



EPC 1kW LLC 1/8th Brick Size Module Reference Design

Key Features:

- Peak efficiency: 97.9% at 400 W
- Full-load efficiency: 97% @ 12 V delivering 83.3 A output
- Small size: 22.9 mm x 58.4 mm (0.90 in x 2.30 in)
- Low profile: 10 mm total converter thickness without heatsink
- Fixed switching frequency: 1 MHz
- High power density: 1227 W/in³



The EPC9149 demonstration board is a 1 kW, 48 V input to 12 V output LLC converter that operates as a DC transformer with fixed conversion ratio of 4:1.

It features the 100V rated [EPC2218](#) and 40V rated [EPC2024](#) eGaN FETs. The compatible controller module (EPC9533) includes the Microchip [dsPIC33CK32MP102](#) 16-bit digital controller.

Support Files	
Design Files (Schematic, Gerbers, ect.)	Link to Resource
Firmware	Link to Resource