

# Intel 80486: The Complete Guide

## Introduction

The Intel 80486 processor was a groundbreaking chip that revolutionized the personal computer industry. Released in 1989, the 80486 was the first x86 processor to feature an integrated memory management unit (MMU), which allowed it to run multiple programs simultaneously and access more memory. This made it possible to run more complex and demanding applications, such as graphical user interfaces (GUIs), spreadsheets, and databases.

The 80486 was also the first x86 processor to feature a built-in floating-point unit (FPU), which made it much faster at performing mathematical calculations. This made it ideal for use in scientific and engineering applications, as well as for computer-aided design (CAD) and 3D modeling.

The 80486 was a major commercial success, and it was used in millions of personal computers. It was also used in a variety of other devices, such as workstations, servers, and embedded systems. The 80486 was eventually succeeded by the Intel Pentium processor, but it remains an important milestone in the history of computing.

In this book, we will take a comprehensive look at the Intel 80486 processor. We will cover its history, architecture, programming, and applications. We will also discuss the 80486's impact on the personal computer industry and its legacy in the world of computing.

Whether you are a programmer, engineer, or simply a curious enthusiast, this book will provide you with a wealth of information about the Intel 80486 processor.

This book is intended for an American audience and is written in the English language.

## Book Description

**Intel 80486: The Complete Guide** is the definitive guide to the Intel 80486 processor. This comprehensive book covers everything you need to know about the 80486, from its history and architecture to its programming and applications.

Whether you are a programmer, engineer, or simply a curious enthusiast, this book will provide you with a wealth of information about the 80486.

**In this book, you will learn:**

- The history of the 80486
- The architecture of the 80486
- How to program the 80486
- The applications of the 80486
- The impact of the 80486 on the personal computer industry

**This book is intended for an American audience and is written in the English language.**

# Chapter 1: The Evolution of the 80486

## The birth of the 80486

The Intel 80486 processor was born on April 10, 1989. It was the successor to the Intel 80386 processor, and it was the first x86 processor to feature an integrated memory management unit (MMU). The MMU allowed the 80486 to run multiple programs simultaneously and access more memory, which made it possible to run more complex and demanding applications.

The 80486 was also the first x86 processor to feature a built-in floating-point unit (FPU), which made it much faster at performing mathematical calculations. This made it ideal for use in scientific and engineering applications, as well as for computer-aided design (CAD) and 3D modeling.

The 80486 was a major commercial success, and it was used in millions of personal computers. It was also used in a variety of other devices, such as workstations,

servers, and embedded systems. The 80486 was eventually succeeded by the Intel Pentium processor, but it remains an important milestone in the history of computing.

The development of the 80486 began in the early 1980s. Intel engineers were working on a new x86 processor that would be more powerful than the 80386. The new processor was originally called the 80486, but it was later renamed to the 80486DX to distinguish it from the 80486SX, which was a lower-cost version of the 80486DX.

The 80486DX was released in April 1989, and it was an immediate success. It was the fastest x86 processor available, and it quickly became the standard processor for high-end personal computers. The 80486SX was released in October 1989, and it was a more affordable option for budget-minded consumers.

The 80486 was a major advancement in x86 processor technology. It was the first x86 processor to feature an

MMU and an FPU, and it was the fastest x86 processor available. The 80486 was a major commercial success, and it was used in millions of personal computers. The 80486 was eventually succeeded by the Intel Pentium processor, but it remains an important milestone in the history of computing.

# Chapter 1: The Evolution of the 80486

## The 80486's architecture

The Intel 80486 processor was a major advancement in computer architecture. It was the first x86 processor to feature an integrated memory management unit (MMU), which allowed it to run multiple programs simultaneously and access more memory. This made it possible to run more complex and demanding applications, such as graphical user interfaces (GUIs), spreadsheets, and databases.

The 80486 also featured a built-in floating-point unit (FPU), which made it much faster at performing mathematical calculations. This made it ideal for use in scientific and engineering applications, as well as for computer-aided design (CAD) and 3D modeling.

The 80486's architecture was also designed to improve performance over previous x86 processors. It featured a 32-bit data bus, which allowed it to transfer twice as

much data per clock cycle as the 16-bit 80386 processor. It also featured a pipelined architecture, which allowed it to execute multiple instructions simultaneously.

The 80486's architecture was a major factor in its success. It was the first x86 processor to offer the performance and features that were needed to run the latest software applications. This made it the processor of choice for both personal computers and workstations.

The 80486's architecture has had a lasting impact on the design of x86 processors. Many of the features that were introduced in the 80486, such as the MMU and the FPU, are still found in modern x86 processors. The 80486's architecture is a testament to the engineering prowess of Intel and its lasting impact on the computer industry.

# Chapter 1: The Evolution of the 80486

## The 80486's impact on the PC industry

The Intel 80486 processor had a profound impact on the personal computer (PC) industry. It was the first x86 processor to feature an integrated memory management unit (MMU), which allowed it to run multiple programs simultaneously and access more memory. This made it possible to run more complex and demanding applications, such as graphical user interfaces (GUIs), spreadsheets, and databases.

The 80486 was also the first x86 processor to feature a built-in floating-point unit (FPU), which made it much faster at performing mathematical calculations. This made it ideal for use in scientific and engineering applications, as well as for computer-aided design (CAD) and 3D modeling.

The 80486 was a major commercial success, and it was used in millions of personal computers. It was also

used in a variety of other devices, such as workstations, servers, and embedded systems. The 80486 was eventually succeeded by the Intel Pentium processor, but it remains an important milestone in the history of computing.

Here are some of the specific ways that the 80486 impacted the PC industry:

- It made possible the development of more complex and demanding applications, such as GUIs, spreadsheets, and databases.
- It made PCs more affordable and accessible to a wider range of users.
- It helped to establish the PC as a viable platform for business and professional use.
- It laid the foundation for the development of future generations of x86 processors.

The 80486 was a truly revolutionary processor, and it had a profound impact on the development of the PC industry.

**This extract presents the opening three sections of the first chapter.**

**Discover the complete 10 chapters and 50 sections by purchasing the book, now available in various formats.**

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