TEXAS INSTRUMENTS

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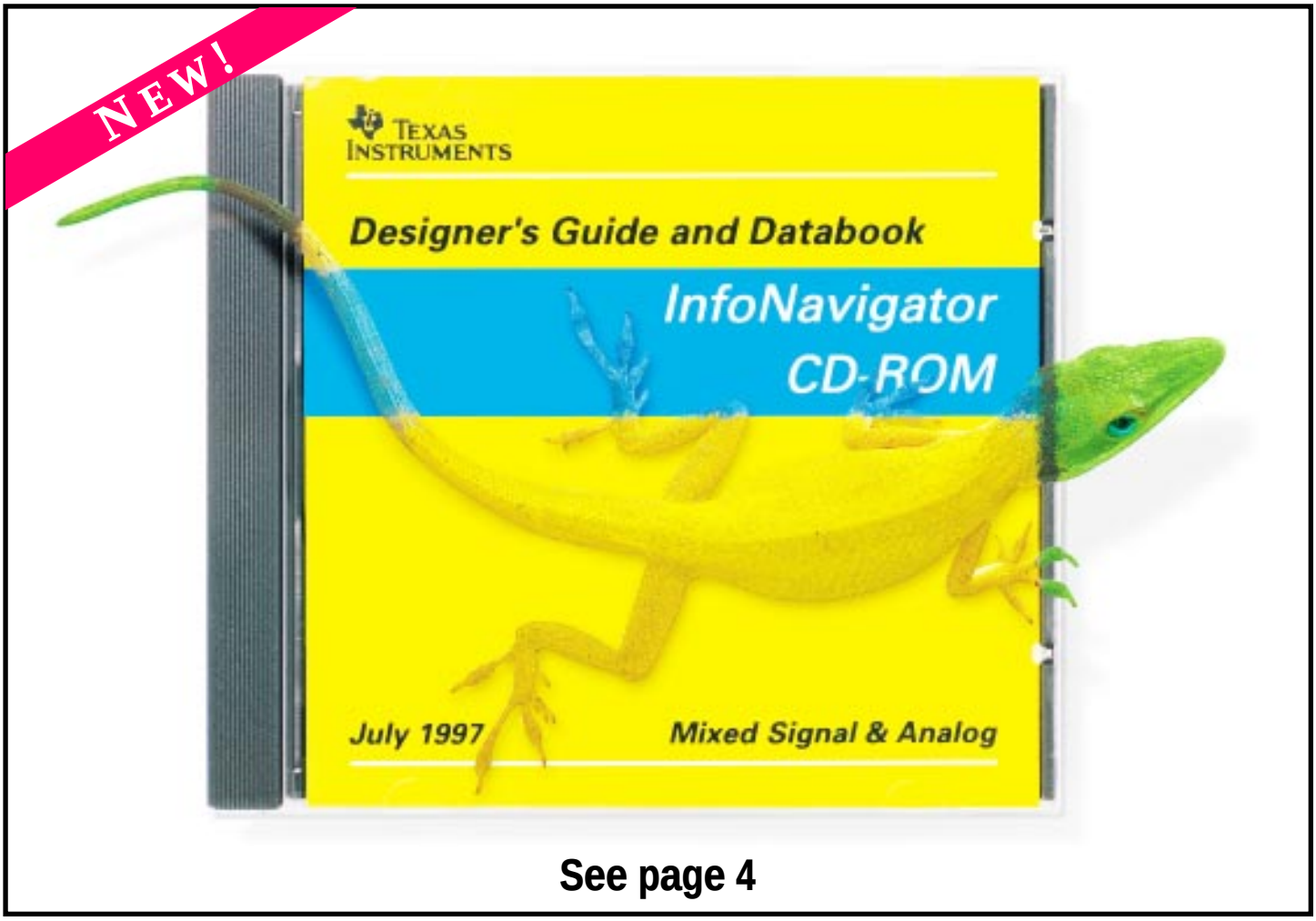
MIXED SIGNAL & LINEAR Showcase



See page 4

Inside

Product Features

- 12-Bit or 10-Bit Operation
- 3 independent PGAs (TLC8144)
- Economical color and gray scale operation
- CDS, sample & hold modes
- Pixel-by Pixel digital compensation
- 400 mW power dissipation
- Characterized for operation from 0°C to 70°C

ADCs enable single chip solution from CCD output to digital domain

The TLC8044 and TLC8144 are analog-to-digital converters designed to digitize and compensate the analog output of CCD image sensors at resolutions as high as 12-bits. These versatile ADCs will operate in correlated double sample (CDS) mode, and in sample and hold mode. This makes them compatible with many CCD imager applications such as hand-held or flatbed scanner designs and contact image sensor (CIS) designs.

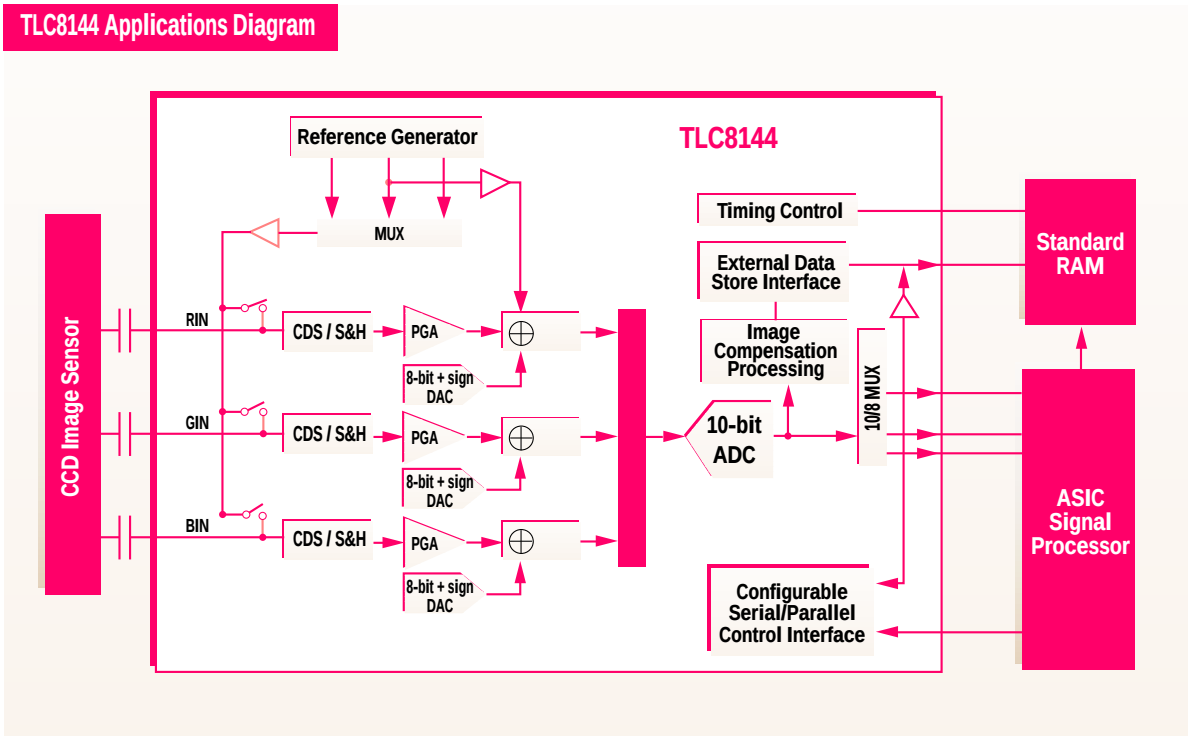
The TLC8044 and TLC8144 both feature separate RGB inputs, bipolar analog signal offset correction, and a 3-to-1 RGB analog MUX. In addition, the internal sample and hold circuitry allows them to handle both color and gray-scale operations.

