# CyberPro™3000/3005

## The CyberPro3000 3D/2D Video Graphics Chip w/Integrated NTSC/PAL TV Encoder

**IGS Technologies**

## Features

- 64-bit graphics accelerator with integrated 230 MHz 24-bit true color DAC

- High performance 3D rendering engine based on PixelSquirt™ technology, 100 Million pixels/sec, Alpha blending, RGB & spectral lighting, integrated setup & rendering engine

- Accelerated 3D Rasterization Operations

- Flicker-Free TVDirect™ direct output to TV connectors

- Enhanced triple video windows with PIP

- P3D support

- TVDirect - On-chip integrated digital TV encoder

- Proprietary 3-line flicker-free filtering of TV graphics, text

- SGRAM/EDO; up to 4MB, supports true single cycle SGRAM (256K/512Kx32) 83-133 MHz

- Video Window / Display; DirectDraw™ MPEG-1 playback, 100 MHz MCLK offers up to 320 Mbytes/sec. peak bandwidth

- VGA/SVGA/VBE 2.0/DPMS BIOS

- 208 pin PQFP

- .35micron, 3.3V/5V technology

## CPUs Supported

All IDT CPUs

## Description

The CyberPro3000 merges the functions of a digital NTSC/PAL TV Direct™ encoder, high-resolution 3D graphics accelerator, 2D GUI video accelerator and a flexible CPU bus interface into a single IC. These four functions combine to make the CyberPro the ideal solution for PC/PCTV and other applications.

The CyberPro3000 also features an ITU-BT656/601 digital video input port, multi-format Alpha blending, and Macrovision™ (3005) Pay-Per-View copy protection system. [1]

### High performance 3D rendering engine

The 3D rendering engine is based on the PixelSquirt™ which performs many 3D operations on chip, such as polygon setup, rasterization, and texturing, resulting in minimal overhead on the host processor delivering outstanding texture mapped graphics. A patented rendering engine takes advantage of a no Z-buffer memory architecture, increasing resolution and the number of textures that can be stored in any given memory configuration. Overall, this engine provides a radical solution to address bandwidth and memory requirements in achieving visual realism at resolutions of 1024x768 and higher. With true single cycle SGRAM CyberPro provides the highest performance for 3D games on PC or TV.

### Superb 2D 64-bit graphics accelerator

CyberPro3000 provides a glueless solution for simple, efficient, cost effective high performance graphics subsystem design for PCI and other CPUs through FlexiBus™. The integrated 230 MHz 24-bit true color DAC, PCI bus master, write FIFO and dual command FIFO's reduce system cost while optimizing memory bandwidth for maximum graphics performance.

### Flicker-Free TVDirect™ for worldwide TV formats

The CyberPro3000 incorporates a proprietary flicker-free technology, and an integrated TV encoder on-chip for true TV quality. Direct output to TV connectors including NTSC/PAL S-video, NTSC/PAL composite, SCART/RGB and 16:9 wide screen TV. The TVDirect feature provides OEMs with the best PC-TV quality for the lowest cost.

**Enhanced triple video windows with PIP**

The CyberPro3000 supports three hardware assisted scalable video windows enabling video phone and video conferencing applications. The PIP feature enables more than one video source like DVD and TV to be displayed at the same time on CRT or TV. The CyberPro3000 has a direct video port interface to DVD decoders and video decoders.

Where necessary, the video is scaled by interpolation then displayed for better video quality. This multimedia chip provides excellent video and playback, scaling from 32x32 icon size to full screen supporting both horizontal and vertical interpolation with edge smoothing technologies for jagged edges. In addition, it eliminates the combing effect of rapid movement. When the video is scaled down it is filtered and either captured or displayed at a much higher quality.

1    *This applies to The CyberPro3005 devices only. The devices are protected by USA patent numbers 4631603, 4577217 and 4819098 And other intellectual property rights. Use of the Macrovision anti-copy process in the devices are licensed for noncommercial home use only. Reverse engineering or disassembly is prohibited. Please see the Macrovision web site at www.macrovision.com for more information.*

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