

Battery Management Deep Dive Technical Training



Tuesday, Oct. 15				Wednesday, Oct. 16			
8:00 - 9:00 a.m. Badge pick up and light refreshments				Texas Ballroom 4			
Texas Ballroom				Gauge		Battery monitoring & protection	
9:00 - 9:30 a.m.	Kickoff and welcome: BMS update, Jinrong Qian Texas Instruments Vice President			8:45 - 9:30 a.m.	When and how to simplify multicell gauge configurations	How to design small and portable applications leveraging USB Type-C™ technology	
9:30 - 10:15 a.m.	Keynote speaker, Dr. Robert Spotnitz-Battery Design LLC			9:30 - 10:15 a.m.	In the field: how accurate battery gauges are changing medicine as we know it	How to choose the best companion parts for battery chargers	
10:15 - 10:30 a.m. Break				10:15 - 10:30 a.m. Break			
10:30 - 11:15 a.m.	Special considerations in battery management for industrial applications			10:30 - 11:15 a.m.	How to maintain high accuracy in applications without long rest periods	Chargers roadmap: update and overview of next-generation products	
11:15 - 12:00 p.m.	Automotive leadership			11:15 - 12:00 p.m.	Gauge roadmap: update and overview of next-generation products	Avoiding common mistakes in schematic design and PCB layout for battery-charging applications	
12:00 - 1:00 p.m. Lunch in Texas Ballroom 1-3				12:00 - 1:00 p.m. Lunch in Texas Ballroom 1-3			
Texas Ballroom 4		Texas Ballroom 5		Texas Ballroom 6		Texas Ballroom 6	
Gauge		Charger		Battery monitoring & protection		Battery monitoring & protection	
1:00 - 2:00 p.m.	Battery gauging fundamentals: how to overcome modern challenges for high-performance	The future of high-power-density battery charging	Monitoring and protection roadmap: TI's next-generation products	1:00 - 1:45 p.m.	Winter is coming: how to tune your gauge for the best low-temperature performance	How to design tiny, safe, and long-lasting battery products with switching chargers	Functional safety mechanisms in next-gen automotive battery monitoring and balancing
2:00 - 3:00 p.m.	Battery backup applications: CEDV vs. IT	Charger fundamentals: how to choose the right battery charger for your project	Design considerations for high-cell-count applications: industrial	1:45 - 2:30 p.m.	Troubleshooting common multicell gauge issues	Understanding battery charger low quiescent modes and how to use them	How to ensure communication robustness with a daisy-chain architecture
3:00 - 3:30 p.m. Break				2:30 - 3:00 p.m. Break			
3:30 - 4:30 p.m.	How to tune gas gauges for pulsed loads	How to use a smart charger for system control, monitoring and protection	Design considerations for high-cell-count applications: automotive	3:00 - 3:45 p.m.	Using gauge simulation to reduce design cycle time	How to overcome design challenges for lithium-ion chargers to charge alternative battery chemistries	Automotive functional safety: what's new in ISO-26262 and Part 11 for semiconductors
4:30 - 5:30 p.m.	Optimizing single-cell, smart batteries to extend runtime and enhance system safety	The benefits of USB charging solutions for two-cell battery applications	How to optimize industrial battery pack design with next-gen battery monitors	3:45 - 4:30 p.m.	An introduction to the gauging algorithm for dynamic loads	How to avoid common design challenges in linear battery chargers	How to interpret built-in safety mechanisms for TI's latest monitoring and balancing products
5:30 - 8:00 p.m. Cocktail reception and dinner				5:30 - 8:00 p.m. Cocktail reception and dinner			

IMPORTANT NOTICE AND DISCLAIMER

TI PROVIDES TECHNICAL AND RELIABILITY DATA (INCLUDING DATASHEETS), 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, 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 (www.ti.com/legal/termsofsale.html) or other applicable terms available either on 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.

Mailing Address: Texas Instruments, Post Office Box 655303, Dallas, Texas 75265
Copyright © 2019, Texas Instruments Incorporated