The TLC8044 features a fully differential analog signal path and has a 12-bit, 6-MSPS analog-to-digital converter that will support up to 36-bit color designs. The TLC8044 also affords the designer the option of using pixel-by-pixel digital correction circuitry, six internal offset correction registers (red, green, blue, even and odd pixels), and three internal registers to correct pixel shading. For global error correction, the TLC8044 offers both global offset and global gain adjustment for each color channel.

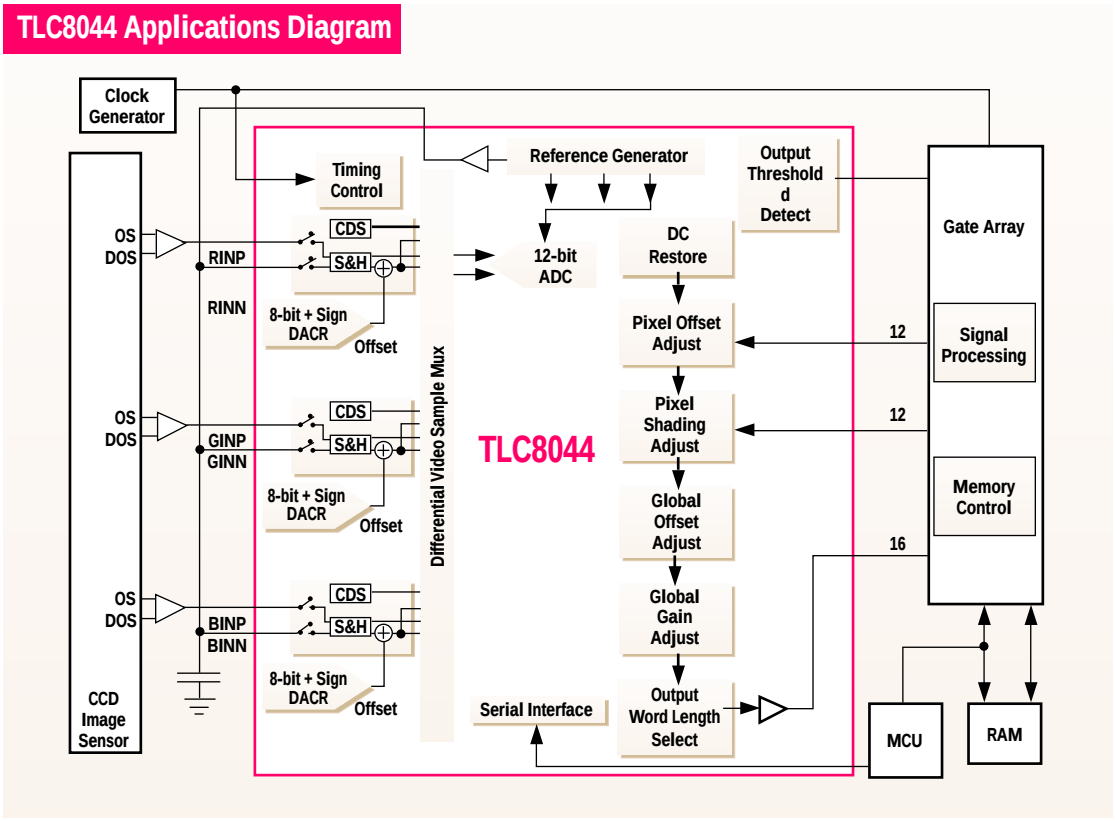
The TLC8144 uses a single-ended analog signal path that includes 3 independent analog programmable gain amplifiers (PGA's) and a 10-bit 6-MSPS analog-to-digital converter that will support up to 30-bit color. The TLC8144 is able to perform pixel-by-pixel compensation of pixel response non-uniformity (PRNU) using data that is stored externally. Alternatively the designer has the option of bypassing this step. The output of the A/D can be passed directly to the controlling processor.

This entire family of CCD interface devices features an easy interface to a host processor. The TLC8044 has a

TLC8144 Applications Diagram



TLC8044 Applications Diagram



programmable output word length of 8,10,12, or 16 bits, a separate programmable threshold detect output for each color (for OCR operations), and a three wire serial input bus that sets all global and default correction values. The TLC8144 also incorporates interface flexibility. It features a flexible output architecture that allows the 10-bit output data to be accessed by either a 10-bit bus or via a time-multiplexed 8-bit bus. The TLC8144 is the internal sample and hold circuitry allows them to handle both color and gray-scale operations.

The TLC8044 features a fully differential analog signal path and has a 12-bit, 6-MSPS analog-to-digital converter that will support up to 36-bit color. The TLC8044 also affords the designer the option of using pixel-by-pixel digital correction circuitry, six internal offset correction registers (red, green,

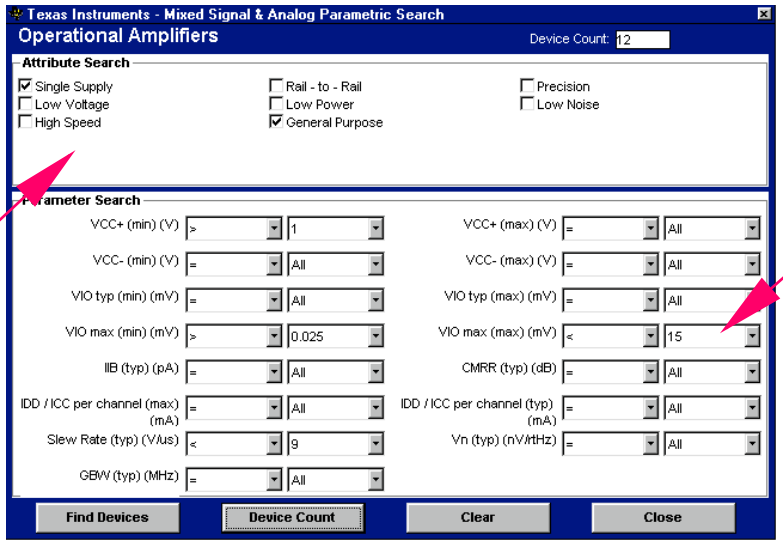
■ **Check box 01** for a datasheet.

