

# Analog design journal article archive

Title	Author(s)	Issue Date
Isolated voltage sensing in AC motor drives	Alex Smith, Roland Bucksch and Martin Staebler	2022 Q2
Improve power density with a baby boost converter in a PFC circuit	Sheng-Yang Yu, Benjamin Genereaux and LihChung Yin	2022 Q2
Using Hall-effect sensors for contactless linear movement sensing	Mekre Mesganaw	2022 Q2
Protect against high-current faults using hybrid hot-swap architecture	Rakesh Panguloori and Durga Praveen G	2022 Q1
How to ensure the stability and performance of an active EMI filter	Yongbin Chu and Yogesh Ramadass	2022 Q1
How to implement an isolated USB 2.0 high-speed, Type-C® DRP	Anant Kamath and Manasa Gadiyar	2022 Q1
Selecting a multichannel, ultra-low current measurement IC	Eduardo Bartolome, Shriram Devi and Nagesh Surendranath	2022 Q1
Using isolated comparators for faulted detection in electric motor drives	Krunal Maniar	2022 Q1
Going TVS-less in reverse-battery protection design	Abhijeet Godbole and Dilip Jain	2021 Q4
Ultra-fast USB battery charging with power dense switched-cap converters	Jing Ye and Xiaohu Qin	2021 Q4
Designing with small DC/DC converters: HotRod™ QFN vs. enhanced HotRod™ QFN packaging	Rich Nowakowski and Simon Zhao	2021 Q4
Optimizing input and output transient settling times in amplifier circuits	Timothy Claycomb	2021 Q4
Active EMI filters to reduce size and cost of EMI filters in automotive systems	Yongbin Chu and Yogesh Ramadass	2021 Q3
How to prevent transformer saturation in push-pull converters	Anant Kamath	2021 Q3
Using voltage supervisors for rail monitoring in functional safety applications	Mathew Jacob	2021 Q3
Clutter-free power supplies for RF converters in radar applications (Part 2)	Rob Reeder and Neeraj Gill	2021 Q3
The pros and cons of spread-spectrum implementation methods in buck regulators	Sam Jaffe	2021 Q2
Design considerations for isolated current sensing	Alex Smith	2021 Q2
Clutter-free power supplies for RF converters in radar applications (Part 1)	Rob Reeder, Neeraj Gill	2021 Q2
Current sensing in high-power USB Type-C® applications	Damkroger, Ben	2021 1Q
Low-noise electrification using 48-V automotive systems	Beck, Marshall	2021 1Q
Maximize power density with three-level buck-switching chargers	Falin, Jeff	2021 1Q
High-power, low-cost, discrete linear pre-regulator for automotive rear lights	Helmlinger, Michael; Zamora, Marco; Mellin, Olivier	2021 1Q
How to simplify AFE filtering via high-speed ADCs with internal digital filters	Neu, Thomas	2020 4Q
Selecting output caps to optimize ripple and stability in PSR flyback converters	Hegarty, Timothy	2020 4Q
Wide-bandgap semiconductors: Performance and benefits of GaN versus SiC	Beheshti, Masoud	2020 4Q
Automotive EMC-compliant reverse-battery protection with ideal-diode controllers	Jain, Dilip; Godbole, Abhijeet	2020 4Q
Multibattery management in medical ultrasound systems	Pithadia, Sanjay; Saxena, Neeraj	2020 4Q
Transformer structures that achieve low EMI with low- and high-side rectifiers	Keogh, Bernard; Wang, Max (Jun)	2020 4Q
Comparing two-wire microphone circuits for automotive applications	Semig, Peter; Manandhar, Sanjeev	2020 3Q
Designing high-performance PWM DACs for field transmitters	Noeman, Ahmed	2020 3Q
Selecting capacitors to minimize distortion in audio applications	Kaye, Zak	2020 3Q
Design considerations for USB Type-C™ Power Delivery AC adapters	Broiles, Jim	2020 3Q

Title	Author(s)	Issue Date
Breaking down accuracy errors in precision high-speed signal chain designs	Reeder, Rob	2020 3Q
Why use PSR-flyback isolated converters in dual-battery mHEV systems	Hegarty, Timothy	2020 2Q
Enabling precision delta-sigma ADCs in functional safety applications	Lotzenburger, Lars	2020 2Q
Thermal design concerns for buck converters in high-power automotive applications	Beck, Marshall	2020 2Q
How to improve PFC light-load efficiency	Sun, Bosheng	2020 1Q
Error analysis for ratiometric and absolute methods of temperature sensing	Ebrahimi-Darkhaneh, Hadi	2020 1Q
Designing PoE switching supplies for input power sharing and with power limiting	Picard, Jean; Fernandez, Darwin	2020 1Q
Advanced EMI mitigation techniques for automotive converters	Tripathi, Ambreesh; Ramadass, Yogesh	2020 1Q
Push-pull converter simplifies isolated power supply in automotive HEV/EV system	Kamath, Anant	2020 1Q
How an auxless PSR flyback converter increases PLC reliability and density	Hegarty, Timothy	2019 4Q
Implementing STO functionality with diagnostic and monitoring for industrial motor drives	Bhatnagar, Aishwarya	2019 4Q
Challenges and solutions for PoE systems in Ethernet switches	Xu, Penny	2019 4Q
EMI filter components and their nonidealities for automotive DC/DC regulators	Beck, Marshall	2019 4Q
A small-footprint PoE solution for machine-vision cameras and sensors	Oberhuber, Ralph	2019 4Q
Implementing a small-footprint power over Ethernet solution for machine vision cameras and sensors	Graf, Steffen	2019 4Q
Methods of output-voltage adjustment for DC/DC converters	Chris Glaser	2019 3Q
Maximizing the dynamic range of analog fronts ends having a transimpedance amp	Samir Cherian	2019 3Q
Precision signal-conditioning solutions for motor-control position feedback	Ralph Oberhuber	2019 3Q
Measurement error caused by self-heating in NTC and PTC thermistors	Hadi Ebrahimi-Darkhaneh	2019 3Q
Select inductors for buck converters to get optimum efficiency and reliability	Mathew Jacob	2019 3Q
Selecting output caps for buck converters based on Zout and load slew rates	Cheng, Brian; Neidorff, Bob	2019 2Q
Easily improve the performance of analog circuits with decompensated amplifiers	Freet, Jacob	2019 2Q
High-side current sources for industrial applications	Noeman, Ahmed	2019 2Q
A comparison of battery-charger topologies for portable applications	Aguilar, Alvaro	2019 2Q
How to debug I2C through waveform analysis	Nguyen, Duy	2019 1Q
Maximizing power density and thermal performance in power- module designs	Frazor, Josh; Jacob, Mathew	2019 1Q
Selecting amplifiers for shunt-based current sensing in 3- phase motor drives	Staebler, Martin	2019 1Q
Improving battery life in wearable patient monitors and medical patches	Pithadia, Sanjay	2019 1Q
The impact of a balun on the second harmonic of an RF DAC	Li, Fanlong	2019 1Q
Multimode control for a four-switch buck-boost converter	Sun, Bosheng	2018 4Q
How to implement wire-break detection and diagnostics in isolated digital inputs	Anant, Kamath S	2018 4Q
It's about time: How TDR enables predictive maintenance for industrial Ethernet	Matthieu Chevrier, Mattieu; Mauer, Thomas	2018 4Q
How to use power scaling to maximize power savings in a SAR ADC system	Sosa, Cynthia	2018 4Q
Using a high-frequency switching regulator without a linear regulator to power a data-converter system	Rich Nowakowski, Rich; Abedin, Sarmad	2018 4Q
Stretching a single-phase design with a buck controller to support high currents	Jacob, Mathew	2018 4Q
Does adaptive pre-boost control in automotive-lighting applications boost efficiency?	Helmlinger, Michael; Vemuri, Arun	2018 4Q
Op amps with complementary-pair input stages: What are the design trade-offs?	Semig, Peter; Claycomb, Timothy	2018 3Q
Understanding 100% mode in low-power DC/DC converters	Glaser, Chris	2018 3Q

