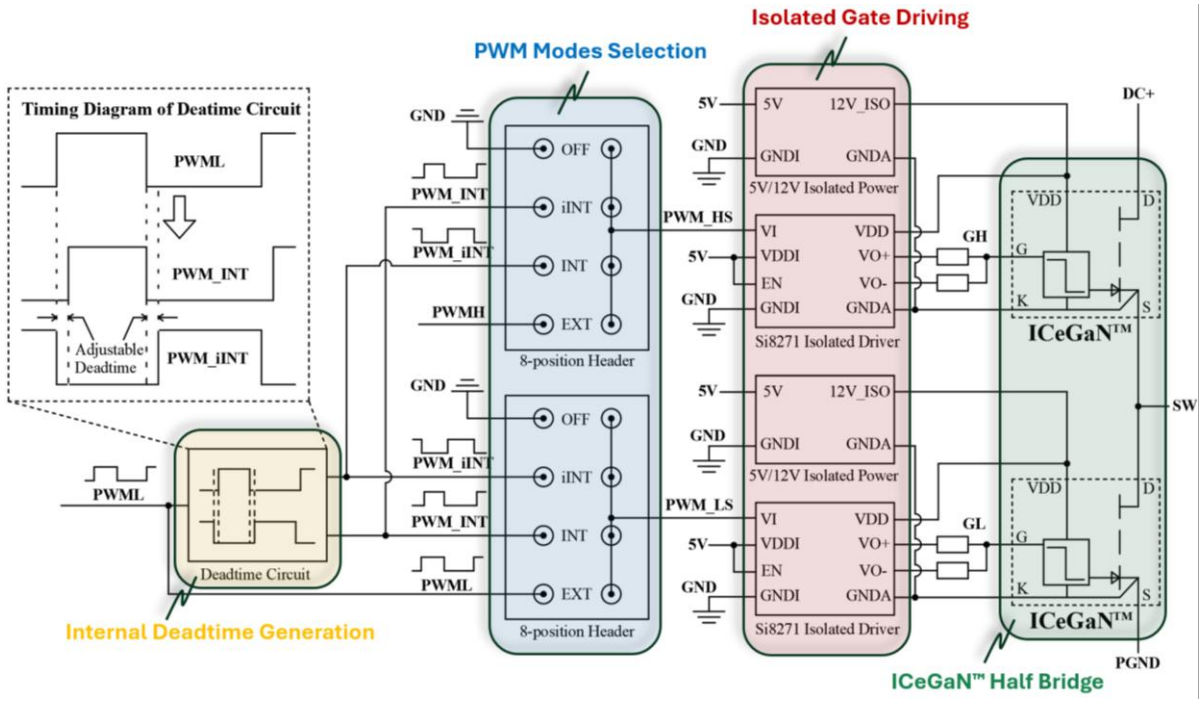
Block Diagram

The block diagram below provides a simplified representation of the half-bridge evaluation board.



Technical support

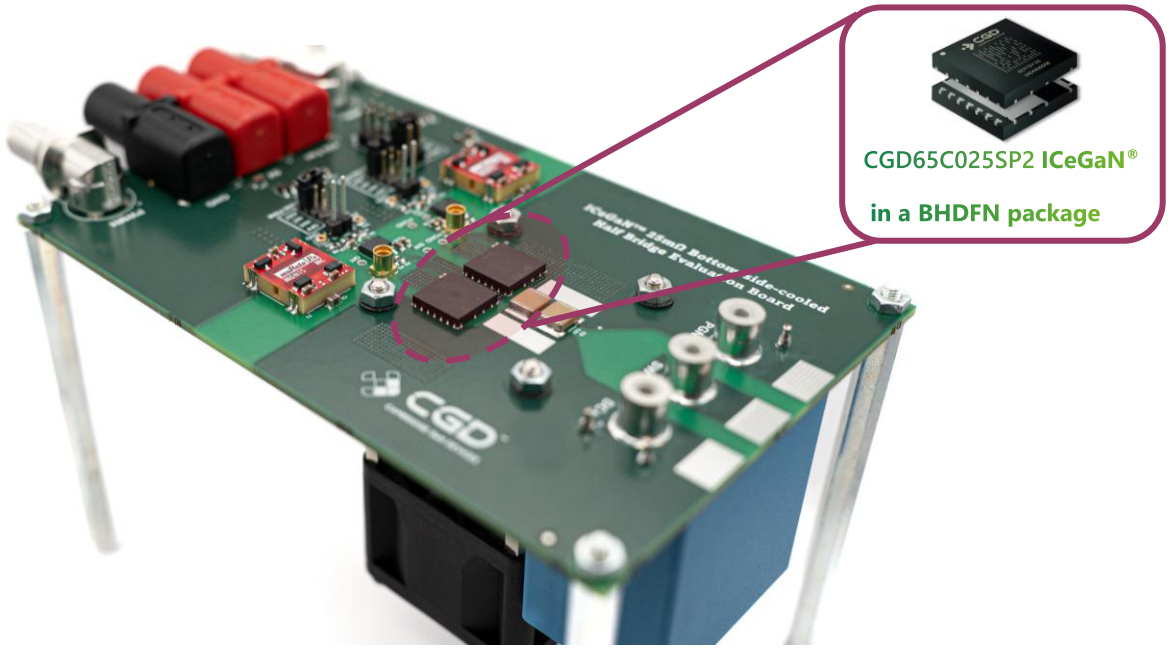
Please refer to the complete user guide **CGD-UG2404** for more details.

