TBC Modulation Board

• **Available** for use
  − FPGA (Spartan 6) with 300 MHz clock
    ▪ Including Verilog code for arbitrarily timed PWM signals
  − 8 isolated digital signals
    ▪ 4 independent floating outputs (high side)
    ▪ 4 isolated signals sharing one common ground
  − 15V supply with adjustable linear regulator
    ▪ 2W maximum

• You may use any other signal source
• You must implement your own gate driver and any circuitry not mentioned here
• Connection by male header pins, layout posted to website by Monday

AC Link Waveforms
Switch Network Sinusoidal Analysis

\[ V_C \]

\[ \frac{v}{i} \]

\[ V_C \]

\[ i_C \]
Switch Network Equivalent Circuit

Diode Rectifier Sinusoidal Analysis
Diode Rectifier Equivalent Circuit

Complete Equivalent Circuit