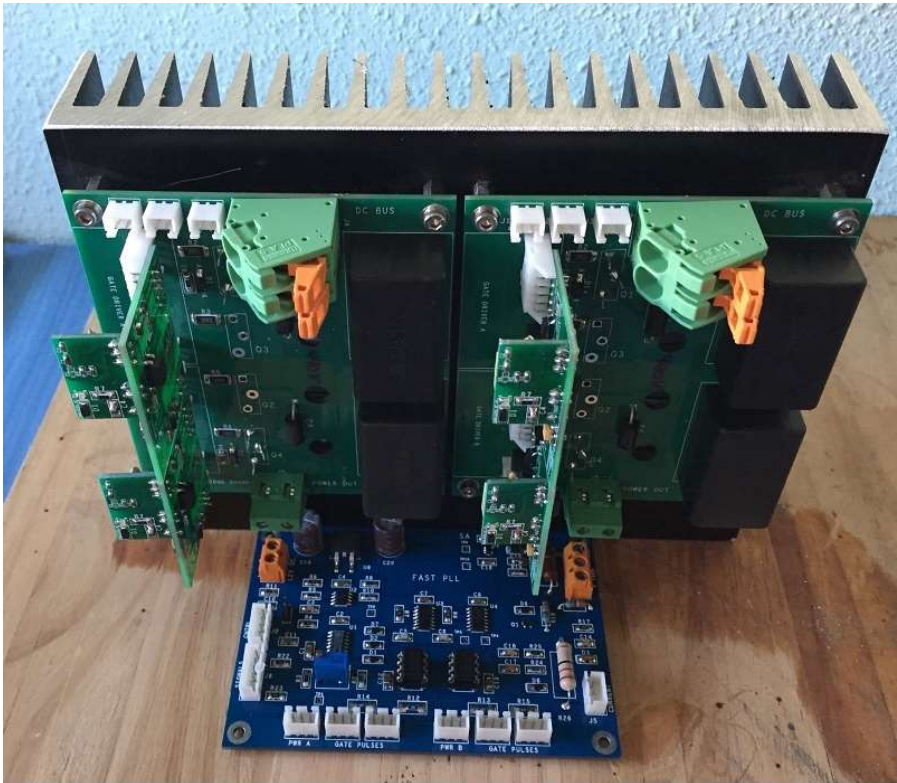


# INDUCTION HEATING POWER INVERTER



- Full bridge based on two Ledoelectronics **Le-HB2** modules
- 60 A 1200V SiC transistors
- Operation up to 1 MHz
- Control system with PLL, with dead time generation, protection functions and power regulation by frequency

The inverter uses two half bridge modules of low parasitic inductance **Le-HB2**, whose detailed information can be found on the website [www.ledoelectronics.com](http://www.ledoelectronics.com). The gate amplifiers used are of the **Le-OD18-09** type, which guarantee safe operation up to 1 MHz over the silicon carbide MOSFETs used on the bridge. The technical information of these modules is also available on the same website.

The Fast PLL board guarantees the generation and distribution of the control pulses, synchronized with the induction frequency of the LC series tank, connected to the inverter's output. If a high frequency transformer is used at the output of the bridge,

for isolation and impedance coupling, then the synchronism signal is taken directly from the induction capacitor.

The inverter has been successfully tested in two different applications:

1. Induction converter of 8 KW and 25 KHz, fed to 600V DC from an uncontrolled three-phase bridge rectifier.
2. Induction converter of 3.5 KW and 975 KHz, powered at 300V DC from a single-phase, uncontrolled rectifier bridge.

In both cases, the power has been controlled, by varying the control frequency above the resonant frequency.