Title	Author(s)	Issue Date
How to parallel two DC/DC converters with digital controllers	Sun, Bosheng	2018 3Q
Designing a front-end interface for vibration sensors that monitor machine performance	Noeman, Ahmed	2018 3Q
A comparative analysis of bridgeless boost PFC circuit	Chellappan, Salil	2018 3Q
Analyzing the impact of clock noise on an RF sampling DAC system	Li, Lanlong	2018 2Q
How to reduce radiated emissions of digital isolators for systems with RF modules	Rao, Koteswar	2018 2Q
The architecture of a switched-capacitor charger with fast charging and high efficiency	Schnier, Steven; Cui, Yutian	2018 2Q
Second-sourcing options for small-package amplifiers	Claycomb, Tim	2018 2Q
Common mistakes made in controller designs for power converters	Jacob, Mathew	2018 1Q
Design tips for linear and switched-mode power supplies	Long, Billy	2018 1Q
Designing for high common-mode rejection in balanced audio inputs	Caldwell, John	2018 1Q
RF-sampling tool kit for system designers	Neu, Tommy	2018 1Q
Understanding the thermal-resistance specification of DC/DC converters with integrated power MOSFETs	Miller, Peter; Nowakowski, Rich	2018 1Q
Achieving a clean startup by using a DC/DC converter's precise enable pin	Chris Glaser	2017 4Q
Using interleaving with SAR ADCs for lower power, smaller size and lower cost	Liska, Peggy	2017 4Q
Comparing internally-compensated advanced current mode (A CM) with D-CAP3™ control	Nowakowski, Rich; Manack, Ryan	2017 4Q
Using noise-gain shaping to stabilize fully-differential amplifiers	Freet, Jacob	2017 4Q
Managing pixel-clock input jitter for more robust serial-link communications	Syu, Jason	2017 4Q
Reducing noise on the output of a switching regulator	Hubbard, Dylan	2017 3Q
Improving the thermal performance of a MicroSiPTM power module	Glaser, Chris; Horton, Sandra	2017 3Q
How to use isolation to improve ESD, EFT and surge immunity in industrial systems	Kamath, Anant	2017 3Q
What you need to know about high-speed cables for FPD-Link III SerDes	Chin, T.K.	2017 3Q
Designing high-efficiency isolated bidirectional power converter for a UPS	Sivakumar, Ramkumar	2017 2Q
Control challenges in a totem pole PFC	Sun, Bosheng	2017 2Q
An EMC/EMI system-design and testing methodology for FPD-Link III SerDes	Verma, Ankur	2017 2Q
Designing a modern power supply for RF sampling converters	Neu, Thomas	2017 2Q
Design and analysis of a time-gain control (TGC) circuit to drive the control voltage for TI's ultrasound AFE	Udupa, Anand; Amjhera Wala, Shabbir; Nagabhushana, Karthik; Pithadia, Sanjay	2017 1Q
How to design remotely powered cameras for automotive applications	Chin, T.K.	2017 1Q
Automating circuit designs for photodiode amplifiers	Baker, Bonnie	2017 1Q
Signal-to-noise ratio of an LVDT amplitude demodulator	Vemuri, Arun; Torres, Hector	2017 1Q
Clocking the RF ADC: Should you worry about jitter or phase noise?	Neu, Thomas	2017 1Q
How to build a LIDAR system with a time-to-digital converter	Chevrier, Matthieu; Campanella, Giovanni	2017 1Q
Designing the front-end DC/DC conversion stage to withstand automotive transients	Choudhary, Vijay	2016 4Q
System modeling in MATLAB Simulink® for PLL-based resolver-to-digital converters	Verma, Ankur	2016 4Q
Testing tips for applying external power to supply outputs without an input voltage	Glaser, Chris	2016 4Q
Measuring the linear operating region of instrumentation amplifiers	Semig, Pete; Wells, Collin	2016 4Q
Saving board space with a low-profile series-capacitor buck converter	Shenoy, Pradeep	2016 4Q
Motor-control considerations for electronic speed control in drones	Mogensen, Kristen	2016 4Q
Low-EMI buck converter powers a multivariable sensor transmitter with BLE connectivity	Hegarty, Tim	2016 3Q