Suggested resale price

Quoted per device in quantities of 1,000

TLC8044CFN: $8.77

New CD-based "Designer's Guide and Data Book" allows for powerful searches



Select desired attributes

Select desired parameters

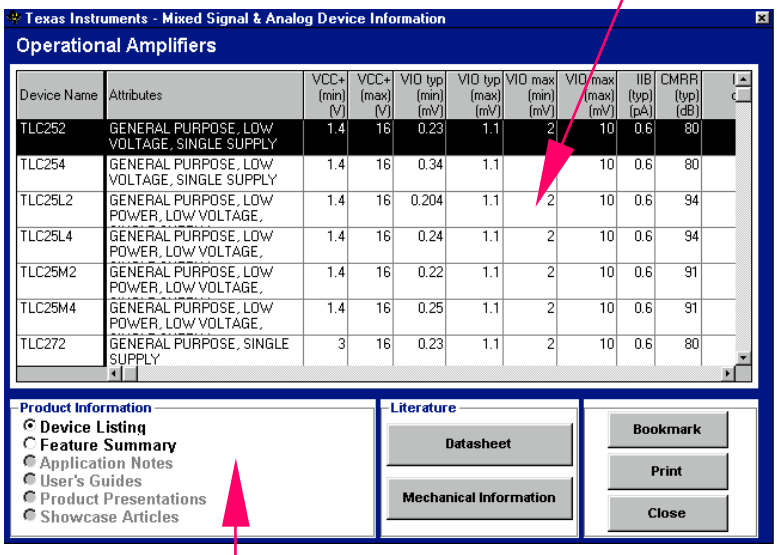
The latest version of InfoNavigator is now available containing approximately 20,000 pages of technical specifications and application notes. It includes a powerful search engine that will save designers time when they need to find the appropriate mixed-signal or analog device. By choosing parametrics or functionality, the search engine generates a table of products which meet the requirements. The user can review a high-level technical overview on each device before accessing comprehensive data sheets and application notes.

One important new feature in this version is the ability to download device updates from our World Wide Web site. This will enable users to get the latest details on our mixed signal and analog devices as soon as it becomes available.

■ **Check box 02** for CD-based Designer's Guide and Data Book.

Search Results Table

Results of parametric data selected



Additional information available on device selected

TI offers high-performance total graphics solution

The TVP4020 is TI's second generation PC graphics controller to incorporate PERMEDIA graphics technology from 3Dlabs®. The jointly-designed TVP4020 combines the strengths of 3Dlabs and TI to produce leading-edge performance at an affordable price.

The TVP4020 brings the visual realism previously found only in high-end workstations to a variety of consumer and commercial applications, including PC games, virtual reality and virtual world wide web browsing. It integrates the three most important graphics functions required by these demanding applications:

- High-performance 3D
- Leading 2D acceleration
- Advanced video processing

The TVP4020 features an integrated 100 MFLOP geometry pipeline processor as well as a number of advanced video processing features such as XY scaling and filtering, YUV to RGB color space converter, and VBI support.

The device integrates TI's award-winning 230 MHz RAMDAC, which supports all popular screen resolutions and refresh rates up to 1600 x 1200 pixels at 83 Hz. The TVP4020 can address up to 8 Mbytes of external memory and it includes both PCI and AGP bus interfaces for design flexibility.

The TVP4020 includes software drivers for Windows™95 and WindowsNT as well as the leading 3D APIs including Direct3D™, OpenGL®, and Heidi™.

The TVP4020 supports a wide-range of PC applications, from low-cost graphics to complete graphics and video solutions.

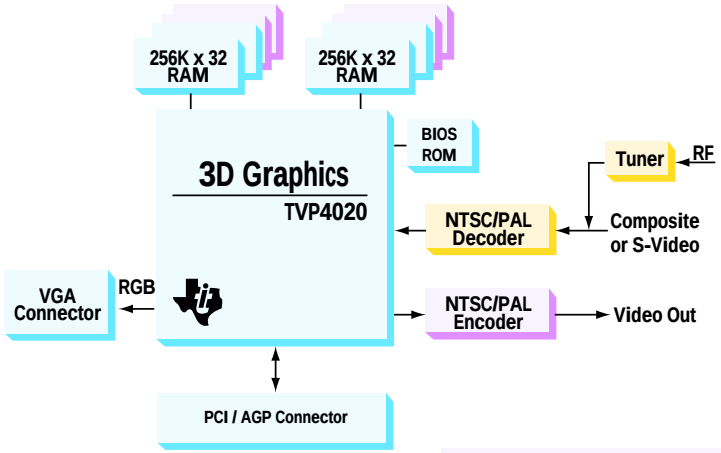
This device is available in a 272-pin BGA package.

■ **Check box 03** for a datasheet and product bulletin.

Product Features

- 3D, 2D, and Video
- 100 MFLOP Geometry Pipeline Processor
- Integrated 230 MHz RAMDAC
- PCI and AGP bus interfaces
- 8 Mbyte address space
- Extensive software driver support
- Characterized for operation from 0° C to 70° C

TVP4020 Suggested Applications



Suggested Applications

Low Cost Graphics

Graphics with Video Out

Complete Graphics & Video

LOW-COST GRAPHICS

- High performance 2D and 3D
- 2 or 4 Mbytes of RAM
- MPEG playback with soft ware decoder
- Low parts count

GRAPHICS WITH VIDEO OUT

- High Performance 2D and 3D
- 4, 6 or 8 Mbytes of RAM
- MPEG playback with software decoder
- Compatible with many available NTSC/PAL encoders
- Video out image may be the same or different as the monitor
- Supports applications such as living room PC

COMPLETE GRAPHICS & VIDEO

- High performance 2D and 3D
- 6 or 8 Mbytes of RAM
- Simultaneous video in and out
- Compatible with many available NTSC/PAL encoders and decoders
- Supports applications such as video conferencing and video editing

Suggested resale price

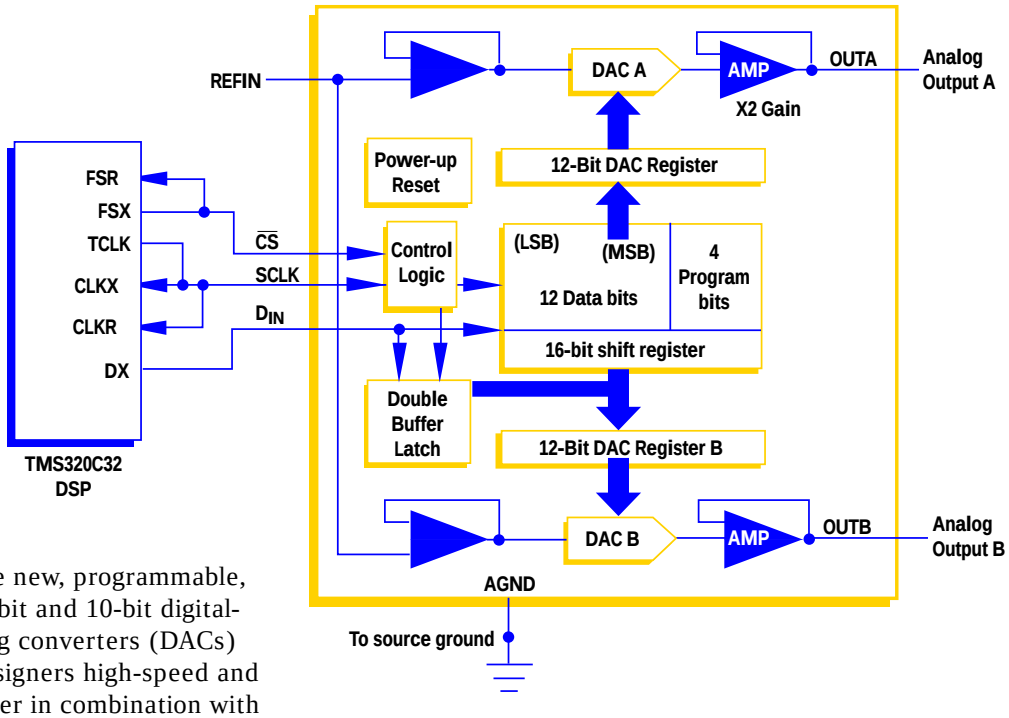
Quoted per device in quantities of 50,000

TVP4020GFN:
$43.20

Programmable dual DACs let designers trade power for speed

Product Features

- Serial CMOS DAC with voltage output
- 10-bit TLC5617
- 12-bit TLC5618
- 5-V single-supply
- 20 MHz system clock
- 1.21 MHz update rate
- 3-Wire serial interface
- Glueless interface to TMS320 DSPs
- Characterized for operation from 0°C – 70°C



These new, programmable, dual 12-bit and 10-bit digital-to-analog converters (DACs) offer designers high-speed and low power in combination with an easy interface to TI's line of TMS320 digital signal processors (DSPs).

