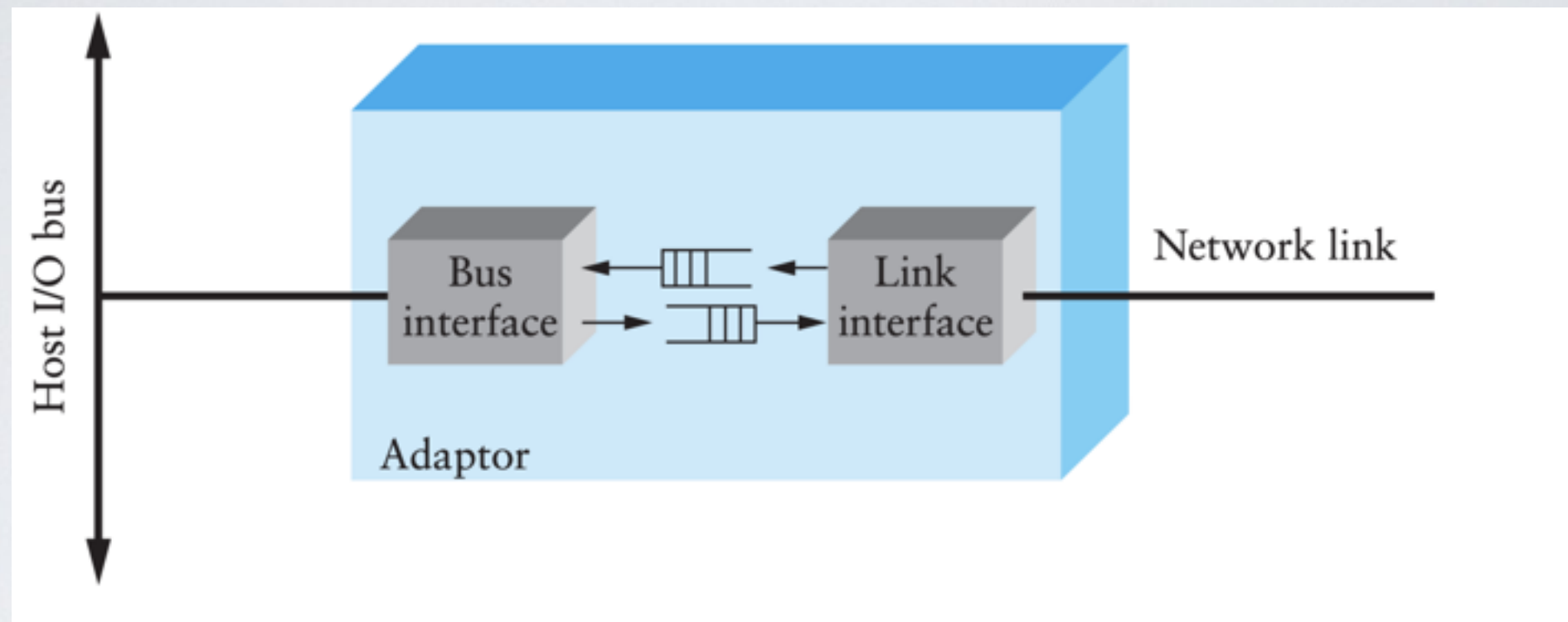


Example : IDE Disk Driver

```
void IDE_ReadSector(int disk, int off, void *buf)
{
    outb(0x1F6, disk == 0 ? 0xE0 : 0xF0); // Select Drive
    IDEWait();
    outb(0x1F2, 1); // Read length (1 sector = 512 B)
    outb(0x1F3, off); // LBA low
    outb(0x1F4, off >> 8); // LBA mid
    outb(0x1F5, off >> 16); // LBA high
    outb(0x1F7, 0x20); // Read command
    insw(0x1F0, buf, 256); // Read 256 words
}

void IDEWait()
{
    // Discard status 4 times
    inb(0x1F7); inb(0x1F7);
    inb(0x1F7); inb(0x1F7);
    // Wait for status BUSY flag to clear
    while ((inb(0x1F7) & 0x80) != 0)
        ;
}
```

Example : Network Interface Card



- Link interface talks to wire/fiber/antenna
- FIFOs on card provide small amount of buffering
- Bus interface logic uses DMA to move packets to and from buffers in main memory