

### MxC™ 200 48Vdc 15W DC-DC Converter

Helix Semiconductors' MuxCapacitor (MxC) 200 DC-DC Converter offers the highest energy efficiency per density. It enables use with low cost PoL regulators (i.e., 12V Buck Regulator) maximizing system efficiency. Each MuxCapacitor output can be tapped for intermediate voltages. The integrated multi-stage MuxCapacitor enables a low profile module for high density equipment. High efficiency reduces thermal loading for lower packaging costs.

Intelligent MuxCapacitor timing & control optimizes power delivery efficiency from no-load to maximum power.

### Applications

- Intermediate Bus Converters
- Telecom Blades, Data Centers
- PoE: Wireless Access Points, Security Cameras, VoIP Phones
- Electric & Hybrid Automobiles
- Industrial Controllers, HVAC
- IoT & IIoT Gateways

### Features

- Nominal +24 to 48Vdc Input Voltage
  - 3-stage MuxCapacitor™, G=1/2 each
  - Up to 57Vdc Input Voltage
- 15W Output
  - $P_{out} = P_{out1} + P_{out2} + P_{out3}$
- Multiple intermediate outputs
- Idle Operation: Enabled, No-Load
  - 1mW Non-Switching
  - 48mW Switching
- > 97% Efficiency @ 2.6W
- > 90% Efficiency @ 15W
- Maximizes POL regulator efficiency
- Fault Detectors
  - Output Over Current
  - Thermal Shutdown
- Extends use of low-voltage PoLs
  - Enables 48V operation
  - Greater hi-VIN efficiency
  - Power multiple PoLs
- Package Options
  - 32 Pin QFN, 5mm x 5mm
  - Wire Bond Die

### MxC 200 Block Diagram