Both the TLC5618 (12-bit) and TLC5617 (10-bit) feature settling-time vs. power consumption programmability (12.5-µs / 3-mW slow mode and 2.5-µs / 8-mW fast mode) and a software programmable power down mode (to 1 µA). They also offer a high-impedance buffered reference input and simultaneous or independent updates of both DACs in the package. Both devices also have a power-on-reset function that ensures repeatable power-up conditions.

The TLC5618 is a 12-bit DAC perfectly suited for applications such as cellular telephones, battery operated industrial controls, remote industrial controls, and machine and motion controls. The 16-bit digital control data is obtained over a 3-wire serial bus that is CMOS compatible.

The TLC5618 and TLC5617 are available in 8-pin SOIC packages.

Suggested resale price

Quoted per device in quantities of 1,000

TLC5617ID: $3.55

TLC5618ID: $4.31

The Growing TLC56xx Family of Serial Input, Voltage Output, Easy to Use DACs from TI

Device Number	Resolution	Description
TLC5615	10	Single
TLC5617	10	Dual, Programmable
TLC5618	12	Dual, Programmable

■ **Check box 04** for a datasheet.

10-Bit, 20 MSPS ADC provides high resolution and speed with 33% power savings

The TLC876 is a single-supply, 10-bit, 20 MSPS analog-to-digital converter (ADC) which allows designers to reduce board space, lower power dissipation, improve bus efficiency, increase flexibility and lower system cost. This ADC's speed and resolution make it ideal in digital video systems, digital cameras, scanners, communications systems and other cost-sensitive, high performance applications.

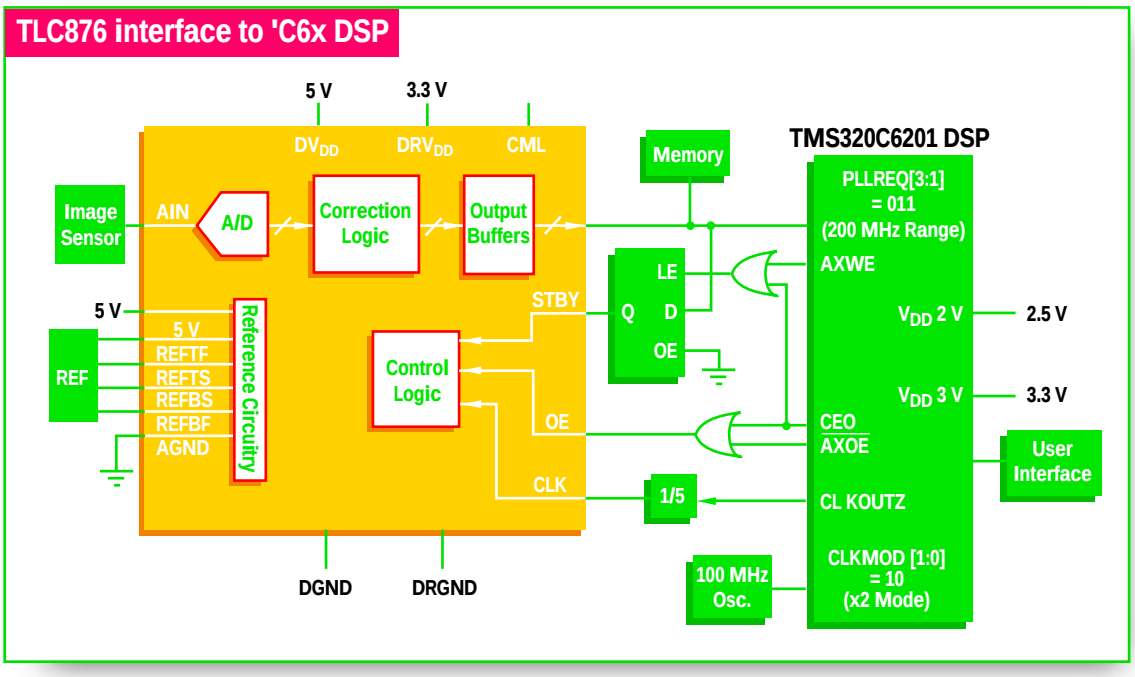
The device, designated the TLC876, is pin compatible with the current market alternative and offers several key improvements. The TLC876's power consumption is only 107-mW, 33 percent lower than competitive device. Designers experiencing bus delays will find the TLC876 significantly reduces enable and disable times (5 ns vs. 150 ns), improving bus efficiency and system throughput.

The TLC876 analog input has been designed to allow inputs as low as ground. This permits the system designer to eliminate level shifting stages prior to the ADC, saving board space and cost. Additionally, the reference input impedance is two times higher, reducing the drive requirements and cost of the reference drive circuitry.

The TLC876 guarantees differential non-linearity (DNL) of less than 1-LSB and delivers 54 dB of signal-to-noise ratio (SNL).

The TLC876 features three-state outputs, and both inputs and outputs are compatible with 3-V and 5-V logic. The TLC876 is available in 28-pin SOIC or 28-pin SSOP packaging.

■ **Check box 05** for a datasheet.



Product Features

- 20 MSPS, 10-bit resolution ADC
- 5-V single-supply operation
- Low power dissipation ... 107 mW Typ
- Pin Compatible with the AD876
- Characterized for operation over Commercial (0°C to 70°C) and Industrial (–40°C to 85°C)