Title	Author(s)	Issue Date
Modeling the output impedance of an op amp for stability analysis	Wells, Collin; Oljaca, Miro	2016 3Q
Green box testing: A method for optimizing high-speed serial links	Morrison, Casey	2016 3Q
How unmatched impedance at the clock input of an RF ADC affects SNR and jitter	Tommy Neu	2016 3Q
Ratiometric measurement in the context of LVDT-sensor signal conditioning	Vemuri, Arun T; Sullivan, Matthew	2016 3Q
How to compare your circuit requirements to active-filter approximations	Baker, Baker	2016 3Q
Reduce buck converter EMI and voltage stress by minimizing inductive parasitics	Hegarty, Timothy	2016 3Q
Linear operating region of two-op-amp instrumentation amplifiers with gain stages	Semig, Pete	2016 2Q
Adjusting the soft-start time of an integrated power module	Glaser, Chris	2016 2Q
How to select input capacitors for a buck converter	Xie, Manjing	2016 2Q
Low-IQ synchronous buck converter enables intelligent field- sensor applications	Hegarty, Timothy	2016 2Q
The intricacies of signal integrity in high-speed communications	Zarr, Rick	2016 2Q
Increase power factor by digitally compensating PFC EMI- capacitor reactive current	Sun, Bosheng	2016 2Q
Battery-charging considerations for low-power applications	Allag, Tahar	2016 1Q
Using op amps to reduce near-field EMI on PCBs	Toporski, Todd	2016 1Q
Design considerations for resolver-to-digital converters in electric vehicles	Ankur Verma, Ankur; Chellamuthu, Anand	2016 1Q
Automating amplifier circuit design	Baker, Bonnie	2016 1Q
JESD204B over optical fiber enables new architecture for phased-array radar	Guibord, Matt	2016 1Q
MOSFET power losses and how they affect power-supply efficiency	Lakkas, George	2016 1Q
Agency requirements for stand-by power consumption with offline and PoL converters for consumer electronic applications	Nowakowski, Rich; King, Brian	2015 4Q
Understanding frequency variation in the DCS-Control™ topology	Chris Glaser	2015 4Q
VCM vs. VOUT plots for instrumentation amplifiers with two op amps	Pete Semig	2015 4Q
Common-mode transient immunity for isolated gate drivers	Shailendra Baranwal	2015 4Q
Pushing the envelope with high-performance digital-isolation technology	Anant Kamath	2015 4Q
How to reduce current spikes at AC zero-crossing for totem- pole PFC	Bosheng Sun	2015 4Q
Faster, cooler charging with dual chargers	Jeff Falin	2015 4Q
Ten tips for successfully designing with automotive EMC/EMI requirements	Mark Sauerwald	2015 3Q
Transient-testing platforms and automation techniques for LDOs and buck regulators	Kern Wong	2015 3Q
Debugging power-supply startup issues	Robert Taylor and Ryan Manack	2015 3Q
Ceramic or electrolytic output capacitors in DC/DC converters—Why not both?	Michael Score	2015 3Q
Design tips for a resistive-bridge pressure sensor in industrial process-control systems	Peter Semig, Collin Wells, Miro Oljaca	2015 3Q
Fast input-voltage transient response with digitally-controlled isolated DC/DC converters	Frank Tang	2015 2Q
Two-step calibration of sensor signal conditioners	Arun T Vemuri and Javier Valle-Mayorga	2015 2Q
Designing an anti-aliasing filter for ADCs in the frequency doma	Bonnie Baker	2015 2Q
Tips and tricks for high-speed, high-voltage measurement	Grant Smith	2015 2Q
JESD204B multi-device synchronization: Breaking down the requirements	Matt Guibord	2015 2Q
Advanced linear equalization in multi-gigabit systems	Lee Sledjeski	2015 2Q
Stabilizing difference amplifiers for headphone applications	John Caldwell	2015 1Q
Reducing distortion from CMOS analog switches	John Caldwell	2015 1Q
Bandstop filters and the Bainter topology	Bonnie Baker	2015 1Q

Title	Author(s)	Issue Date
Five steps to a great step-down converter PCB layout	Chris Glaser	2015 1Q
Fly-Buck™ converter provides EMC and isolation in PLC applications	Timothy Hegarty	2015 1Q
Optimal operating point of an LED	Donald Schelle	2015 1Q
Stacked-FETs enable high-efficiency, high-density solutions	Tiger Zhou	2015 1Q
Distortion and source impedance in JFET-input op amps	Caldwell, John	2014 4Q
SPICE models for Precision DACs	Prakash, Rahul	2014 4Q
Isolated sensing systems with low power consumption	Duena, Jose; Hendrick, Tom	2014 4Q
Power-supply sequencing for FPGAs	Sirhan, Sami; Gupta, Sureena	2014 4Q
Design a transient-mode bridgeless PFC with a standard PFC controller	Yu, Sheng-Yang	2014 4Q
How to set up a knock-sensor signal-conditioning system	Tran, Yvette	2014 3Q
FPD-Link III – doing more with less	Sauerwald, Mark	2014 3Q
Dealing with nonlinearity in LVDT position sensors	Vemuri, Arun T	2014 3Q
Decrease testing time for quality control of op amp noise	Tabris, Mohamed; Barthel, Richard	2014 3Q
Design tips for an efficient non-inverting buck-boost converter	Fan, Haifeng	2014 3Q
AC cycle skipping improves PFC light-load efficiency	Sun, Bosheng	2014 3Q
Industrial-strength design considerations to prevent thermal and EMI damage	Zarr, Rick	2014 2Q
Battery-charging considerations for high-power portable devices	Allag, Tahar; Liu, Wenjia	2014 2Q
Systems telemetry: What, why and how?	Gupta, Sureena; Sirhan, Sami	2014 2Q
Adapting Qi-compliant wireless-power solutions to low-power wearable products	Johns, Bill; Sengupta, Upal; Siddabattula, Kalyan	2014 2Q
Extract maximum power from the supply when charging a battery	Falin, Jeff; Rushil, KK; Ye, Jing	2014 2Q
Closed-loop motor control: An Introduction to rotary resolvers	Byrd, Dwight	2014 1Q
Low-cost flyback solutions for 10-mW standby power	Lokhandwala, Adnaan	2014 1Q
Split-rail approaches extend boost-converter input-voltage ranges	Fan, Haifeng	2014 1Q
Accurately measuring efficiency of ultralow-IQ devices	Glaser, Chris	2014 1Q
New-generation ESD-protection devices need no VCC connection	Liang, Roger	2014 1Q
CAN bus, Ethernet, or FPD-Link: Which is best for automotive communications?	Sauerwald, Mark	2014 1Q
When is the JESD204B interface the right choice?	Gupta, Sureena	2014 1Q
Low-cost solution for measuring input power and RMS current	Sun, Bosheng	2013 4Q
Dynamic power management for faster, more efficient battery charging	Wong, Samuel	2013 4Q
Techniques for accurate PSRR measurements	Rice, John; Sandler, Steve (Picotest)	2013 4Q
Correcting cross-wire faults in modern e-metering networks	Kugelstadt, Thomas	2013 4Q
Designing active analog filters in minutes	Baker, Bonnie C.	2013 4Q
Driving solenoid coils efficiently in switchgear applications	Pithadia, Sanjay	2013 4Q
High-efficiency, low-ripple DCS-Control™ offers seamless PWM/power-save transitions	Glaser, Chris	2013 3Q
Linear versus switching regulators in industrial applications with a 24-V bus	Nowakowski, Richard; Taylor, Robert	2013 3Q
Basics of debugging the controller area network (CAN) physical layer	Monroe, Scott	2013 3Q
Exploring anti-aliasing filters in signal conditioners for mixed- signal, multimodal sensory processing	Vemuri, Arun T.	2013 3Q
Improved LiFePO4 cell balancing in battery-backup systems with an Impedance Track™ fuel gauge	Keller, Keith	2013 3Q
Grounding in mixed-signal systems demystified, Part 2	Pithadia, Sanjay; More, Shridhar	2013 2Q
Introduction to capacitive touch-screen controllers	Siegel, Eric	2013 2Q
RS-485 failsafe biasing: Old versus new transceivers	Kugelstadt, Thomas	2013 2Q
Synchronous rectification boosts efficiency by reducing power loss	Fagnani, Anthony	2013 2Q

