High-Performance Analog Overview

Amplifiers and Linear
Clocks and Timers
Data Converters
Interface
Power Management
RF/IF & ZigBee® Solutions
At Texas Instruments (TI) we know that we only succeed when we help you succeed. That’s why we provide High-Performance Analog>>Your Way™.

Now more than ever, TI gives you high-performance analog products, application knowledge and technical support to help you win in the marketplace.

**Advanced products** that meet your design’s performance requirements >> From amplifiers and data converters to power management, interface and wireless solutions, TI has the high-performance analog ICs to meet your needs.

**Application knowledge** to make your design process easier >> Because TI develops analog and digital ICs across the board and for a wide range of applications, we have complete systems knowledge and can assist you in the overall design process.

**Local analog technical support** for your design >> TI’s worldwide analog support infrastructure includes the most extensive network of analog application engineers, providing support locally where you need it.

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**Analog Applications Journal**

Make getting technical application information quicker and easier by signing up to receive your quarterly Analog Applications Journal. This online journal is a collection of application articles provided to make your design process easier. Topics include data acquisition, power management, amplifiers, interface and low-power RF.

www.ti.com/aa

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**High-Performance Analog Connection** Your monthly update of new Analog products from TI

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**Analog Connection eNewsletter**

Need more information on analog products? Subscribe now to the Analog Connection eNewsletter.

Receive up-to-date information on TI’s analog products that include amplifiers, power management, data converters, interface, clocks and low-power RF solutions. This monthly eNewsletter will keep you informed of new product offerings, pricing and links to other areas of TI. Sign up now at:

www.ti.com/analogconnection
TI offers a comprehensive high-performance analog portfolio from amplifiers and data converters to power management and interface. Whether you need faster speed, higher precision, lower power or smaller size, TI has analog ICs to differentiate your design. That’s **High-Performance Analog>>> Your Way™**.

**Featured High-Performance Analog Products from TI**

- **ADS5281**: Low-Power, 8-Channel, 12-Bit, 50-MSPS ADC with Serialized LVDS Interface
- **TAS5706**: 20-W Stereo Digital Audio Power Amplifier with EQ and DRC
- **AFE5805**: Fully-Integrated, 8-Ch Analog Front-End for Ultrasound, 0.85nV/√Hz, 12-Bit, 122 mW
- **CC2480**: Z-Accel™ 2.4-GHz ZigBee® Processor
- **TPS2358**: Dual-Slot, ATCA AdvancedMC™ Controller
- **HVS882**: 8-Channel, Wide 10 to 34-V Digital-Input Serializer for Industrial Digital Inputs
- **INA333**: MicroPower (50μA), Zero-Drift, Rail-to-Rail Out Instrumentation Amplifier
- **TPS62601**: 6-MHz, 500-mA Buck DC/DC Converter with <13mm² Total Solution Size
- **DAC9881**: Highest Accuracy DAC, 18-Bit Monotonic Performance
Signal Chain

Power Management

Voltage References

Op Amps
Video Op Amps
Comparators
Voltage-Controlled Gain Amps
Audio Amps
Logarithmic Amps
Integrating Amps

Amp

ADC

Processor

DAC

Amp

Difference Amps
Current Shunt Monitors
Instrumentation Amps
Digitally Programmable Gain Amps

ΔΣ

Microcontrollers

C6000™, C5000™

R2R & String

Current Steering

Power

Power Amps
Buffers

High Speed

Sensor Conditioners
4-20mA Transmitters

SAR

Clocks & Timers

C2000™
MSP430
MSC12xx

CODECs

Voice and Audio

Temperature Sensors

PWM Driver

Interface

LVDS/MLVDS
RS-485/422
CAN
Serial Gigabit Transceiver
USB
Low-Power RF
PCI
1394
UARTs
GTLP/VME
Power Management

Portable Power Solutions

- Step-Up DC/DC Converters
- Inductorless DC/DC Regulators (Charge Pumps)
- Battery Management
- Lithium-Ion Protection and Authentication for Batteries
- Battery Charge Management
- Battery Management
- Rechargeable Battery
- DC Inputs
- USB
- Audio Supply
- Noise-Sensitive RF Circuity
- Battery Charge Management
- Battery Management
- DSP µC
- Supervisory Circuits (Voltage Supervisors)
- Linear Regulators
- Step-Down DC/DC Converters
- Application-Specific Multi-Output Solutions
- System Voltages
- Photo Flash
- White LED Drivers
- LCD Color Display
- Memory

