



# DESTINY

Destiny Technology Corporation

D8405 Destiny's System on a Chip sets a new standard for mainstream high performance printer controllers

For over a decade Destiny's name has been synonymous with printer controllers. To simplify controller design, we now offer SOC, a System on a Chip.

The D8405 is the faster big brother for the highly successful D8401 in Destiny's new SOC family. The D8405 has an embedded PowerPC 405 and provides the best cost/performance in the industry. D8405 is suitable for any PCL<sup>®</sup> and PostScript<sup>®</sup> page printer with a speed ranging from 20 PPM to 60PPM. Working as a color accelerator, the D8405 provide a 7 ppm. to 15 ppm. color printer solution. The CPU runs at up to 200MHz with integrated FPU (floating-point unit), a 32K-byte instruction cache, and 32K-byte data cache. A variety of peripherals can be easily incorporated into your system through its unique and powerful flexible bus structure, which includes a PCI bus, an EBC bus for ROM/SRAM, a general IO device, and Destiny's industry recognized engine interface. An additional feature is the integrated Ethernet controller. With the same CPU and OS, users have full control of the network sub-system. All and all the D8405 is a great solution for any application of monochrome or color printers, MFP, Fax/Copier printers add-on boards, or medium speed tandem color printers.

D8405 provides the connection with key IO components, like ROM, flash ROM, SDRAM whether on board or DIMM. As to the IO, it provides networking, parallel port interface (P1284), serial interface (UART), IO ports (for example, IRDA, SCC, network IO), general purposed IO pins, external interrupts, and external DMA channels.

D8405 internally provides built-in PLL, DMA controller, interrupt controller, and various VDO I/F configurations to improve system performance.

The OEM can choose the amount of support software required. Destiny can supply anything from a minimal board support package (BSP) to a turnkey solution, with plenty of options in between.

## Feature summary

- PowerPC 405 (200Mhz) with 32K/32K I/D Cache
- Integrated IEEE Double Precision Floating Point Unit
- High Performance 3-Bus architecture, including PLB (processor local bus) 64-bit 100MHz, OPB (on chip peripheral) Bus, and DCR (device control register) Bus
- An External Bus Controller Capable of Supporting up to 8 ROM/IO/SRAM Bank
- A High Speed Memory Controller Capable of Supporting up to 7 SDRAM Bank
- 4 DMA Channels with Scatter/Gather Mode added, Command/Chaining Capability
- Universal 32-Input Interrupt Controller for Ethernet, P1284, UART, VDO, GIO and External device
- Built-in 32 X 32 Rotator for Fast 90/180/270 Degree Rotation
- An Ethernet Interface (EMAC)