Title	Author(s)	Issue Date
Designing a negative boost converter from a standard positive buck converter	Pieper, Mark	2013 2Q
Digital current balancing for an interleaved boost PFC	Sun, Bosheng	2013 2Q
Grounding in mixed-signal systems demystified, Part 1	Pithadia, Sanjay; More, Shridhar	2013 1Q
Add a digitally controlled PGA with noise filter to an ADC	Gossner, Kai	2013 1Q
Design of a 60-A interleaved active-clamp forward converter	King, Brian	2013 1Q
Power MOSFET failures in mobile PMUs: Causes and design precautions	Wong, Kern	2013 1Q
35-V single-channel gate drivers for IGBT and MOSFET renewable energy applications	Stevens, John	2013 1Q
How to pick a linear regulator for noise-sensitive applications	Gupta, Sureena	2013 1Q
Harnessing wasted energy in 4- to 20-mA current-loop systems	Glaser, Chris	2012 4Q
WEBENCH® tools and the photodetector's stability	Baker, Bonnie C.	2012 4Q
LDO noise examined in detail	Nogowa, Masashi	2012 4Q
Design considerations for system-level ESD circuit protection	Liang, Roger	2012 4Q
Simple open-circuit protection for boost converters in LED driver applications	Caldwell, John; Amidon, Gregory	2012 4Q
Using a fixed threshold in ultrasonic distance-ranging automotive applications	Vemuri, Arun T.	2012 3Q
Data-rate independent half-duplex repeater design for RS-485	Kugelstadt, Thomas	2012 3Q
Easy solar-panel maximum-power-point tracking for pulsed- load applications	Glaser, Chris	2012 3Q
High-definition haptics: Feel the difference!	Rao, ShreHarsha	2012 3Q
Applying acceleration and deceleration profiles to bipolar stepper motors	Quinones, Jose	2012 3Q
Controlling switch-node ringing in synchronous buck converters	Taylor, Robert; Manack, Ryan	2012 2Q
A solar-powered buck/boost battery charger	Falin, Jeff; Li, Wang	2012 2Q
Remote sensing for power supplies	Zhou, Tiger	2012 2Q
Design considerations for a resistive feedback divider in a DC/DC converter	Fernandez, Darwin	2012 2Q
Industrial flow meters/flow transmitters	Kalyanaraman, Deepa	2012 2Q
Source resistance and noise considerations in amplifiers	Vega, Jorge	2012 2Q
Turbo-boost charger supports CPU turbo mode	Qian, Jinrong; Chen, Suheng	2012 1Q
Benefits of a multiphase buck converter	David, Baba	2012 1Q
Downslope compensation for buck converters when the duty cycle exceeds 50%	John, Bottrill	2012 1Q
High-efficiency AC adapters for USB charging	Lokhandwala, Adnaan	2012 1Q
Measuring op-amp settling time by using sample-and-hold technique	Vega, Jorge; Ramus, Xavier	2012 1Q
Solar charging solution delivers narrow voltage DC/DC system bus for multicell battery applications	Li, Wang; Day, Michael	2011 4Q
Solar lantern with dimming achieves 92% efficiency	Glaser, Chris	2011 4Q
Analog linearization of resistance temperature detectors	Trump, Bruce	2011 4Q
How delta-sigma ADCs work, Part 2	Baker, Bonnie C.	2011 4Q
A boost-topology battery charger powered from a solar panel	Falin, Jeff; Li, Wang	2011 3Q
Isolated RS-485 transceivers support DMX512 stage lighting and special-effects applications	Kugelstadt, Thomas	2011 3Q
Industrial data-acquisition interfaces with digital isolators	Kugelstadt, Thomas	2011 3Q
Clock jitter analyzed in the time domain, Part 3	Neu, Thomas	2011 3Q
How delta-sigma ADCs work, Part 1	Baker, Bonnie C.	2011 3Q
Converting single-ended video to differential video in single- supply systems	Karki, James	2011 3Q
Implementation of microprocessor-controlled, wide-input- voltage, SMBus smart battery charger	Keller, Keith	2011 2Q
Benefits of a coupled-inductor SEPIC converter	John, Betten	2011 2Q
IQ: What it is, what it isn't, and how to use it	Glaser, Chris	2011 2Q
Backlighting the tablet PC	Falin, Jeff; Meng, Xianghao	2011 2Q