Line Power Solutions

- Power Factor Correction or AC/DC
- PWM Controllers
- MOSFET Drivers
- Hot Swap and Power-over-Ethernet
- Non-Isolated Plug-In Modules
- Power Switches USB ExpressCard™, PCMCIA
- Isolated Plug-In Modules
- UCD9080 8-Channel Power-Supply Sequencer
- DC/DC Controller
- Supply Voltage Supervisor
- Hard Drive
- Memory
- DSP or Microcontrollers
- USB Peripheral
- System Voltage
# Analog eLab Design Center

**Learn**
- Learn
  - Online Training
  - Analog eLab™ Videocasts
  - All Webcasts
  - Seminars
  - Conferences
  - TI Developer Conference
  - 1-Day Workshops
  - Multi-Day Workshops
  - Application Notes/Technical Documents
  - Company Authored Articles

**Select**
- Select
  - Clocks and Timing Quick Search
  - Interface Quick Search
  - Power Management Quick Search
    - Power Quick Search
    - Discover How T2 Modules Can Reduce Your Output Capacitance
  - Battery Chargers Quick Search
  - Data Converters Quick Search
    - Analog to Digital Converters
    - Digital to Analog Converters
  - Audio Quick Search
  - RF/IF Component Quick Search
  - Translation Device Selection Tool
  - Selection and Solution Guides
  - End Equipment Solutions
  - Parametric Search
  - Competitor Cross-Reference Search

**Design**
- Design
  - TI Pro Series
    - SwitcherPro™ Design Software
      -- Use Online Now
      -- Learn How to Create a Design with SwitcherPro
    - ADCPro™ Evaluation Software
    - MDACBufferPro™ Design Software
    - FilterPro™ Design Software
  - Reference Designs
  - Calculators and Other Utilities
  - Hardware Design Tools and Software
  - Quality, Reliability & Lead (Pb)-Free
  - RoHS Content & Delivery Schedule
  - Packaging Information

**Simulate**
- Simulate
  - TINA-TI™ Powerful and Easy-to-Use Circuit Simulation Program Based on a SPICE Engine
  - Complete SPICE Model Library
  - IBIS and BSDL Model Libraries

**Sample**
- Sample
  - Pricing and Availability
  - Request Samples
  - TI eStore
    - Browse Evaluation Modules
  - TI Worldwide Sales and Support Offices
  - Distributors
  - Sales Representatives

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Online training, Analog eLab webcasts, seminars, conferences and workshops where TI experts help you to solve real-world analog problems.

Sophisticated search tools provide guided approaches for product selection with digital parametric searches to narrow results.

Reference designs, calculation utilities, and power design tools, including TI Pro Series web-based software tools.

Fast, web-based power simulations, with a large selection of empirically validated TI models, via the powerful, user-friendly TINA-TI schematic editor and SPICE simulator for mixed-signal circuit analysis (DC, AC, noise, transient and Fourier).

Order samples and evaluation modules.
TI makes your design easier with:

- End-equipment solution guides, system block diagrams, application notes, design software, simulation tools and evaluation modules
- Application engineering support
- Analog, embedded processing and logic ICs for your design needs throughout the signal chain

For system block diagrams, application notes and more recommended products, go to [www.ti.com/analog](http://www.ti.com/analog) and select your application area of interest.
Frequently asked questions

• How can I get updates from TI?
The monthly Analog Connection e-newsletter keeps you up to date on new analog products from TI. Register for the e-newsletter and read previous issues at:
www.ti.com/analogenewsletter

Additionally, register for a my.TI account to receive updates on new products and training opportunities that are relevant to your product and application areas.
http://myti.com

• See the Product Information Center contact information below:
Product Information Center contact information. Also, go to www.ti.com/analog for a list of TI and distributor sales offices.

• How can I order free samples?
Samples are available via the product folders on www.ti.com. Just click on the "order free samples" link, and follow the instructions.

• Where can I find a current listing of TI literature?
A complete listing of TI product selection guides, end-equipment solution guides and other literature is available at:
www.ti.com/analogliterature

• What are some of the design tools available to help me with my design?
TI has a variety of selection, design and simulation software, along with application notes, reference designs and other tools to help ease your design process and speed your time to market. Just visit our Analog eLab™ Design Center at:
www.ti.com/analogelab