



SYNTEST

# ASIC Full Turnkey Services

## An Easier Way of Getting Your Chips to Production!

Today, many semiconductor companies, including Integrated Device Manufacturers (IDM), are outsourcing manufacturing, so that they can devote more time and resources to the design of innovative ICs. This has resulted in the growth not only of independent foundries and their capacities, but also in the need of partners capable of handling prototype samples and supply chain management for production – Full Turnkey (FTK) Services, as they are commonly known.

Further the size and complexity of IP, ASIC and SoC designs are increasing day by day. However, Time-To-Market schedules are continuously being shortened, putting tremendous pressure on making the very first silicon a success.

It is in this environment that SynTest, est. 1990, the leading supplier of DFT (Design-for-Test) tools and services for SoC designs, is now also offering ASIC Full Turnkey (FTK) Services, which include IP, physical design, prototype development and debug, final test; prototype sample delivery; and supply chain management for production delivery. For such engagements, SynTest becomes the Single Responsible Party to deliver the prototype samples and production parts to you.

SynTest’s DFT tools and services improve SoC design testability, which can help reduce Turn-Around-Time (TAT) and overall test costs as well as help to make the very first silicon a success.

### ASIC Full Turnkey (FTK) Services

SynTest offers gate-level-netlist-to-production or GDSII-to-production as FTK engagement models. DFT insertion and/or physical design services can be added as and when required.

The SynTest team works closely with the customer’s design engineering team on DFT insertion and/or layout issues. Having DFT insertion and layouts done by SynTest can help with timing closure and reduce time-to-GDSII.

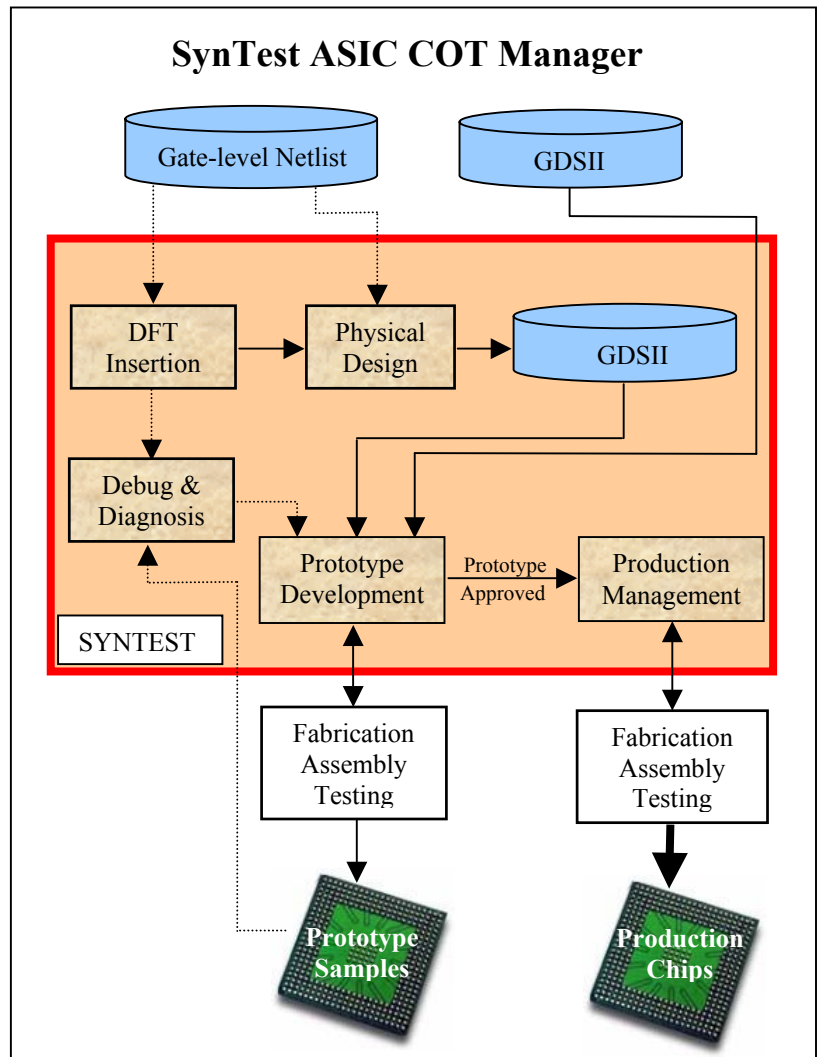
After a rigorous post-layout sign-off process, the GDSII is ready for mask making. SynTest works with its foundry, packaging and assembly partners to coordinate and deliver prototype samples.