Title	Author(s)	Issue Date
Challenges of designing high-frequency, high-input-voltage DC/DC converters	Nowakowski, Richard; King, Brian	2011 2Q
The IBIS model, Part 3: Using IBIS models to investigate signal-integrity issues	Baker, Bonnie C.	2011 2Q
Fine tuning TI's Impedance Track™ battery fuel gauge with LiFePO4 cells in shallow-discharge applications	Keller, Keith	2011 1Q
Designing an isolated I <sup>2</sup> C Bus interface by using digital isolators	Kugelstadt, Thomas	2011 1Q
The IBIS model, Part 2: Determining the total quality of an IBIS model	Baker, Bonnie C.	2011 1Q
A low-cost, non-isolated AC/DC buck converter with no transformer	Falin, Jeff; Parks, Dave	2010 4Q
Save power with a soft Zener clamp	John, Betten	2010 4Q
Clock jitter analyzed in the time domain, Part 2	Neu, Thomas	2010 4Q
The IBIS model, Part 1: A conduit into signal-integrity analysis	Baker, Bonnie C.	2010 4Q
Interfacing high-voltage applications to low-power controllers	Kugelstadt, Thomas	2010 4Q
Coupled inductors broaden DC/DC converter usage	Falin, Jeff	2010 3Q
Computing power going "Platinum"	O'Loughlin, Michael	2010 3Q
Magnetic-field immunity of digital capacitive isolators	Kugelstadt, Thomas	2010 3Q
Clock jitter analyzed in the time domain, Part 1	Neu, Thomas	2010 3Q
Operational amplifier gain stability, Part 3: AC gain-error analysis	Oljaca, Miroslav; Surtihadi, Henry	2010 3Q
Discrete design of a low-cost isolated 3.3- to 5-V DC/DC converter	Kugelstadt, Thomas	2010 2Q
Designing DC/DC converters based on ZETA topology	Falin, Jeff	2010 2Q
How digital filters affect analog audio signal levels	Jorge, Arbona; Supriyo, Palit	2010 2Q
Precautions for connecting APA outputs to other devices	Crump, Stephen	2010 2Q
Operational amplifier gain stability, Part 2: DC gain-error analysis	Oljaca, Miroslav; Surtihadi, Henry	2010 1Q
Fuel-gauging considerations in battery backup storage systems	Karki, James	2010 1Q
Li-ion battery charger solutions for meeting JEITA compliance	Qian, Jinrong	2010 1Q
Operational amplifier gain stability, Part 1: General system analysis	Oljaca, Miroslav; Surtihadi, Henry	2010 1Q
Interfacing op amps to high-speed DACs, Part 3: Current- sourcing DACs simplified	Karki, James	2010 1Q
Signal conditioning for piezoelectric sensors	Eduardo, Bartolome	2009 4Q
Using power solutions to extend battery life in MSP430 applications	Day, Michael	2009 4Q
Efficiency of synchronous versus nonsynchronous buck converters	Nowakowski, Richard; Tang, Ning	2009 4Q
How the voltage reference affects ADC performance, Part 3	Baker, Bonnie C.; Miroslav, Oljaca	2009 4Q
Using fully differential op amps as attenuators, Part 3: Single- ended unipolar input signals	Karki, James	2009 4Q
Interfacing op amps to high-speed DACs, Part 2: Current- sourcing DACs	Karki, James	2009 3Q
Impact of sampling-clock spurs on ADC performance	Neu, Thomas	2009 3Q
How the voltage reference affects ADC performance, Part 2	Baker, Bonnie C.; Miroslav, Oljaca	2009 3Q
Using fully differential op amps as attenuators, Part 2: Single- ended bipolar input signals	Karki, James	2009 3Q
Using the infinite-gain, MFB filter topology in fully differential active filters	Kuehl, Thomas	2009 2Q
Taming linear-regulator inrush currents	Falin, Jeff	2009 2Q
Designing a linear Li-Ion battery charger with power-path control	Mauney, Charles	2009 2Q
Selecting the right charge-management solution	Masoud, Beheshti	2009 2Q
Designing with digital isolators	Kugelstadt, Thomas	2009 2Q
How the voltage reference affects ADC performance, Part 1	Baker, Bonnie C.; Miroslav, Oljaca	2009 2Q
Using fully differential op amps as attenuators, Part 1: Differential bipolar input signals	Karki, James	2009 1Q

Title	Author(s)	Issue Date
Cell balancing buys extra run time and battery life	Wen, Sihua	2009 1Q
Improving battery safety, charging, and fuel gauging in portable media applications	Qian, Jinrong	2009 1Q
Paralleling power modules for high-current applications	Jason, Arrigo	2009 1Q
Using a portable-power boost converter in an isolated flyback application	Falin, Jeff; King, Brian	2009 1Q
Message priority inversion on a CAN Bus	Crump, Stephen	2009 1Q
RS-485: Passive failsafe for an idle bus	Kugelstadt, Thomas	2009 1Q
Output impedance matching with fully differential operational amplifiers	Karki, James	2008 4Q
Compensating and measuring the DC/DC converter loop that powers a high-power LED driver	Falin, Jeff	2008 4Q
Designing DC/DC converters based on SEPIC topology	Falin, Jeff	2008 4Q
Getting the most battery life from portable systems	Keller, Keith; Banak, M.A.	2008 4Q
Stop-band limitations of the Sallen-Key, low-pass filter	Baker, Bonnie C.	2008 4Q
Input impedance matching with fully differential amplifiers	Karki, James	2008 4Q
A dual-polarity, bidirectional current-shunt monitor	Kuehl, Thomas	2008 3Q
New current-mode PWM controllers support boost, flyback, SEPIC and LED-driver applications	Schneider, Jürgen	2008 3Q
Cascading of input serializers boosts channel density for digital inputs	Dehmelt, Frank	2008 3Q
When good grounds turn bad— isolate!	Kugelstadt, Thomas	2008 3Q
A DAC for all precision occasions	Baker, Bonnie C.	2008 3Q
A new filter topology for analog high-pass filters	Fortunato, Mark	2008 2Q
Selecting antennas for low-power wireless application	Audun, Andersen	2008 2Q
Understanding output voltage limitations of DC/DC buck converters	Tucker, John	2008 2Q
Battery-charger front-end IC improves charging-system safety	Ye, Mao	2008 2Q
Understanding the pen-interrupt (PENIRQ) operation of touch- screen controllers	Fang, Wendy; Wang, Ing-Yih James	2007 4Q
Driving a WLED does not always require 4 V	Hadden, William	2007 4Q
Host-side gas-gauge-system design considerations for single- cell handheld applications	Qian, Jinrong; Vega, Michael	2007 4Q
Using a buck converter in an inverting buck-boost topology	Tucker, John	2007 4Q
Using touch-screen controller's auxiliary inputs	Fang, Wendy; Wang, Ing-Yih James	2007 3Q
Power-management solutions for telecom systems improve performance, cost, and size	Narveson, Brian C.; Harris, Adrian	2007 3Q
TPS6108x: A boost converter with extreme versatility	Falin, Jeff	2007 3Q
Get low-noise, low-ripple, high-PSRR power with the TPS717xx	Falin, Jeff	2007 3Q
Simultaneous power-down sequencing with the TPS74x01 family of linear regulators	Falin, Jeff	2007 3Q
Calibration in touch-screen systems	Fang, Wendy; Chang, Tony	2007 2Q
Current balancing in four-pair, high-power PoE applications	Tom, Steven R.	2007 2Q
Enabling high-speed USB OTG functionality on TI DSPs	Harmon, Dan	2007 2Q
Spreadsheet modeling tool helps analyze power- and ground- plane voltage drops to keep core voltages within tolerance	Widener, Steve	2007 2Q
Conversion latency in delta-sigma converters	Baker, Bonnie C.	2007 2Q
New zero-drift amplifier has an IQ of 17 $\mu$ A	Kugelstadt, Thomas	2007 1Q
LDO white-LED driver TPS7510x provides incredibly small solution size	Hadden, William	2007 1Q
Power management for processor core voltage requirements	Harris, Adrian	2007 1Q
A 3 A, 1.2 Vout linear regulator with 80% efficiency and Plost < 1 W	Falin, Jeff	2006 4Q
Fully integrated TPS6300x buck-boost converter extends Li- ion battery life	Johns, Bill	2006 4Q



