

Fraunhofer IISB - Power Electronics

Highly Integrated Cryogenically Cooled Power Electronics Systems

Cryogenic Power Electronics for Superconducting Aircraft Powertrains

Flagship Project Example: Motor Inverter for Project ASCEND (Airbus UpNext)

- 500 kW cryogenic inverter
- Full operation at $-196\text{ }^{\circ}\text{C}$ (77 K)
- Cooled with LN_2
- For electric aircraft propulsion
- Enables superconductivity
- High efficiency and power density
- Custom GaN power module development



First cryogenically cooled drive inverter in the 500 kW class. © Elisabeth Iglhaut / Fraunhofer IISB

Let's connect!

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