.18 Timing of Synchronous Bus Operations

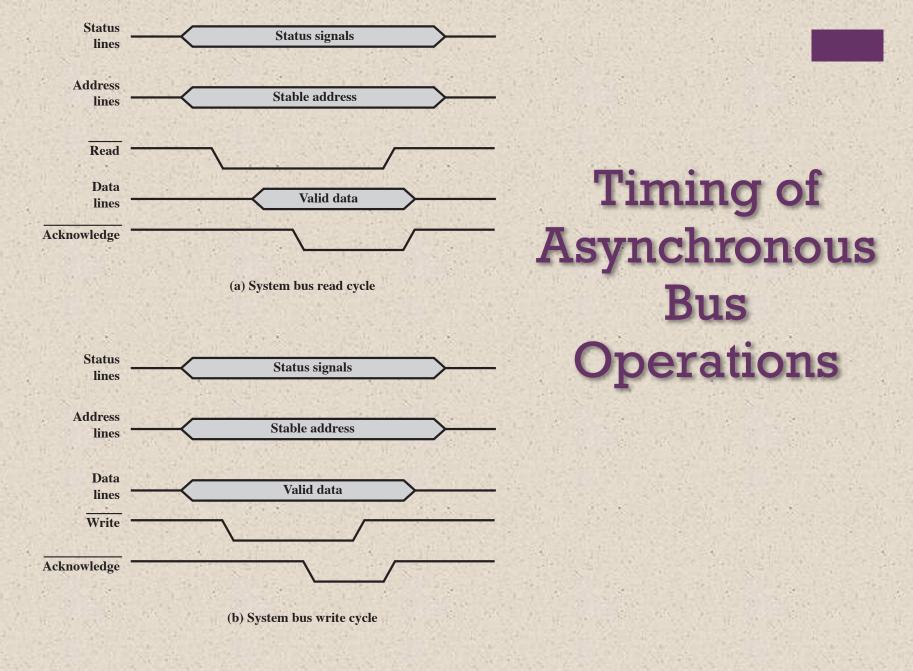


Figure 3.19 Timing of Asynchronous Bus Operations