Title	Author(s)	Issue Date
Detection of RS-485 signal loss	Gingerich, Kevin	2006 4Q
Clamp function of high-speed ADC THS4041	Liu, Hui-Qing	2006 3Q
TPS61059 powers white-light LED as photoflash or movie light	Lester, Scot	2006 3Q
TPS65552A powers portable photoflash	Lester, Scot	2006 3Q
Using the ADS8361 with the MSP430 USI port	Hendrick, Tom	2006 3Q
Complete battery-pack design for one- or two-cell portable applications	Vega, Michael	2006 3Q
Improved CAN network security with TI's SN65HVD1050 transceiver	Crump, Stephen	2006 2Q
Low-cost current-shunt monitor IC revives moving-coil meter design	Kugelstadt, Thomas	2006 2Q
TLC5940 PWM dimming provides superior color quality in LED video displays	Day, Michael	2006 2Q
Wide-input dc/dc modules offer maximum design flexibility	Jones, Geoff	2006 2Q
Powering today's multi-rail FPGAs and DSPs, Part 2	Falin, Jeff	2006 2Q
Device spacing on RS-485 buses	Gingerich, Kevin	2006 2Q
Matching the noise performance of the operational amplifier to the ADC	Baker, Bonnie C.	2006 1Q
Powering today's multi-rail FPGAs and DSPs, Part 1	Falin, Jeff	2006 1Q
TPS79918 RF LDO supports migration to StrataFlash® Embedded Memory (P30)	Day, Michael	2006 1Q
Practical considerations when designing a power supply with the TPS6211x	Falin, Jeff; Johns, Bill	2006 1Q
High-speed notch filters	Carter, Bruce	2006 1Q
Understanding and comparing data sheets for high-speed ADCs	Eduardo, Bartolome	2005 4Q
Getting the most out of your instrumentation amplifier design	Kugelstadt, Thomas	2005 4Q
TLC5940 dot correction compensates for variations in LED brightness	Day, Michael; Saab, Tarek	2005 4Q
Low-power, high-intercept interface to the ADS5424 14-bit, 105-MSPS converter for undersampling applications	Steffes, Michael; Ramus, Xavier	2005 3Q
Miniature solutions for voltage isolation	Jones, Geoff	2005 3Q
New power modules improve surface-mount manufacturability	Thornton, Chris	2005 3Q
So many amplifiers to choose from: Matching amplifiers to applications	Mancini, Ron	2005 3Q
Using resistive touch screens for human-machine interface	Downs, Rick	2005 3Q
Simple DSP interface for ADS784x/834x ADCs	Hendrick, Tom	2005 2Q
Auto-zero amplifiers ease the design of high-precision circuits	Kugelstadt, Thomas	2005 2Q
Understanding noise in LDO linear regulators	Teel, John C.	2005 2Q
Understanding power supply ripple rejection in linear regulators	Teel, John C.	2005 2Q
Maximizing signal integrity with M-LVDS backplanes	McCormick, Michael; Graham, David	2005 1Q
A better bootstrap/bias supply circuit	O'Loughlin, Michael	2005 1Q
Implementation of 12-bit delta-sigma DAC with MSC12xx controller	Cheung, Hugo; Raj, Sreeja	2005 1Q
Clocking high-speed data converters	Eduardo, Bartolome; Vineet, Mishra; Goutam, Dutta; David, Smith	2005 1Q
14-bit, 125-MSPS ADS5500 evaluation	Liu, Hui-Qing	2004 3Q
Active filters using current-feedback amplifiers	Stephens, Randy	2004 3Q
Tips for successful power-up of today's high-performance FPGAs	Falin, Jeff; Pham, Landa	2004 3Q
Failsafe in RS-485 data buses	Gingerich, Kevin	2004 3Q
Integrated logarithmic amplifiers for industrial applications	Kugelstadt, Thomas	2004 1Q
Op amp stability and input capacitance	Mancini, Ron	2004 1Q
LED-driver considerations	Day, Michael	2004 1Q
The RS-485 unit load and maximum number of bus connections	Gingerich, Kevin	2004 1Q
Estimating available application power for Power-over-Ethernet applications	Patoka, Martin	2004 1Q
ADS809 analog-to-digital converter with large input pulse signal	Liu, Hui-Qing	2004 1Q
Two-channel, 500-kSPS operation of the ADS8361	Hendrick, Tom	2003 4Q