Suggested resale price

Quoted per device in quantities of 1,000

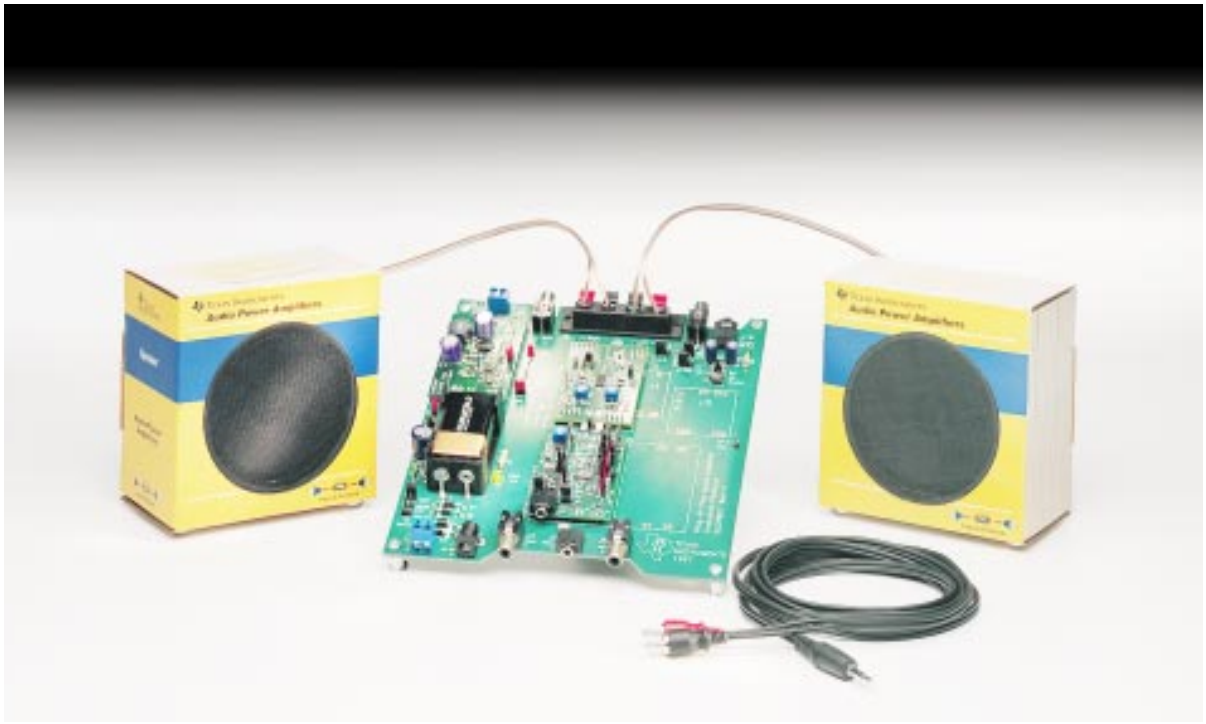
TLC876CDW: $2.89

Plug-N-Play platform provides easy evaluation of all TI audio power amplifiers

Texas Instruments is now offering designers an innovative way to evaluate audio power amplifiers. With the new Plug-n-Play concept, engineers can plug in various device modules and play them through the EVM platform to evaluate our entire line of audio power amplifiers.

The Plug-N-Play Base Kit includes an evaluation platform, two 3 W speakers, audio input cable, speaker wire and data manual. The Plug-n-Play (PnP) platform is the heart of the kit, providing the interface to all modular EVMs, the stereo speakers and headphones, audio source and power supply. The platform has three dedicated sockets for testing either two mono audio power amplifiers or one stereo amplifier. There is also a socket for driving headphones, allowing the user to evaluate stereo speaker and headphone drive simultaneously. Provided is a "signal conditioning" section for the user to tailor the platform to their particular application or for use with the microphone/mixer EVM. The platform includes industry standard connectors for the speakers, headphones, power supply and audio source (CD, tape, etc.) making the system very flexible. For designers of battery powered applications, the platform includes a socket for a 9-V battery, which can be used with our high efficiency DC/DC converter EVM to produce either a 3.3 V or 5 V supply for low voltage audio power amplifiers.

The PnP platform is compatible with all of TI's current audio power amplifier EVMs. The following modular EVMs are currently available:



Plug-n-play evaluation kit shown with TPA0102, DC/DC converter, and microphone mixer modular EVMs.

You can call us at 1-800-477-8924 x5801 to order any or all of the following:

- **Professional Kit which includes the Plug-N-Play Base Kit plus all modular evms: $350 (BEST VALUE!)**
- **Plug-N-Play Base Kit (no amplifiers included): $150**
- **Individual modular evms ($50 to $70).**

■ All EVM modules plug into platform; no soldering or tools required

■ Input/output jacks available for easy connection to audio source and external speakers

■ Compatible with TPA4860, TPA4861, TPA302, TPA0102, and TPA1517 EVMs

■ Road-map compatible with future TI audio power amplifiers

■ High-efficiency DC/DC converter module available for battery-powered operations

TPA4860 – A 1 W bridged-tied load (BTL) mono audio power amplifier. The TPA4860 provides high power supply rejection (56 dB) for increased fidelity, it is characterized at 3.3 V and 5 V operation and offers shutdown control. The TPA4860 also includes headphone interface logic circuitry to facilitate headphone applications. It is available in a 16-pin SOIC.

TPA4861 – A 1 W bridged-tied load (BTL) mono audio power amplifier. The TPA4861 provides high power supply rejection (56 dB) for increased fidelity, it is characterized at 3.3 V and 5 V operation and offers shutdown control. It is available in an 8-pin SOIC.

TPA302 – A 300 mW single-ended (SE) stereo audio power amplifier designed to drive headphones. The TPA302 requires only 5 mA (Max) of supply current. It offers shutdown control for extending battery life.

TPA0102 – Offers stereo speaker and headphone drive in a 24-pin TSSOP PowerPAD™ package, replacing three chips in most designs. The device offers two BTL channels that can deliver 1.5 W into 4-Ω. For applications where speakers are driven as BTL and the line outputs (often headphones) are required to be SE, the device automatically switches into SE mode delivery up to 500 mW of power. The TPA0102 also has an integrated MUX on board to allow two sets of stereo inputs to the amplifier.

TPA1517 – It is a 6 W single-ended stereo audio power amplifier. It has a supply voltage range of 9.5 V to 18 V and a mute/standby mode for increasing life in battery powered systems. The TPA1517 is available in a 20-pin DIP and the 20-pin SOIC PowerPAD package. Two EVMs are available for the TPA1517, one in each package.

DC/DC Converter – A dc-dc buck converter which provides a 5 V or 3.3 V output at up to 2.5 A with an input voltage range of 5.5 V to 12 V. The PWM controller is a TL5001 operating at a nominal frequency of 275 kHz. The TL5001 is configured for a maximum duty cycle of 100% and has short circuit protection built-in.

Microphone Mixer – The microphone mixer module is designed to provide volume control and a microphone interface to the Plug-N-Play platform. The module uses a low noise TLC2274 quad CMOS rail-to-rail output op amp.

All modules plug directly into the platform. No soldering is needed. This allows the designer to evaluate several different audio power amplifier products with minimal work. This significantly decreases preparation time and allows more time for actual evaluation. Plus, future TI audio power amplifiers will be compatible, allowing you to use this platform as a basis for easy evaluation in the future.

■ **Check box 06** for an order form, plug-n-play data manual, and product bulletin.

