



1 – 3 field of work examples of  
power electronic systems

## Consulting

### In Power Electronics concept - development - volume production

#### 1. Your situation

- Launching a new product
- Open new market segments
- Need for know-how assistance in a special discipline
- Minimize design iterations
- Looking for optimization potentials of new and running designs
- Problems with sub-supplier systems & components
- Improvement of reliability / yield, reduction of returns

#### 2. Our service

- Feasibility studies
  - new technologies, components
  - benchmarking competitors
- Design reviews
  - System design vs. requirements (thermal, lifetime, EME/EMI,..)
  - Component choice, datasheet checks
  - Electronic circuit design and PCB-layout
  - Firmware, software, VHDL
  - Technical standards
- Process reviews
  - Technical assistance in audits of production process and suppliers
  - Stress test setup definition
- Independent expertise
  - Requirement checks
  - Simulations, tolerance analysis, FMEA

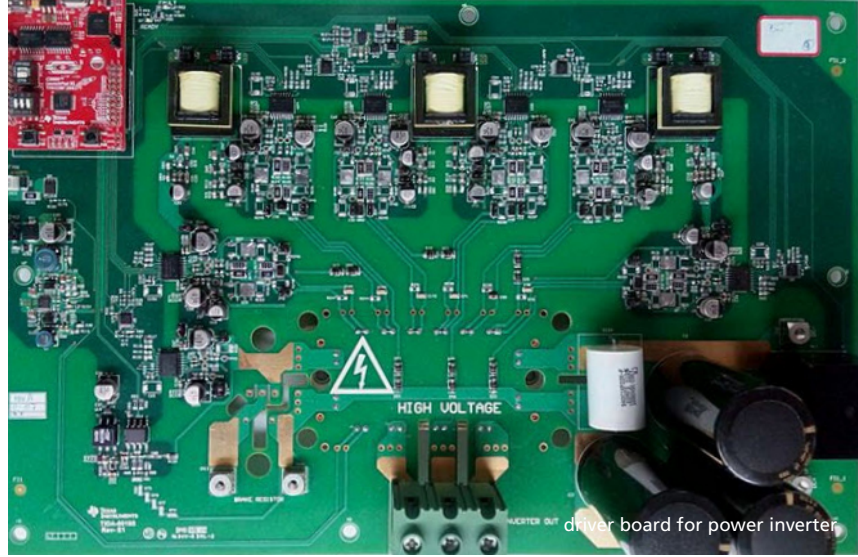
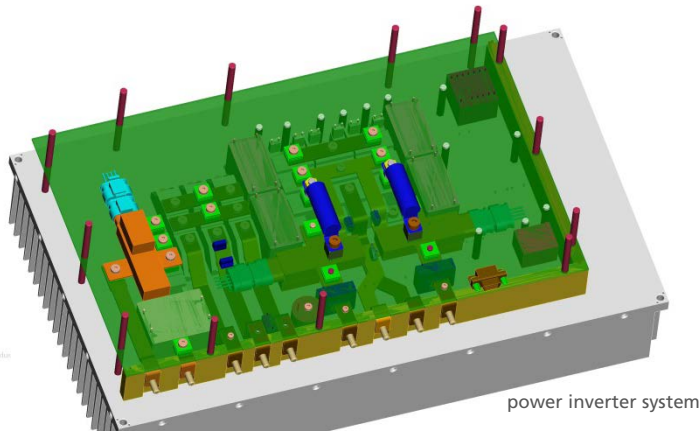
#### Fraunhofer Institute for Integrated Systems and Device Technology IISB

Landgrabenstraße 94  
90443 Nürnberg  
Germany

#### Contact:

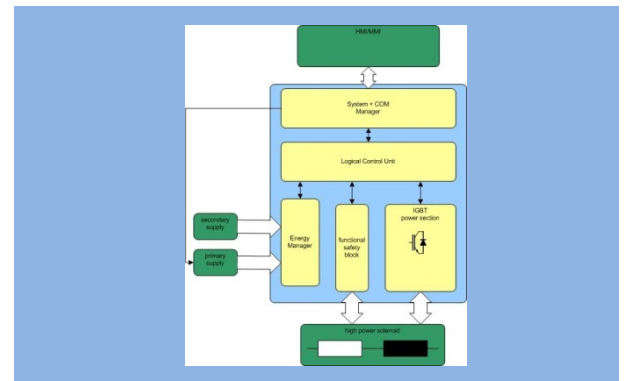
Markus Billmann  
Phone: +49 911 23568 20  
Fax: +49 911 23568 12  
markus.billmann@iisb.fraunhofer.de

[www.iisb.fraunhofer.de](http://www.iisb.fraunhofer.de)



## Your Benefit

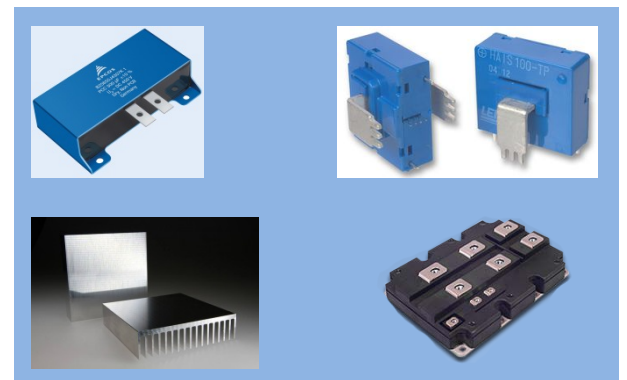
- Large Expert Team with many years of industrial background
- Independent system related point of view
- Regardless of manufacturer and therefore objective
- In-house experts - multiple disciplines
- Modern and well-equipped laboratories with a wide range of analysis devices



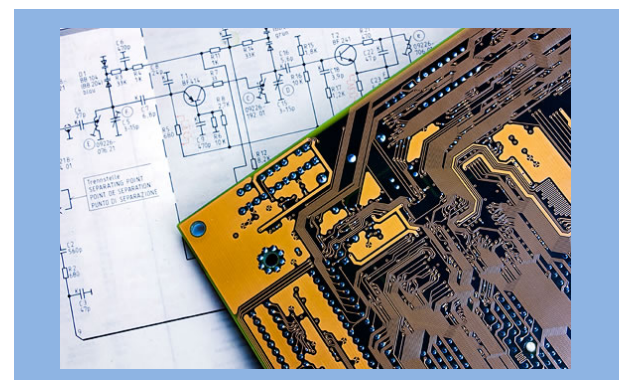
System behavior analysis

## Our references

- Wind power generation
- Automotive
- Industrial
- Home appliance
- Aircraft
- Railway



Power electronic components



Schematic and layout design review