Title	Author(s)	Issue Date
Calculating noise figure in op amps	Karki, James	2003 4Q
UCC28517 100-W PFC power converter with 12-V, 8-W bias supply, Part 2	O'Loughlin, Michael	2003 4Q
Evaluation criteria for ADSL analog front end	Wu, John Z. ; Teeple, C.R.	2003 4Q
Calculating noise figure and third-order intercept in ADCs	Karki, James	2003 4Q
ADS82x ADC with non-uniform sampling clock	Liu, Hui-Qing	2003 3Q
Expanding the usability of current-feedback amplifiers	Stephens, Randy	2003 3Q
Video switcher using high-speed op amps	Carter, Bruce	2003 3Q
UCC28517 100-W PFC power converter with 12-V, 8-W bias supply, Part 1	O'Loughlin, Michael	2003 3Q
Soft-start circuits for LDO linear regulators	Falin, Jeff	2003 3Q
Auto-Track™ voltage sequencing simplifies simultaneous power-up and power-down	Thornton, Chris	2003 1Q
Using the TPS61042 white-light LED driver as a boost converter	Falin, Jeff	2003 1Q
Load-sharing techniques: Paralleling power modules with overcurrent protection	Dinwoodie, Lisa	2003 1Q
Analyzing feedback loops containing secondary amplifiers	Mancini, Ron	2003 1Q
Understanding piezoelectric transformers in CCFL backlight applications	Day, Michael; Lee, Bang S.	2002 4Q
Power conservation options with dynamic voltage scaling in portable DSP designs	Falin, Jeff	2002 4Q
Using the UCC3580-1 controller for highly efficient 3.3-V/100- W isolated supply design	King, Brian	2002 4Q
Active output impedance for ADSL line drivers	Stephens, Randy	2002 4Q
Interfacing op amps and analog-to-digital converters	Carter, Bruce	2002 4Q
FilterPro™ low-pass design tool	John, Bishop	2002 3Q
Using high-speed op amps for high-performance RF design, Part 2	Carter, Bruce	2002 3Q
Using direct data transfer to maximize data acquisition throughput	Mark, Buccini	2002 3Q
MSC1210 debugging strategies for high-precision smart sensors	Cheung, Hugo	2002 3Q
Adjusting the A/D voltage reference to provide gain	Russell, Anderson	2002 2Q
Using high-speed op amps for high-performance RF design, Part 1	Carter, Bruce	2002 2Q
Worst-case design of op amp circuits	Mancini, Ron	2002 2Q
Fully differential amplifier design in high-speed data acquisition systems	Karki, James	2002 2Q
Powering electronics from the USB port	Kollman, Robert; Betten, John	2002 2Q
Optimizing the switching frequency of ADSL power supplies	John, Betten; Michael, Day	2002 2Q
SWIFT™ Designer power supply design program	Rogers, Philip; John, Bishop	2002 2Q
Synchronizing non-FIFO variations of the THS1206	Hendrick, Tom	2002 2Q
SHDSL AFE1230 application	Liu, Hui-Qing	2002 1Q
Why use a wall adapter for ac input power?	Kollman, Robert; Betten, John	2002 1Q
Audio power amplifier measurements, Part 2	Palmer, Richard	2002 1Q
Power control design key to realizing InfiniBand(SM) benefits	Jonathan, Bearfield	2002 1Q
Power consumption of LVPECL and LVDS	Sterzik, Chris	2002 1Q
Comparing magnetic and piezoelectric transformer approaches in CCFL applications	Wells, Eddy	2002 1Q
Intelligent sensor system maximizes battery life: Interfacing the MSP430F123 Flash MCU, ADS7822, and TPS60311	Mark, Buccini	2001 3Q
Audio power amplifier measurements	Palmer, Richard	2001 3Q
An audio circuit collection, Part 3	Carter, Bruce	2001 3Q
Designing for low distortion with high-speed op amps	Karki, James	2001 3Q
Runtime power control for DSPs using the TPS62000 buck converter	Matzberger, Markus	2001 3Q
Power supply solution for DDR bus termination	Kollman, Robert; Betten, John; Lee, Bang S.	2001 3Q

Title	Author(s)	Issue Date
The SN65LVDS33/34 as an ECL-to-LVTTL converter	Sterzik, Chris	2001 3Q
A/D and D/A conversion of PC graphics and component video signals, Part 2: Software and control	Bart De, Canne	2001 3Q
-48-V/+48-V hot-swap applications	Dai, Heping	2001 1Q
Frequency response errors in voltage feedback op amps	Mancini, Ron	2001 1Q
An audio circuit collection, Part 2	Carter, Bruce	2001 1Q
Pressure transducer-to-ADC application	John, Bishop	2001 1Q
Notebook computer upgrade path for audio power amplifiers	Palmer, Richard	2001 1Q
Optimal design for an interleaved synchronous buck converter under high-slew-rate, load-current transient conditions	Miftakhutdinov, Rais	2001 1Q
1.6- to 3.6-volt BTL speaker driver reference design	Kehr, Ryan	2001 1Q
Synthesis and characterization of nickel manganite from different carboxylate precursors for thermistor sensors	Kamat, R.K.; Naik, G.M.; Verenkar, V.M.S.	2001 1Q
A/D and D/A conversion of PC graphics and component video signals, Part 1: Hardware	Bart De, Canne	2001 1Q
Using SPI synchronous communication with data converters—interfacing the MSP430F149 and TLV5616	Mancini, Ron	2001 1Q
Building a simple data acquisition system using the TMS320C31 DSP	Parguian, Joselito	2001 1Q
Comparison of different power supplies for portable DSP solutions working from a single-cell battery	Neuhaeusler, Juergen	2000 4Q
Understanding the load-transient response of LDOs	King, Brian	2000 4Q
A statistical survey of common-mode noise	Gaboian, Jerry	2000 4Q
Analysis of fully differential amplifiers	Karki, James	2000 4Q
Thermistor temperature transducer-to-ADC application	John, Bishop	2000 4Q
An audio circuit collection, Part 1	Carter, Bruce	2000 4Q
The Active Fail-Safe feature of the SN65LVDS32A	Morgan, Mark; Smith, Bryan	2000 4Q
Using quad and octal ADCs in SPI mode	Hendrick, Tom	2000 4Q
Hardware auto-identification and software auto-configuration for the TLV320AIC10 DSP Codec—a "plug-and-play" algorithm	Fang, Wendy; Miller, Perry	2000 4Q
Smallest DSP-compatible ADC provides simplest DSP interface	Purvis, Joe	2000 4Q
Optimal output filter design for microprocessor or DSP power supply	Miftakhutdinov, Rais	2000 3Q
Advantages of using PMOS-type low-dropout linear regulators in battery applications	King, Brian	2000 3Q
Performance of LVDS with different cables	Dehmelt, Frank	2000 3Q
Efficiently interfacing serial data converters to high-speed DSPs	Philipose, Lijoy	2000 3Q
Higher data throughput for DSP analog-to-digital converters	Heinz-Peter, Beckemeyer	2000 3Q
New DSP development environment includes data converter plug-ins	Christ, Manfred; Walzer, Frank	2000 3Q
Reducing PCB design costs: From schematic capture to PCB layout	Hendrick, Tom	2000 3Q
The PCB is a component of op amp design	Carter, Bruce	2000 3Q
Fully differential amplifiers	Karki, James	2000 3Q
Design of op amp sine wave oscillators	Mancini, Ron	2000 3Q
Low-cost, minimum-size solution for powering future-generation Celeron™-type processors with peak currents up to 26 A	Miftakhutdinov, Rais; Rogers, Philip	2000 2Q
Simple design of an ultra-low-ripple DC/DC boost converter with TPS60100 charge pump	Kormann, Brigitte; Pelfrey, Jim	2000 2Q
LVDS: The ribbon cable connection	Cole, Elliott	2000 2Q
Introduction to phase-locked loop system modeling	Li, Wang; Meiners, Jason	2000 2Q
The design and performance of a precision voltage reference circuit for 14-bit and 16-bit A-to-D and D-to-A converters	Miller, Perry; Moore, Doug	2000 2Q
Using a decompensated op amp for improved performance	Karki, James	2000 2Q