6 W stereo audio power amplifier in PowerPAD™ package

Product Features

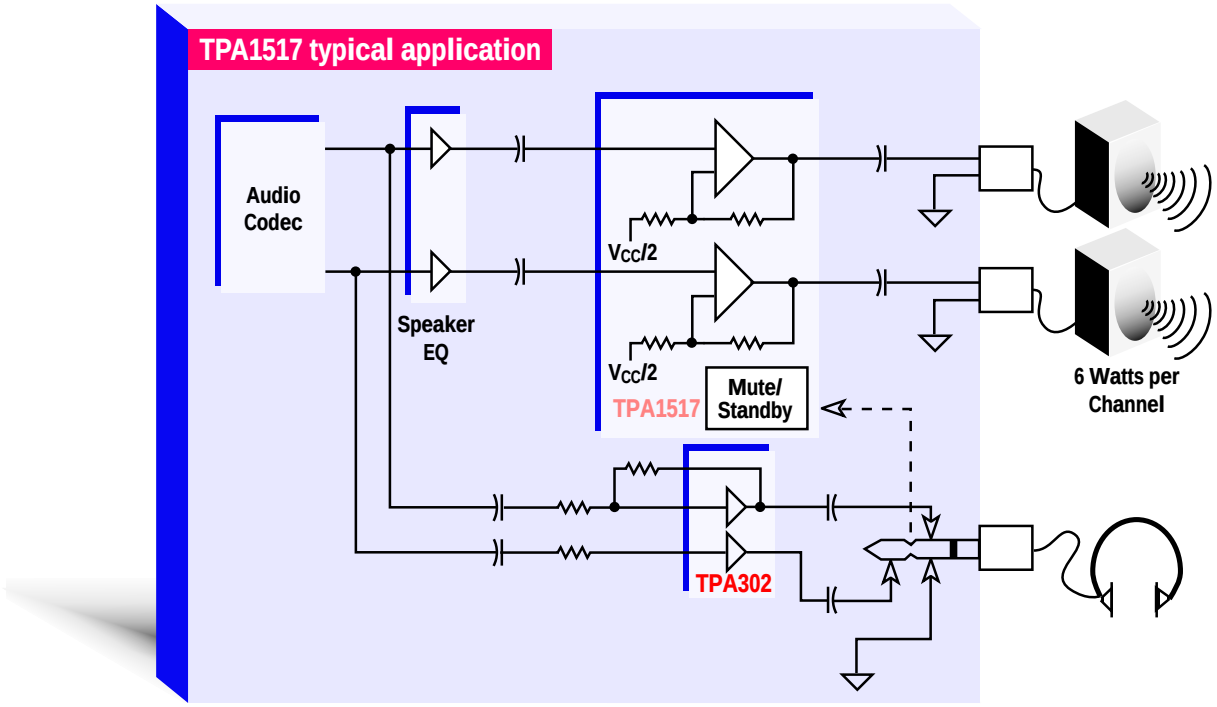
- 6-W Stereo Output at 10% THD+N (5-W at 1% THD+N)
- High PSRR (65-dB, 1 kHz)
- Wide supply voltage range (9.5 V to 18 V)
- Mute and standby operation
- Pinout compatible with the TDA1517
- Characterized for operation from –20°C to 85°C

The TPA1517 is a stereo audio power amplifier capable of delivering 6-W per channel of continuous average power into a 4-Ω load at 10% THD+N or 5-W at 1% THD+N. The device is designed for sound card and multimedia applications.

This single supply audio power amplifier operates with a wide supply voltage range (9.5 V to 18 V). It offers 65-dB (@ 1 kHz) of power supply ripple rejection for increased fidelity in noisy environments like desktop computers. The amplifier features a mute/standby function for increased life in battery powered systems. The TPA1517 and the TPA302, a 300 mW headphone driver, provide a complete stereo speaker and headphone solution in two chips.

The TPA1517 in the 20-pin DIP package (NE) offers a low cost alternative to the TDA1517. The TPA1517 is also available in TI's patented PowerPAD™ 20-pin SOIC (DWP) package. This package has an exposed thermal pad that can be soldered directly to the PCB to provide extra heatsinking. With only 1.25 in^2 of copper area, the PowerPAD package can dissipate over 2.5 W of power at room temperature with zero airflow. Under the same conditions, the standard wide-body SOIC (DW) package can only achieve approximately 1.3 W. For multi-layer board applications with a ground plane, the PowerPAD package usually requires no extra board space for heatsinking. This innovative method provides audio solutions in much smaller packages than competitive devices.

■ **Check box 07** for a datasheet and audio product bulletin.



Suggested resale price

Quoted per device in quantities of 1,000

TPA1517DWP: $1.32

Three channel 1.75 W stereo audio power amplifier

The TPA0103 is a single chip stereo audio power amplifier designed to drive both a mono speaker and stereo headphones. This device is designed for desktop computers and PDA-type applications. The mono channel is in a bridged-tied load configuration (BTL) for delivering maximum output power from PC power supplies. It provides 1.75 W into a 4 Ω load at 0.05% THD+N. The left/right channel outputs are single ended (SE) and are capable of delivering 500 mW of output power into a 4 Ω load (0.2 % THD+N). For systems requiring headphone drive, the left and right channels will provide 80 mW into 32 Ω loads at 0.05 % THD+N.

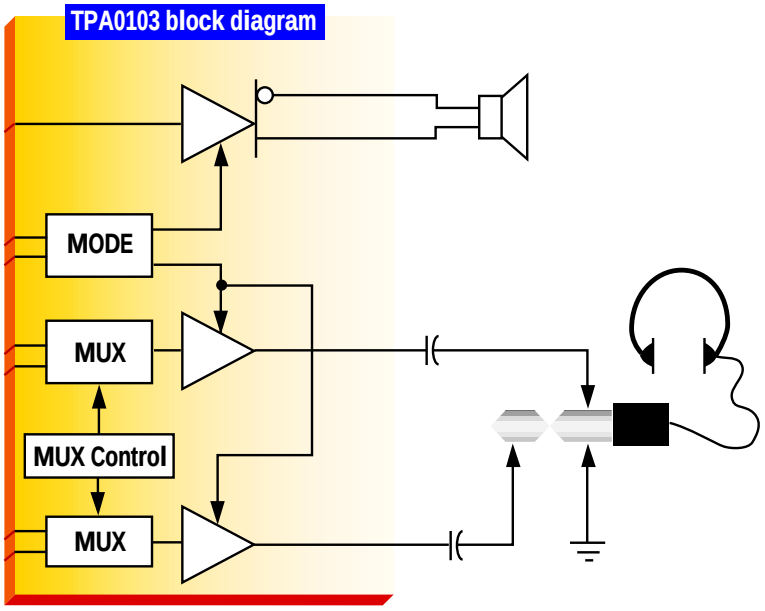
The TPA0103 provides high power supply rejection (75 dB) for increased fidelity, it is characterized at 3.3 V and 5 V operation and offers two types of shutdown: full shutdown where all three channels are powered down, or shutdown of the mono speaker channel for muting during headphone applications. In full shutdown mode, the supply current is 5 µA making the device ideal for battery powered systems.

The TPA0103 also has an integrated mux on board for independent gain control of headphone and speaker outputs.

The TPA0103 provides both the speaker and stereo headphone functions in a single 24-pin TSSOP PowerPAD™ package saving valuable board space.

This device is available in a 24-pin TSSOP PowerPAD package.

■ **Check box 08** for a datasheet and audio product bulletin.



The PowerPAD Advantage:

To address issues of heat dissipation in smaller IC packages Texas Instruments has introduced its patented PowerPAD package. The PowerPAD package uses an exposed thermal pad, which can be directly soldered to a printed circuit board to provide extra heatsinking. With this exposed thermal pad the PowerPAD package delivers TO-220-type thermal performance in a TSSOP package. Thermal impedances of approximately 35°C/W are achievable in multilayer board applications.

