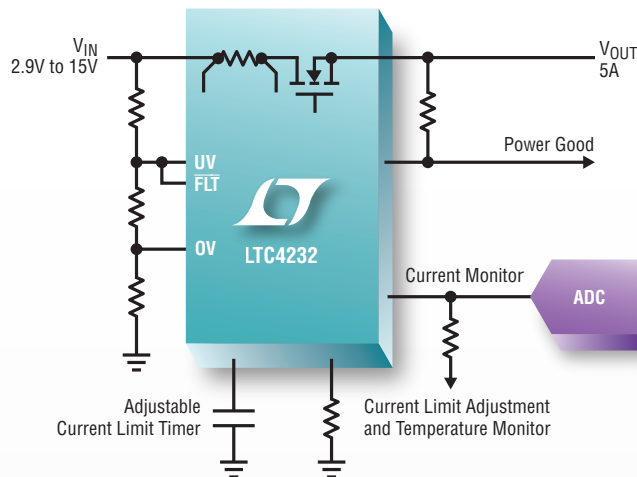# Low Voltage Hot Swap Controllers
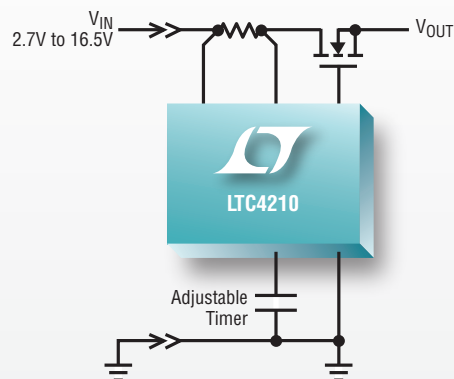
LTC4232: 5A Integrated Hot Swap™ Controller

- Small Footprint
- 33mΩ MOSFET with R_{SENSE}
- Wide Operating Voltage Range: 2.9V to 15V
- Adjustable, 10% Accurate (5A) Current Limit
- Current and Temperature Monitor Outputs
- Overtemperature Protection
- Adjustable Current Limit Timer Before Fault
- Power Good and Fault Outputs
- Adjustable Inrush Current Control
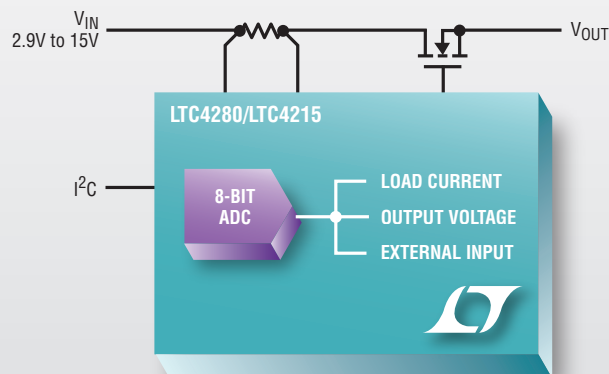- 2% Accurate UV and OV Protection

LTC4210: Hot Swap Controller in 6-Lead SOT-23 Package

- Adjustable Analog Current Limit with Circuit Breaker
- Fast Response Limits Peak Fault Current
- Adjustable Supply Voltage Power-Up Rate
- High Side Drive for External N-Channel MOSFET
- Controls Supply Voltages from 2.7V to 16.5V
- Undervoltage Lockout
- Adjustable Overvoltage Protection Using Timer Pin
- LTC4210-1: Automatic Retry After Fault
- LTC4210-2: Latchoff After Fault
- Low Profile (1mm) SOT-23 (ThinSOT™) Package

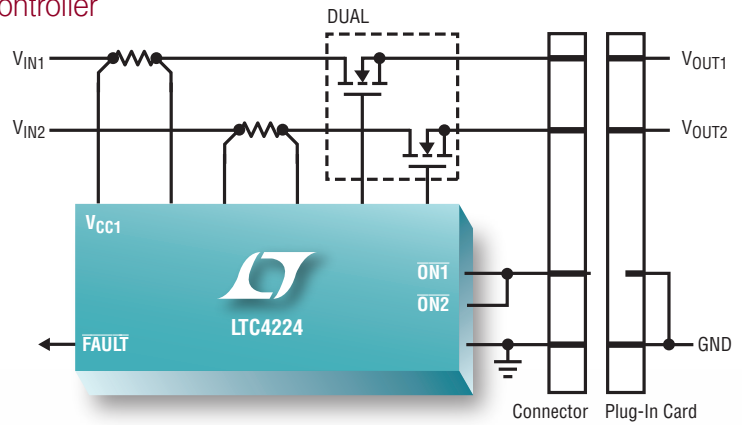## LTC4280/LTC4215: Hot Swap Controllers with I²C Interface and ADC