Title	Author(s)	Issue Date
Sensor to ADC-analog interface design	Mancini, Ron	2000 2Q
LVDS receivers solve problems in non-LVDS applications	Cole, Elliott	2000 1Q
Skew definition and jitter analysis	Corrigan, Steve	2000 1Q
Powering Celeron™-type microprocessors using TI's TPS5210 and TPS5211 controllers	Miftakhutdinov, Rais; Rogers, Philip	2000 1Q
Power supply solutions for TI DSPs using synchronous buck converters	Lee, Bang S.	2000 1Q
A methodology of interfacing serial A-to-D converters to DSPs	Kugelstadt, Thomas	2000 1Q
PCB layout for the TPA005D1x and TPA032D0x Class-D APAs	Palmer, Richard	2000 1Q
Matching operational amplifier bandwidth with applications	Mancini, Ron	2000 1Q
Understanding the stable range of equivalent series resistance of an LDO regulator	Lee, Bang S.	1999 4Q
Synchronous buck regulator design using the TI TPS5211 high-frequency hysteretic controller	Miftakhutdinov, Rais	1999 4Q
TI TPS5602 for powering TI's DSP	Lee, Bang S.	1999 4Q
Keep an eye on the LVDS input levels	Cole, Elliott	1999 4Q
Techniques for sampling high-speed graphics with lower- speed A/D converters	Bart De, Canne	1999 4Q
Precision voltage references	Miller, Perry; Moore, Doug	1999 4Q
Reducing crosstalk of an op amp on a PCB	Stephens, Randy	1999 4Q
Single-supply op amp design	Mancini, Ron	1999 4Q
Migrating from the TI TL770x to the TI TLC770x	Benjie, Balser	1999 3Q
Extended output voltage adjustment (0 V to 3.5 V) using the TI TPS5210	Lee, Bang S.	1999 3Q
Stability analysis of low-dropout linear regulators with a PMOS pass element	Rogers, Everett	1999 3Q
TIA/EIA-568A Category 5 cables in low-voltage differential signaling (LVDS)	Cole, Elliott	1999 3Q
Evaluating operational amplifiers as input amplifiers for A-to-D converters	Karki, James	1999 3Q
Low-power data acquisition sub-system using the TI TLV1572	Kugelstadt, Thomas	1999 3Q
Aspects of data acquisition system design	Miller, Perry	1999 3Q
Power supply decoupling and audio signal filtering for the Class-D audio power amplifier	Palmer, Richard; Darling, Timothy	1999 3Q
Reducing the output filter of a Class-D amplifier	Score, Mike	1999 3Q

**Important Notice:** The products and services of Texas Instruments Incorporated and its subsidiaries described herein are sold subject to TI's standard terms and conditions of sale. Customers are advised to obtain the most current and complete information about TI products and services before placing orders. TI assumes no liability for applications assistance, customer's applications or product designs, software performance, or infringement of patents. The publication of information regarding any other company's products or services does not constitute TI's approval, warranty or endorsement thereof.

All trademarks are the property of their respective owners.

## IMPORTANT NOTICE AND DISCLAIMER

TI PROVIDES TECHNICAL AND RELIABILITY DATA (INCLUDING DATA SHEETS), DESIGN RESOURCES (INCLUDING REFERENCE DESIGNS), APPLICATION OR OTHER DESIGN ADVICE, WEB TOOLS, SAFETY INFORMATION, AND OTHER RESOURCES "AS IS" AND WITH ALL FAULTS, AND DISCLAIMS ALL WARRANTIES, EXPRESS AND IMPLIED, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT OF THIRD PARTY INTELLECTUAL PROPERTY RIGHTS.

These resources are intended for skilled developers designing with TI products. You are solely responsible for (1) selecting the appropriate TI products for your application, (2) designing, validating and testing your application, and (3) ensuring your application meets applicable standards, and any other safety, security, regulatory or other requirements.

These resources are subject to change without notice. TI grants you permission to use these resources only for development of an application that uses the TI products described in the resource. Other reproduction and display of these resources is prohibited. No license is granted to any other TI intellectual property right or to any third party intellectual property right. TI disclaims responsibility for, and you will fully indemnify TI and its representatives against, any claims, damages, costs, losses, and liabilities arising out of your use of these resources.

TI's products are provided subject to [TI's Terms of Sale](#) or other applicable terms available either on [ti.com](http://ti.com) or provided in conjunction with such TI products. TI's provision of these resources does not expand or otherwise alter TI's applicable warranties or warranty disclaimers for TI products.

TI objects to and rejects any additional or different terms you may have proposed.

Mailing Address: Texas Instruments, Post Office Box 655303, Dallas, Texas 75265  
Copyright © 2022, Texas Instruments Incorporated