Product Features

- 1.75 W BTL center channel
- 600 mW stereo channels
- <0.05% THD+N at full power
- Specified at 3.3 V and 5 V
- Shutdown control I_{DD} = 5 µA (typ)
- Operating Temperature –20°C to 85°C

Suggested resale price

Quoted per device in quantities of 1,000

TPA0103PWPLE: $2.53

Product Features

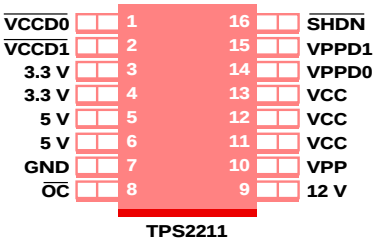
- Single slot device
- Meets PC Card standards set by the PCMCIA committee
- Low $r_{DS(on)}$ 90 mΩ at 5-V and 3-V
- 3.3-V low-voltage mode
- 12-V supply can be disabled except during 12-V flash programming
- Short circuit and thermal protection
- Characterized for operation from –40°C to 85°C

Suggested resale price

Quoted per device in quantities of 1,000

TPS2211IDBLE: $2.02

Fully integrated single channel PCMCIA power distribution switch



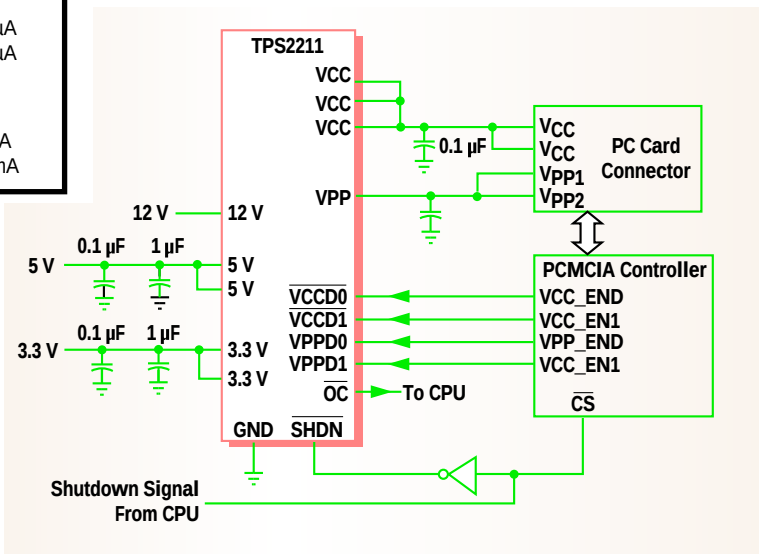
The TPS2211 PC Card power-interface switch provides an integrated power-management solution for interface to PC cards. It features a single slot parallel control interface that is compatible with PC card controllers from Texas Instruments, Cirrus Logic, and Intel. The TPS2211 includes all of the discrete power MOSFETs, a logic section, current limiting, thermal protection, and a 3.3-V low voltage mode required for PC Card applications, all combined in a single integrated circuit. This device allows the distribution of 3.3-V, 5-V, and/or 12-V power to PC cards. The current limiting and thermal shutdown features eliminate the need for discrete components such as fuses. These features improve reliability and reduce component count. Current limit reporting can help the user isolate a power fault to a defective PC Card.

The TPS2211 is a high performance version of Texas Instruments TPS2205 parallel dual slot power interface device. Like the predecessor, the TPS2211 does not require a VDD connection. Bias current is derived from either the 3.3-V or 5-V input pins. This power switch is optimized for the best cost and $r_{DS(on)}$ performance for this application, while fully meeting the power requirements of the PCMCIA specification. Both the 3.3-V and 5-V switch are capable of driving 1 A and maintain the required voltage regulation.

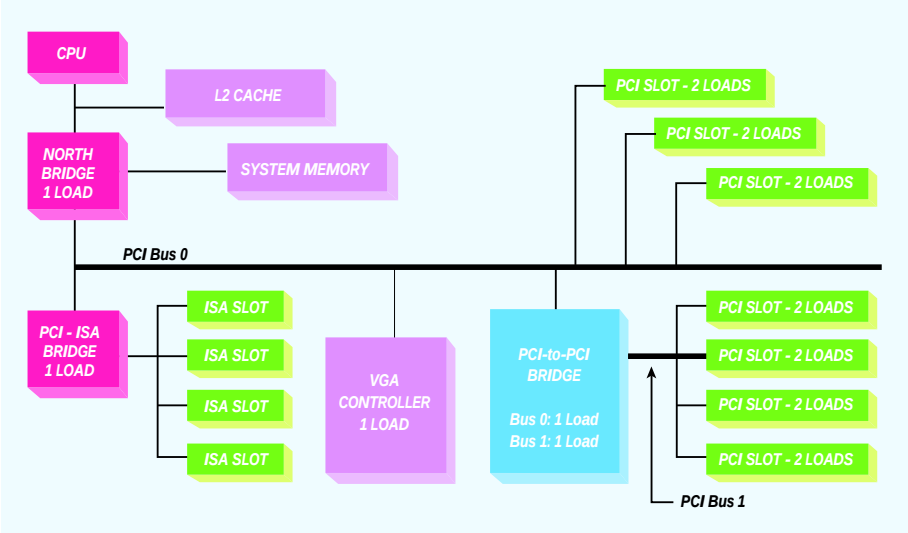
Like the TPS2205, the TPS2211 features a 3.3 V low voltage mode of operation that allows 3.3-V switching without the need for 5-V or 12-V. This facilitates low power system designs such as sleep mode or pager mode where only 3.3-V is available or required. This device is available in a 16-pin SSOP (DB).

Parameter	MAX	UNIT
Input voltage Range		
V_I (5 V)	5.25	V
V_I (3.3 V)	5.25	V
V_I (12 V)	13.5	V
Output Current		
I_O (VCC)	1	A
I_O (VPP)	150	mA
Switch Resistances		
5 V to xVCC	90	mΩ
3.3 V to xVCC	90	mΩ
5 V to VPP	6	Ω
3.3 V to xVPP	6	Ω
12 V to xVPP	1	Ω
Leakage Currents		
IPP High-Impedance	10	µA
ICC High-Impedance	10	µA
Short CKT Output Current		
IO (xVCC)	2.2	A
IO (xVPP)	400	mA

■ **Check Box 09** for samples and datasheet.



High-speed 132 MBps PCI-to-PCI bridge



The PCI2030 PCI-to-PCI bridge device allows developers to take advantage of 132 megabytes per second (MB/s), maximum PCI bus performance and easily incorporate advanced capabilities to desktop personal computers, workstations, network servers, add-in cards and notebook docking stations. The PCI2030 device will interface two 32-bit PCI (Peripheral Component Interconnect) buses, providing functionality not found in systems with only one bus.

The PCI bus is typically limited to only four slots for add-in cards. In systems that require more than four PCI slots, one or more additional PCI buses are required. PCI-to-PCI bridges provide the interface between these extra buses. PCI-to-PCI bridges are also implemented on some multifunction add-in cards to buffer the electrical loading that the add-in card presents to the PCI bus.

The PCI2030 is compatible with either 3.3 V or 5 V PCI signaling environments. It implements the same high-performance pipelined FIFO architecture that has been used successfully in TI's other PCI interface chips. For portable PC users, this means increased bandwidth to simultaneously run multiple applications, such as high-speed network and video processing.

Besides complying fully with the current versions of the PCI specification (Version 2.1) and the PCI-to-PCI bridge specification (1.0), the PCI2030 offers advanced features to meet future versions of the PCI-to-PCI bridge specifications. One such feature simplifies the configuration of complex PCI-based systems by supporting both logical and physical location addresses.

