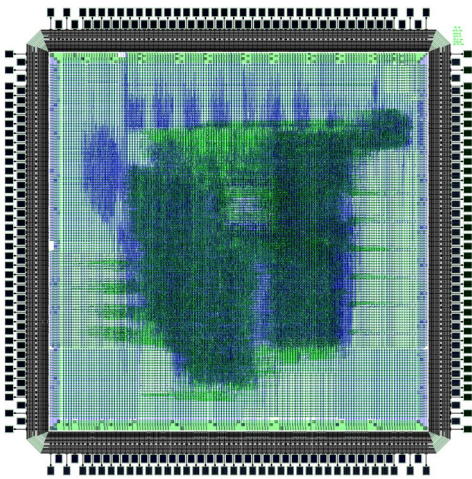# imec
embracing a better life

Imec design services

Imec.IC-link connects innovators and entrepreneurs to the leaders in semiconductor technology. Our world class experts and global network of trusted partners support our customers across the entire value chain. We turn ideas into reality at a single point of contact.

| Physical design & implementation

One stop shop or à la carte

Through imec's Design Services, you gain access to our team of highly experienced digital and analog design specialists as well as imec's design partner network.

We can help you:

- Get a grip on those parts of the design flow your team is not skilled in, or for which you lack the tools: analog as well as digital
- Physically implement your digital and mixed-signal deep-submicron designs from VHDL or Verilog RTL code or netlist, even in the most advanced technologies
- Implement your design using advanced low power techniques
- Insert Design For Test capabilities in your ASIC (Scan, BIST) and create the necessary test patterns (ATPG)
- Find the right IP blocks for your SoC
- With standard-cell library creation and (re-)characterization
- Choose the optimal technology for your next ASIC (performance/price)

We complement your team's capabilities. Imec can also take on your specification - and even help you develop it - and deliver your ASICs; combining our design services and our ASIC production services, with fully supply chain support.
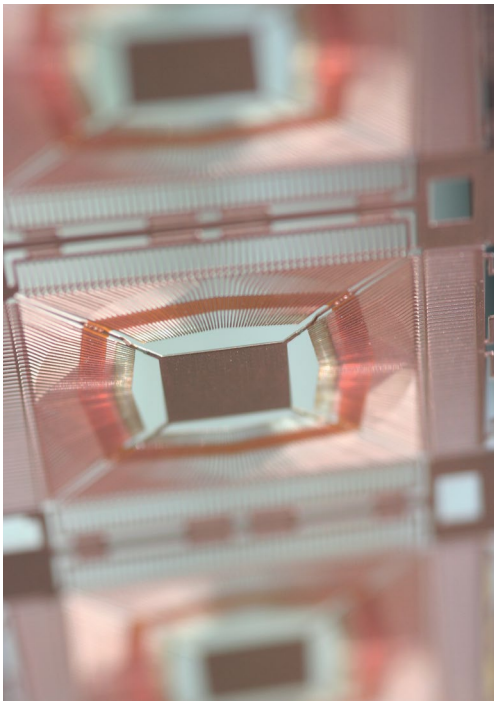
A well-proven, flexible team of ASIC implementation specialists

Imec's Design Services is a team of experienced specialists handling over 40 tape-outs per year, for both SoCs developed within the imec research organization, and for ASICs developed by design partners, companies, research institutes and universities. Many of our design projects combine analog full-custom blocks with digital standard cell-based netlists including macros (e.g. RAM, ROM), and other third party IP blocks (e.g. PLL, ADC, DAC).

Imec's foundry-independent Design Services are supporting the full spectrum of technologies, from 0.7 um to advanced nodes like FinFET 7 nm.

The team has extensive experience in advanced physical design and low-power techniques: massive clock gating, power shut-off, multi supply voltage, multi Vt, body-bias, CPF/UPF flow and multi-mode multi-corner optimization & analysis.

Depending on your specific needs you can choose the entry point in the design flow: specification, RTL, netlist, placed gates or GDSII. You can choose to handle the top-level integration of digital sub-blocks yourself (analog-on-top) or use our services to integrate the digital top-level ASIC including analog IP blocks (digital-on-top).

| Leadframe

Radiation hardening

Our team is specialized in radiation-hardening by design. In cooperation with the European Space Agency we developed DARE (Design Against Radiation Effects) platforms, supporting the Aerospace industry as well as high-energy physics research and medical applications.

The design team works closely with imec's ASIC Services team to provide customers with foundry technical support, ASIC prototyping, packaging and test, qualification, productization and volume production.
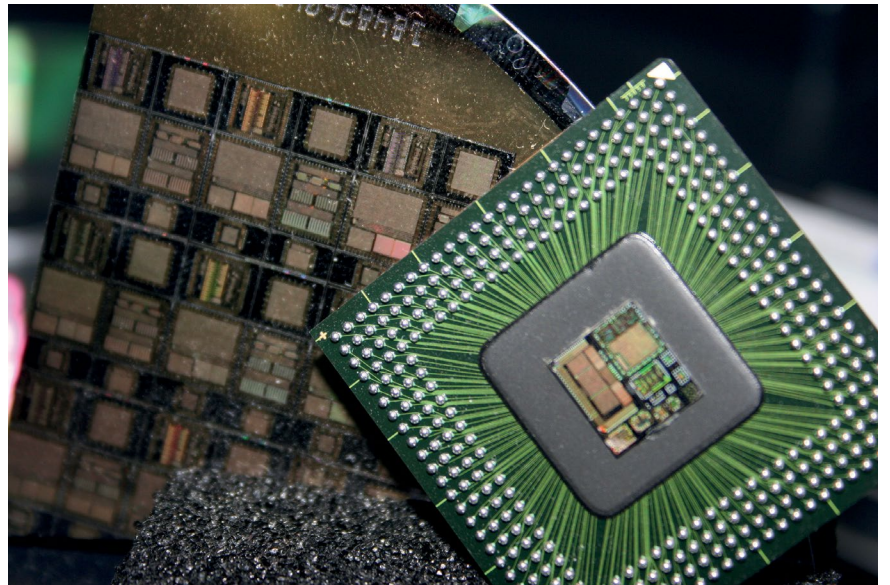
| From wafer to wire-bond chip

Contact us

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