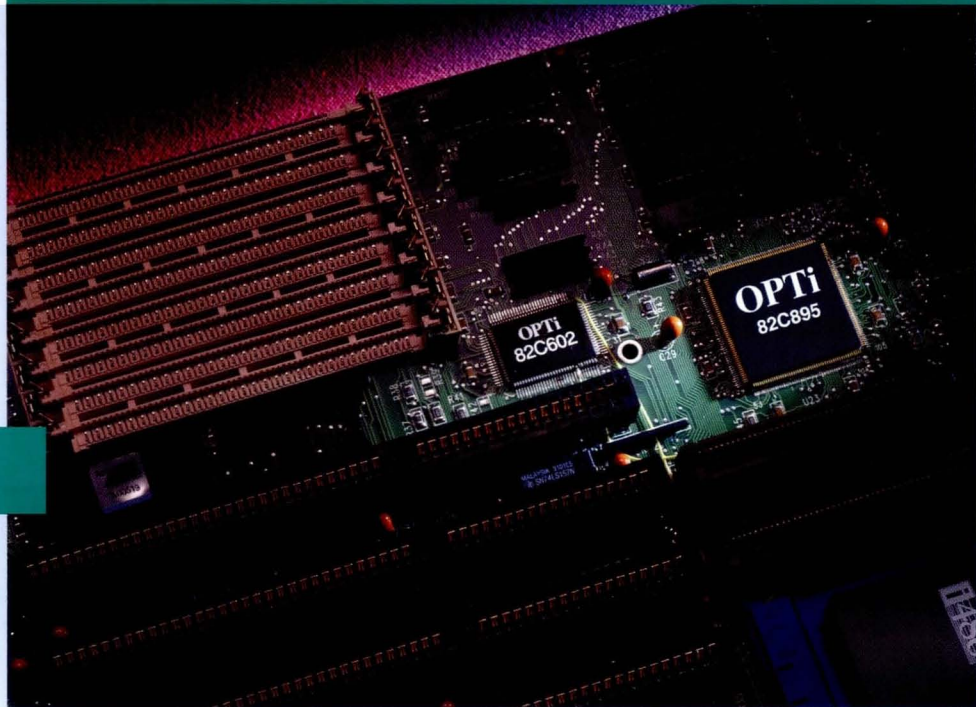# DESKTOP

TRUE GREEN

82C895 Single Chip TRUE GREEN PC Chipset

OPTi's 82C895 single chip GREEN PC chipset is the optimum solution to support systems bearing the Energy Star standard approval. The 82C895 provides support for all 486 type CPUs, including Intel486SLe/SX/DX/DX2/DX4™ and write-back CPUs, such as the P24T.

The 82C895 has a built-in activity timer which monitors interrupts, DMA, video, keyboard, floppy, and hard disk accesses. Coupled with the OPTi 82C602 data buffer chip, the GREEN PC chipset offers three power control ports that control such features as a clock synthesizer chip, monitor syncs, and STPCLK# to the CPU.

The 82C895 consists of a single chip device that acts as a controller for the processor, DRAM, L2 cache, VESA local bus, and ISA Bus peripherals.
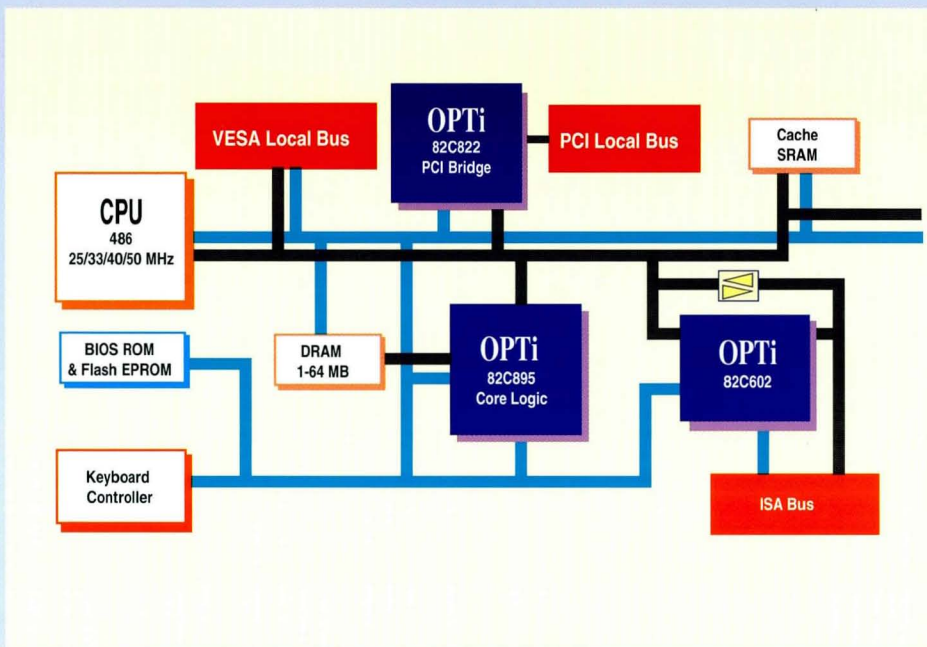
The 82C895 provides energy efficiency to users, while providing OEMs with flexibility by supporting both a full range of 486 processors. The 82C895 is the leading solution for cost-effective, GREEN 486 desktop systems.

Features/Benefits

- Supports L1 write-back cache
- Supports STPCLK# and SMI# on LSe CPUs
- Supports all 486 CPU's, including Intel SLe/SX/DX/DX2/DX4
- Monitor/timer for entering and exiting GREEN mode
- External power management input to allow external trigger to GREEN mode
- Two power saving modes: Auto_GREEN and SMI_GREEN
- Power management port to control external devices during GREEN mode when coupled with the 82C602
- Supports APM drivers to allow system to enter GREEN mode
- Single chip PC/AT solution: one 208 pin CMOS Plastic Flat Package (PQFP)
- IX clock source, supporting systems running from 16 MHz to 50 MHz
- Write-back, direct-mapped, back interleave cache with size selections: 64, 128, 256, and 512K

- Supports 2-1-1-1, 3-1-1-1, 2-2-2-2, and 3-2-2-2 cache burst cycles
- Support for two programmable non-cacheable regions
- Built-in TAG auto-invalidation circuitry
- Option for write-protected, cacheable Video and System BIOS
- Supports System Management Mode (SMM) for Green-PC Management
- Programmable cache and DRAM read/write cycles
- Supports 4 banks of 256K to 16M DRAMs for configurations up to 32 MB
- Support 3-2-2-2 DRAM burst cycles
- Shadow RAM option
- Hidden refresh and conventional refresh support
- VESA VL local bus support
- PCI bus support with 82C822 bridge chip
- Synchronous and Asynchronous AT Bus clock support

OPTi®

System Block Diagram

OPTi 486 Chipsets

82C895 -   Single Chip TRUE GREEN-4 Banks DRAM

82C802G -   Single Chip TRUE GREEN- 8 Banks DRAM

82C602 -   GREEN Buffer with RTC

82C822 -   PCI Bridge Chip

82C465MV - Single Chip Notebook

82C611 -   VL-Bus IDE Controller

82C621 -   PCI IDE Controller

OPTi's 82C895: Optimum power savings for 486 desktop systems.

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