- 8-Bit ADC Monitors Current and Voltage
- I²C/SMBus Interface
- Wide Operating Voltage Range: 2.9V to 15V
- Inrush Current Limit with Foldback
- LTC4280 Has Adjustable Overcurrent Filter Time
- LTC4215 Has Fixed Overcurrent (20µs/420µs), Optional Soft-Start for Inrush Current (Controlled dI/dt)
- High Side Drive for External N-Channel MOSFET
- No External Gate Capacitor Required
- Input Overvoltage/Undervoltage Protection
- Optional Latchoff or Auto-Retry After Faults
- Alerts Host After Faults
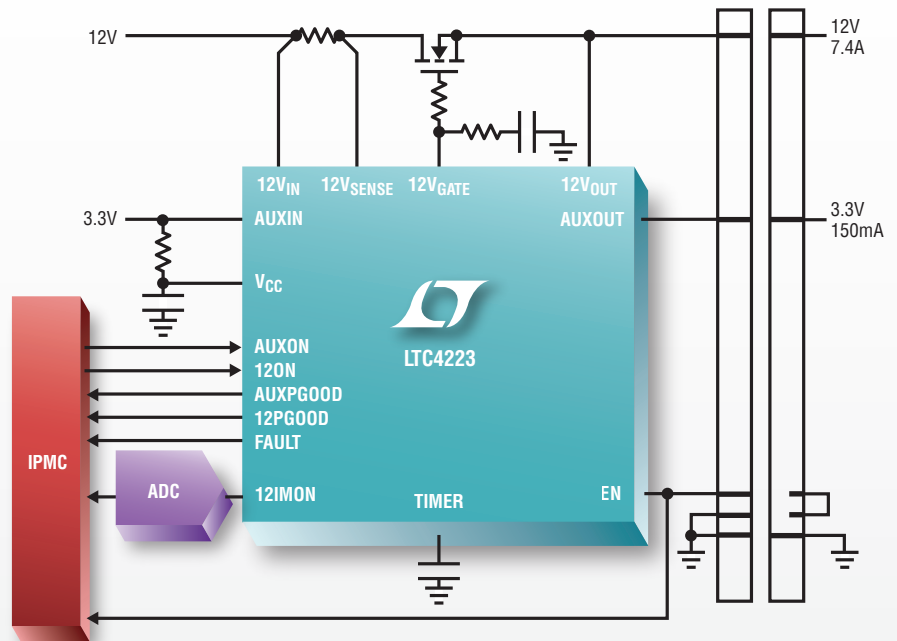

![Linear Technology logo]

LTC4224: Compact Dual Low Voltage Hot Swap Controller

- Controls Load Voltages from 1V to 6V
- No Gate Components Required
- Adjustable Current Limit with Circuit Breaker
- Limits Peak Fault Current in ≤1µs
- No External Timing Capacitor Required
- Adjustable Supply Voltage Power-Up Rate
- Gate Drive for External N-Channel MOSFET
- LTC4224-1: Latchoff After Fault
- LTC4224-2: Automatic Retry After Fault

LTC4223: Dual Supply Hot Swap Controller for AMC and MicroTCA

- Controls 12V and 3.3V Auxiliary Supplies
- Integrated 0.3Ω Auxiliary Switch
- Fast Response Limits Peak Fault Current
- Adjustable Current Limit Circuit Breaker for 12V Supply
- Analog Current Limiting for 3.3V Auxiliary Supply
- Adjustable 12V Power-Up Rate with External Capacitor
- High Side Current Sense Monitor for 12V Output
- Thermal Shutdown Protection
- LTC4223-1: Latchoff After Fault
- LTC4223-2: Automatic Retry After Fault
- MicroTCA and AdvancedMC Applications

Low Voltage Hot Swap Controller Selection Guide

Part Number	# of Channels	V_{IN} Range	Active Limiting	Fold-back	Soft-Start	Power Good	Fault	I²C ADC	Internal MOSFET	Extra Features	Packages
LTC4210	1	2.7V to 16.5V	•							Adjustable Overvoltage Protection	SOT-23
LTC4211	1	2.5V to 16.5V					•			Reset Output	SO-8, MSOP-8, MSOP-10
LTC4215	1	2.9V to 15V	•	•	•	•	•	8-Bit		Fixed Overcurrent Filter Time GPIO, Up to 27 I²C Addresses	4mm × 5mm QFN-24, SSOP-16
LTC4280	1	2.9V to 15V	•		•	•	•	8-Bit		Adj. Overcurrent Filter Time	4mm × 5mm QFN-24
LTC4218/ LTC4218-12	1	2.9V to 26.5V 12V Preset	•	•		•	•			Current and Temperature Monitor Outputs	5mm × 3mm DFN-16, SSOP-16
LTC4217/ LTC4217-12	1	2.9V to 26.5V 12V Preset	•	•		•	•		2A	Current and Temperature Monitor Outputs	5mm × 3mm DFN-16, TSSOP-20
LTC4219-5/ LTC4219-12	1	5V/12V Preset	•	•		•	•		5A	Current and Temperature Monitor Outputs	5mm × 3mm DFN-16
LTC4232	1	2.9V to 15V	•	•		•	•		5A	Current and Temperature Monitor Output	5mm × 3mm DFN-16
LTC4221	2	1V to 13.5V	•	•		•	•			Supply Sequencing	Narrow SSOP-16
LTC4222	2	2.9V to 29V	•	•	•	•	•	10-Bit		Dual Version of LTC4215 with 10-Bit ADC and Wide Input Range	5mm × 5mm QFN-32, SSOP-36
LTC4223	2	12V and 3.3V Auxiliary	•			•	•			MicroTCA Compliant Current Monitor Output	5mm × 4mm DFN-16, SSOP-16
LTC4224	2	1V to 6V	•				•			Small Solution Size	3mm × 2mm DFN-10, MSOP-10

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