SynTest’s prototype debug capability is another important value-add to the FTK engagement. After prototype debug, the samples can be tested “at-speed” on the chosen tester.

SynTest will then perform qualification and characterization of the part and fine-tune the test program for production orders. Production forecasting and supply chain management is part of SynTest’s FTK services.

SynTest is a member of TSMC’s Design Center Alliance for providing Full Turnkey and DFT Services.

SynTest also has connections with various pure-play foundries like Chartered, Dongbu, Fujitsu, SMIC, UMC, and others in order to provide the best and most cost effective design package and production services.





# Physical Design & DFT Services

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## Physical Design Services

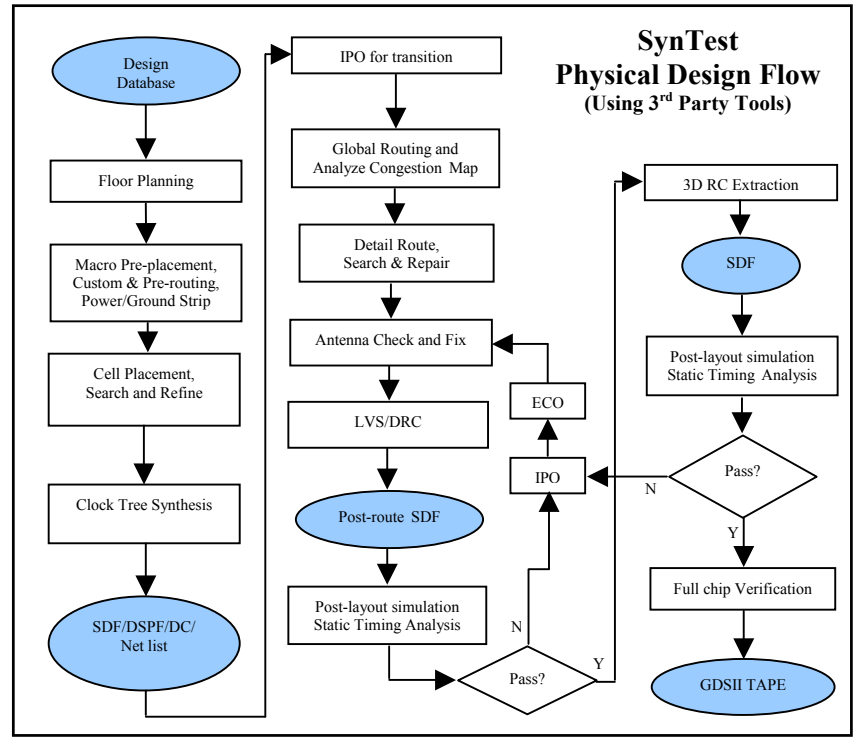
SynTest provides comprehensive physical design and implementation services for customers who develop digital, mixed-signal integrated circuits (ICs) or system-on-chip (SoC) products. We use 3<sup>rd</sup> party silicon libraries and advanced IC layout tools to perform complex physical design tasks from RTL to GDSII.

We work with IP vendors to offer critical elements and various foundries to offer the most cost-effective solution.

Combined with SynTest's DFT services, we provide world-class design skills, dedicated professional project management, and the quality and integrity that ensures the success and time-to-market of your IC development.

## DFT Services

SynTest offers an extensive range of DFT tools that covers DFT Testability Checking, Logic and Memory BIST, Boundary Scan Design, Scan Insertion, ATPG, Fault Simulation and Silicon Debug. SynTest provides services using these tools.



SynTest works with IP vendors offering high-performance configurable cores, to jointly develop testing capabilities in order to deliver greater value to their customers. SynTest's DFT tools allow users of such IPs to improve testability and fault coverage, resulting in reduced defect levels and tester time.

