



FinFET-Class ASICs: IP, Methodology and Expertise

Complex FinFET-class ASICs and 2.5D systems, delivered.

The right blend of technology and experience, delivered in a well-orchestrated fashion, creates winning opportunities.

The explosion of data generated, moved, stored and analyzed around the world today has changed custom IC development forever. The massive, FinFET-class ASICs used in today's networking, data center, artificial intelligence (AI) and 5G infrastructure applications require doing things in silicon that have never been done before.

eSilicon manages the design, development and manufacturing of highly complex ASICs for our customers. To meet the demands of building these monster ASICs, we have created a new model for taking our ASIC customers from RTL to volume production.

Best-in-class IP

Reliable, silicon-proven IP that delivers the needed functionality and performance is a given for any chip design project. But more is required to achieve a winning formula. Will the IP work together in the final design? Things like control interfaces, metal stack and testability strategies can cause tapeout delays and impact final performance.

At eSilicon, we've addressed the problem directly with our IP platforms. Collections of IP that are designed to work together predictably and reliably. We apply the same stringent rules to third-party IP that is part of the platform. And we build in application-specific configurability as well

to allow you to hit your power, performance and area targets more reliably.

A robust methodology

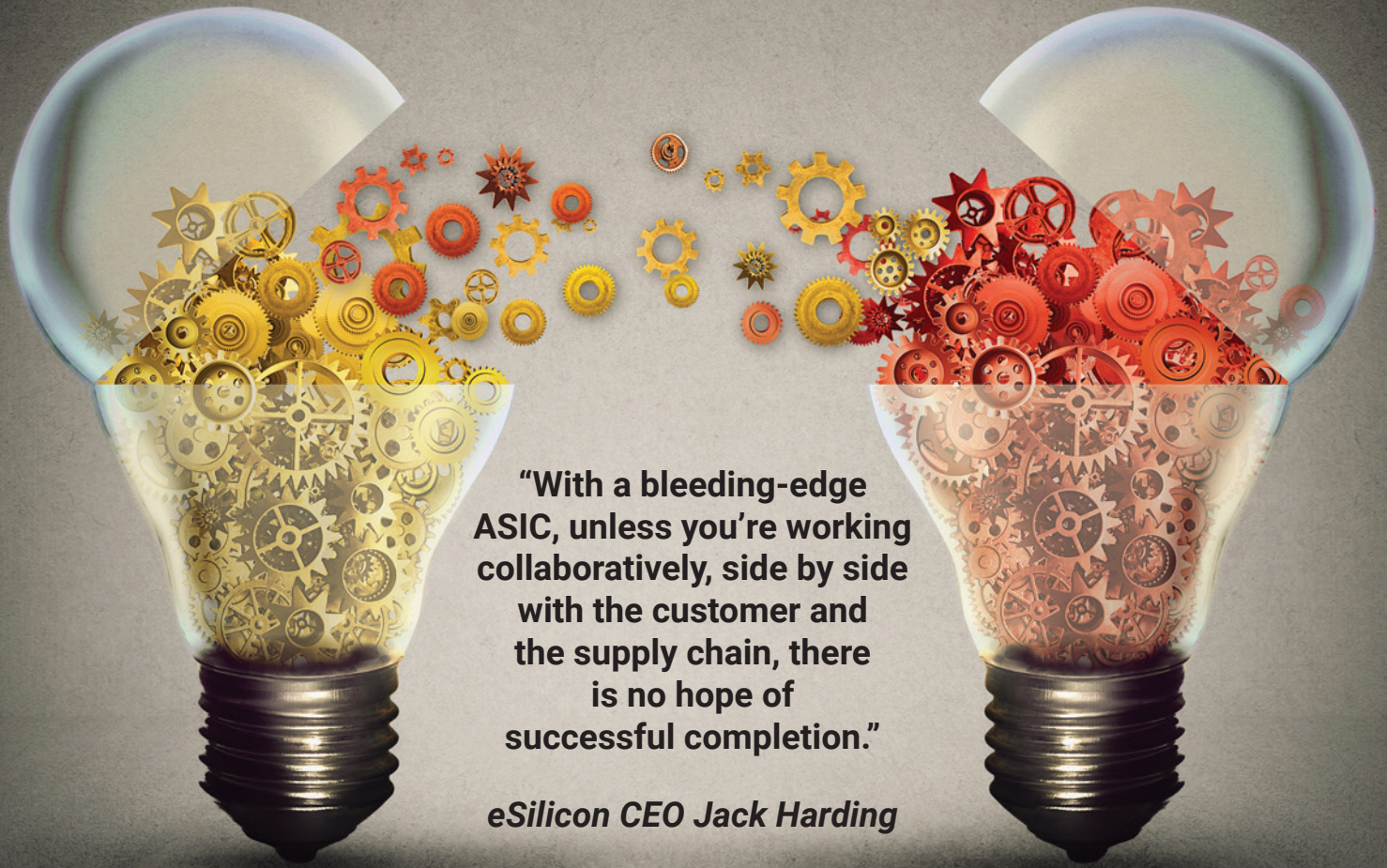
Design methodology is no longer only about chip design. Advanced semiconductor technology is now delivered as a system-in-package, often containing multiple devices integrated on an interposer. A winning design methodology must not only consider chip design, but the way the chip interacts with the package and the way the package interacts with the system.

Introducing StarDesigner™ flow, eSilicon's chip-package-system design flow. StarDesigner flow coordinates all aspects of the design process, from floor-planning to chip assembly, package/substrate design, package-level test to system-level integration. We also employ machine learning technology to optimize the entire process.

Experience where you need it

eSilicon delivers design and manufacturing expertise across the globe. Our distributed team provides deep domain expertise with a local presence, thanks to our cloud-enabled design infrastructure.

Our team covers all aspects of ASIC design, from RTL to tapeout including package/interposer design, power and



signal integrity. Our support doesn't stop at tapeout. We also provide complete logistics and supply chain management to deliver the final chip in volume, including test development, test bring-up, characterization, qualification, supply chain management and quality.

About eSilicon

Our ASIC solutions offering provides ASIC design, development and production management services to help you implement your ASIC and choose the optimal off-the-shelf or custom IP for your design. Then we manage your ASIC through test and yield to predictable, on-time device delivery in volume.

Our custom and off-the-shelf IP offerings support our ASIC customers as well as stand-alone IP engagements. We supply a

wide array of silicon-proven 56G and 112G PAM4 & NRZ DSP-based long-reach SerDes, memories and I/O libraries, including ternary content-addressable memory (TCAM) and HBM2 PHY, all in advanced FinFET technology.

Our ASIC+IP synergies include complete, silicon-proven 2.5D/ HBM2 solutions for FinFET technology. We support a variety of end markets, including networking, computing, AI and 5G.

Contact

Please contact eSilicon at sales@esilicon.com or visit www.esilicon.com for more information.

Collaborate. Differentiate. Win.



eSilicon Headquarters
2130 Gold Street, Suite 100
San Jose, CA 95002
1-408-635-6300
www.esilicon.com
<https://star.esilicon.com>
sales@esilicon.com

© 2017-2019 eSilicon Corporation. All rights reserved. This publication is protected by copyright and international treaty. No part of this publication may be reproduced in any form by any means without prior written authorization from eSilicon Corporation. eSilicon is a registered trademark, and the eSilicon logo and StarDesigner are trademarks, of eSilicon Corporation. All other trademarks mentioned herein are the property of their respective owners. 20190311.PDF