Low Voltage Hot Swap Controllers

LTC4232: 5A Integrated Hot Swap™ Controller
- Small Footprint
- 33mΩ MOSFET with \( R_{\text{SENSE}} \)
- Wide Operating Voltage Range: 2.9V to 15V
- Adjustable, 10% Accurate (5A) Current Limit
- Current and Temperature Monitor Outputs
- Overvoltage 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 \( \text{i}^2\text{C} \) Interface and ADC
- 8-Bit ADC Monitors Current and Voltage
- \( \text{i}^2\text{C} \)/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 \( \text{dI/dt} \))
- 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
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

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<th># of Channels</th>
<th>VIN Range</th>
<th>Active Limiting</th>
<th>Fold-back</th>
<th>Start-Stop</th>
<th>Power Good</th>
<th>Fault</th>
<th>I²C ADC</th>
<th>Internal MOSFET</th>
<th>Extra Features</th>
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<tbody>
<tr>
<td>LTC4210</td>
<td>1</td>
<td>2.7V to 16.5V</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>LTC4211</td>
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<td>2.5V to 16.5V</td>
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<td>Reset Output</td>
<td>SO-8, MSOP-8, MSOP-10</td>
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<td>Fixed Overcurrent Filter Time, Up to 27 I²C Addresses</td>
<td>4mm × 5mm QFN-24, SSOP-16</td>
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<td>LTC4280</td>
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<td>Adj. Overcurrent Filter Time</td>
<td>4mm × 5mm QFN-24</td>
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<td>LTC4218/12</td>
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<td>Current and Temperature Monitor Outputs</td>
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<td>LTC4221</td>
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<td>Narrow SSOP-16</td>
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<td>Dual Version of LTC4215 with 10-Bit ADC and Wide Input Range</td>
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<td>MicroTCA Compliant Current Monitor Output</td>
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<td>Small Solution Size</td>
<td>3mm × 2mm DFN-10, MSOP-10</td>
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