For support, please contact CGD at techsupport@camgandevices.com.

Cambridge GaN Devices Limited
Jeffreys Building, Suite 8
Cowley Road
Cambridge CB4 0DS
United Kingdom

Dare to innovate differently

Half-bridge Evaluation Board for P2 ICeGaN®



Board Size: 134 x 86 x 95 mm

Features

This evaluation board demonstrates how ICeGaN® can achieve fast and clean switching under high dv/dt and how the new BHDFN (Bottom Heat-spreader DFN) package enables excellent thermal performance at high power loss

- Features 2 x P2 Series 650-V / 25-mΩ GaN HEMTs in a newly developed BHDFN package.
- Easy to use: a wide variety of test points, soldering pads, and connectors.
- More flexibility: isolated gate driving, multiple PWM modes, and configurable deadtime
- Suitable for high power: fan and heatsink are included to support continuous operation.
- Good thermal performance: can dissipate 10 W loss at 50°C ambient temperature.
- Clean switching (<20 V overshoot) under a 60 A 400 V double pulse test and >100 V/ns dv/dt.

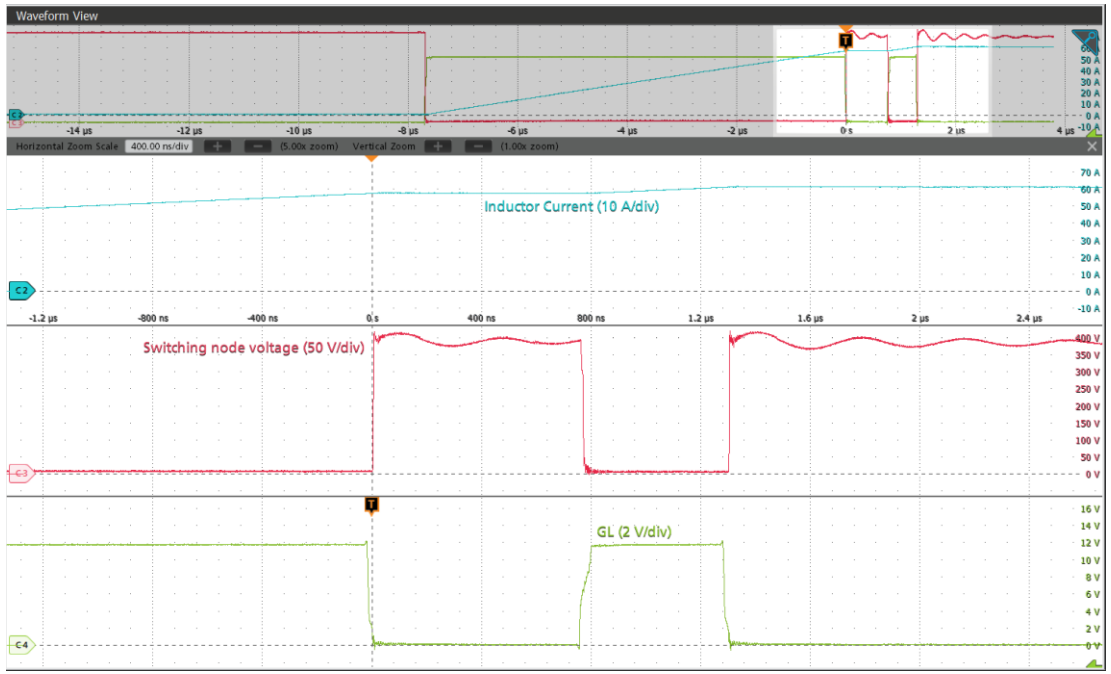
PWM modes

PWM modes	Description
OFF	The logic signal to the gate driver is tied to GND.
iINT	The logic signals to high-side and low-side gate drivers are swapped.
INT	The logic signal of the gate driver is from the internal deadtime generation circuits
EXT	The logic signal of the gate driver is from the external signal connected to the BNC connectors.

Setting one header to INT mode and another one to iINT mode must be **avoided**, as this will lead to a shoot-through event and damage the device.

Test Results

ICeGaN shows clean switching under a 400 V 60 A double pulse test. Both gate-source and drain-source voltages are clean and have negligible ringing under high switching speed and high dv/dt.



I/O ports

The figure below highlights the I/O ports of the evaluation board. The deadtime and PWM modes can be easily changed by moving the header cap. Please refer to the full user guide **CGD-UG2404** for more details on the input and output connectors as well as all the available test points.