The PCI2030 supports six programmable, low-skew buffered clocks for up to six secondary devices. The low skew of clock outputs give designers significant propagation skew margin. Unused clock outputs can be individually disabled to reduce power consumption.

The PCI2030 is the industry's only PCI bridge device that helps incorporate device masks and device type registers, which can be used to help designers meet the requirements of Microsoft's™ PC '97 specification for subsystem and vendor identification information. This eliminates the need to implement EEPROM memory for each device on an add-in card. The PCI2030 gives systems designers greater precision in their I/O and memory addressing schemes by providing two additional decode windows.

The PCI2030 is available in 176-pin TQFP packaging.

■ **Check Box 10** for a datasheet.

Product Features

- 132 Mbytes/sec burst performance
- Serial EEPROM interface
- Subtractive decode support
- Chasis Numbering/Slot Numbering
- Six low skew clock outputs

Suggested resale price

Quoted per device in quantities of 1,000

PCI2030PGF: $14.50

RS-485 transceiver with integrated protection

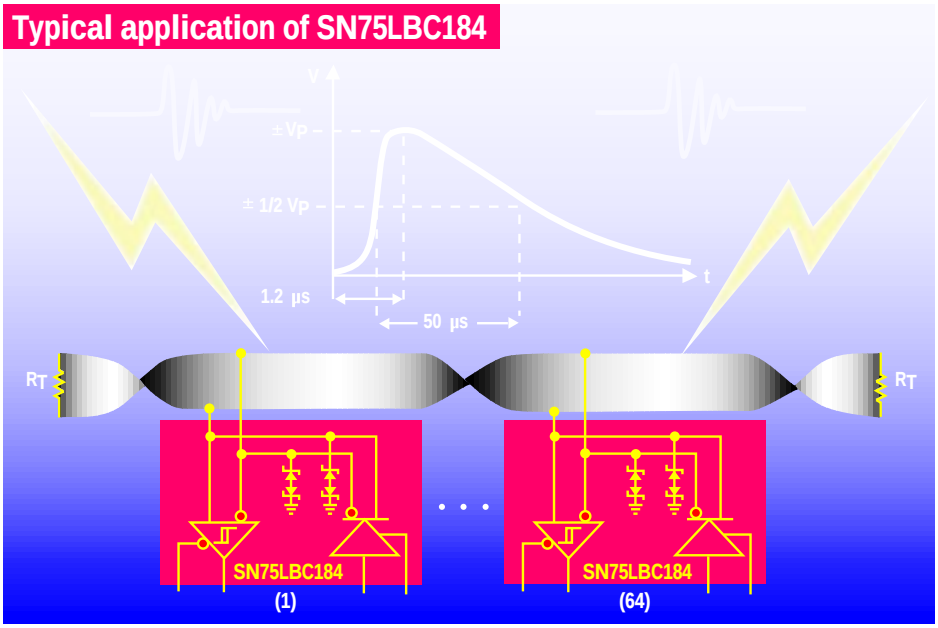
Product Features

- Integrated transient voltage protection
- Circuit damage protection of 400 W peak
- 250 Kbps throughput in electrically noisy environments
- Characterized for operation from 0°C to 70°C (SN75LBC184), –40°C to 85°C (SN65LBC184)

Suggested resale price

Quoted per device in quantities of 1,000

SN75LBC184D/P: $2.44



The SN75LBC184 is the industry's first '176 standard footprint RS-485 differential transceiver to offer integrated transient voltage protection up to 400W peak. The SN75LBC184 provides significant protection from large overvoltage transients on the bus pins which can be caused by secondary effects of a lightning strike or power system switching disturbances.

These devices are well-suited for electrically noisy environments requiring large overvoltage and common mode swing protection. The SN75LBC184 and SN65LBC184 provide substantial benefits for improved reliability and enhanced system performance resulting in total system cost savings.

- **Transient voltage suppression –** protection from large noise transients to reduce down time
- **Integrated solution –** on-chip to minimize cost and printed board-space requirement
- **Controlled driver slew rates –** for reduced EMI and improved data transmission at 250 Kbps over longer unterminated cable runs and stub lengths
- **Half unit load –** for up to 64 similar devices connected on a bus
- **Other features –** open-circuit fail safe, thermal shutdown, power up/down glitch-free, and hysteresis
- **Compatibility –** drop-in replacement of current '176 designs and meet or exceed EIA RS-485 and ISO/IEC 8482:1993(E) standards.

The SN75LBC184 is a cost-effective, footprint compatible, device delivering a high level of bus protection without the need of external discrete clamping diodes and costly multi-chip modules.

These devices are available in 8-pin DIP and SOIC.

■ **Check Box 11** for a datasheet.

Typical applications

- ▼ **Programmable logic controllers**
- ▼ **Industrial PCs**
- ▼ **Single-board computers**
- ▼ **Industrial LAN**
- ▼ **Automated test equipment**
- ▼ **Telecommunications (DTE/DCE)**
- ▼ **Point-of-sale**
- ▼ **Alarm systems**
- ▼ **Data monitoring systems**

New amplifiers data book now available

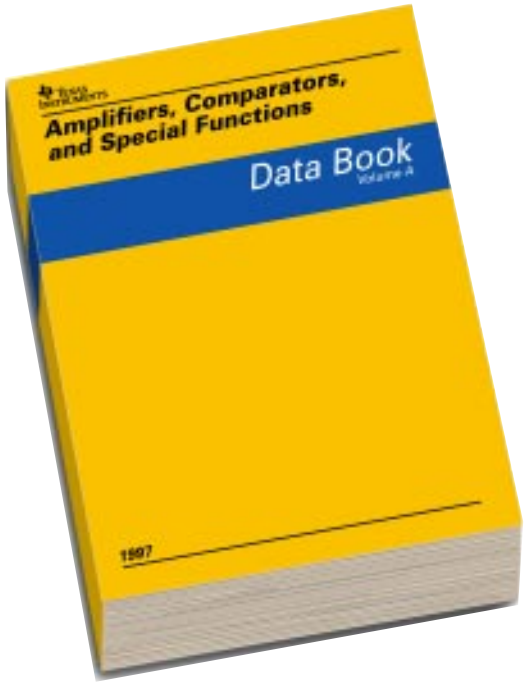
Texas Instruments has recently published a new 2-volume set of its “Amplifiers, Comparators and Special Functions” databook. These books contain all the current data sheets for its full line of operational amplifiers, audio power amplifiers, comparators and associated devices.

Of major interest will be sections containing data on:

- New line of Audio power amplifiers (TPAxxx) – this new product line features the most up-to-date power amplifiers for stereo and mono applications
- New rail-to-rail op amps – this includes the newest products in our low-noise CMOS rail-to-rail output devices
- SOT-23 – we show a listing of our devices, both amplifiers and comparators, which are now available in the ultra-small SOT-23 package
- Precision self-calibrating (Self-Cal™) amplifier products
- Our new family of ultra-fast, low-power comparators
- There is an expanded listing of product characterization over supply voltage and temperature ranges
- There is a complete mechanical applications section in each volume

To order, see the check box information below.

■ **Check Box 12** for a copy of the data book.



E V M K I T S

Each EVM kit contains a fully-assembled evaluation board, data sheet, and a User's Guide for the evaluation board. Some kits also include applications notes, plus necessary software, cables and connectors.

To order any of the EVM kits listed, please call our toll-free order desk number 1-800-477-8924 x 5800.

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