



POETS

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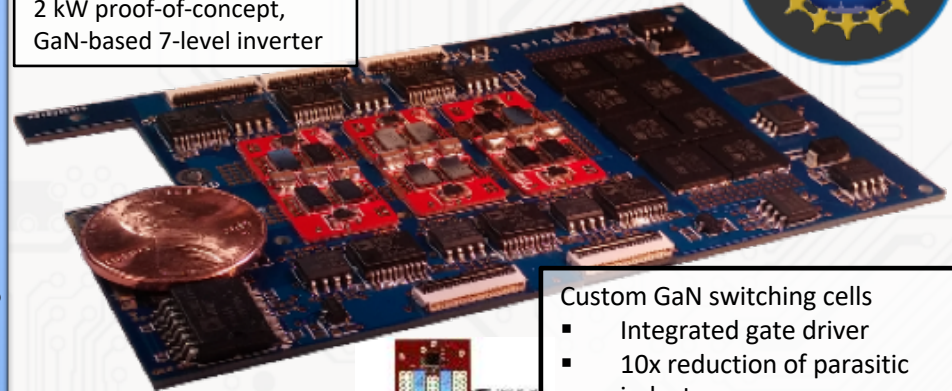


- Power electronics
  - Extreme power densities
  - GaN, SiC
- CMOS integrated circuits
- Electric drives
- Advanced control techniques for power electronics
- Renewable energy integration, grid storage



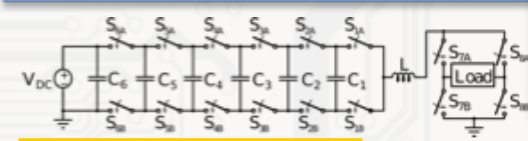
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2 kW proof-of-concept, GaN-based 7-level inverter

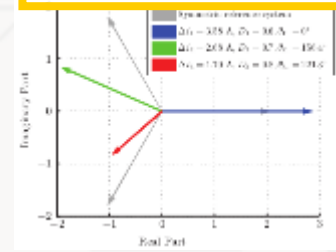


High Power Inverters

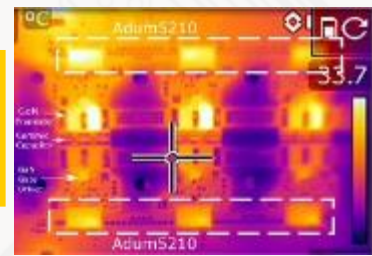
- Custom GaN switching cells
  - Integrated gate driver
  - 10x reduction of parasitic inductance
  - Enables multi-MHz switching speeds



Multi-phase interleaved massively scalable system

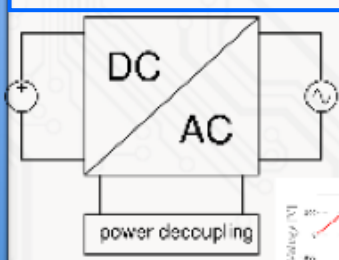


Real-time control for thermal management

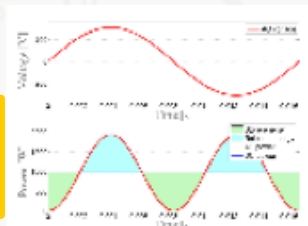


Advanced Digital Control Techniques

Grid-interfaced converters



New architectures for single-phase grid integration



Extreme efficiency bi-directional EV charger

