Teradyne UltraFLEX Test Program Development (TPD) service

What is ATE testing?

Automated Test equipment (ATE) testing refers to the electrical testing of devices (IC) using a tester platform to screen out defects due to manufacturing steps. ATE testing is done in the shortest amount of time with highest % of yield.

Our team at TKS specializes Test program development in a specific Tester platform - **Teradyne UltraFLEX** for complex digital, radar, wireless, and mixed signal SoC devices, which takes deep tester-specific expertise, and internal teams are often stretched thin across projects.

Wafer Sort

Final Test

Which activities TKS performs in Production Test development cycle?

TKS activity

-Datasheet requirements
-Design Documents

Test plan

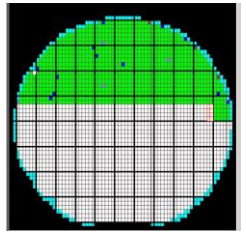
Test concept

Test specification

Offline Test dev.

Online Test dev.
Wafer sort/Final test

Release TP at Wafer sort

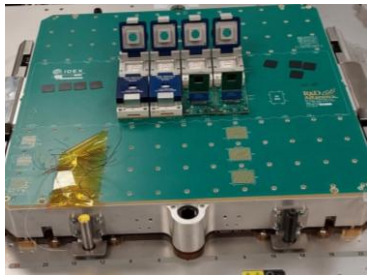


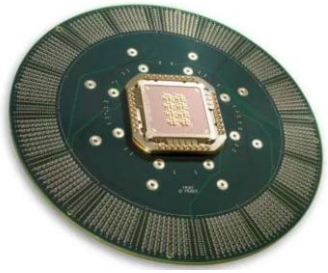
packaging

Release TP at Final test

Release TP at Qualification

Test Hardware development





WHAT WE DELIVER

UltraFLEX TPD, Start to Finish

Dedicated Teradyne UltraFLEX test program development for radar MMIC, wireless SoC, and mixed signal devices, covering the full path from test plan to production release.

- Test plan development and architecture
- Silicon bringup and characterization on UltraFLEX
- Debug, correlation, and production release support
- On-site commissioning and release at your OSAT for small volume or high volume testing

Device Coverage

Radar MMIC | Wireless SoC | Mixed Signal | UltraFLEX

One Tester, One Team

UltraFLEX is all we do. That focus means faster ramp on your programs and no context switching across platforms.

Technical Capabilities

Test spec examples

- Continuity test (Force Currents measure voltage of ESD structures)
- Leakage test (Force Voltage and measure leakage currents)
- Reference Voltage, currents trimming and measurement (for example bandgap and ptat blocks)
- Digital temp sensor trimming and measurement. (Using a reference diode temp, trim the coefficiants at hot and cold)
- Supply monitors trimming and measurement.
- PLL BIST test
- Current Power consumption in radar Application scenario with firmware commands
- DC resistance measurement
- ADC BIST and Gain/Offset measurement
- Contact resistance CRES test for supply lines
- AC impedance test
- SPI and JTAG protocol implementation

Instruments capability

- Ultrapin1600: DSSC source and capture, PPMU, Digital
- UVI80: DCVI and DC Diff meter
- Ultrapac80: ultrapac src and cap
- Pattern development
- HRAM

Additional Activities

- IGXL Spike Checker tool
- Gr and R , Binflips correlation analysis
- DOE Test runs and data analysis for characterization IC blocks over splits and temperatures.
- Test time optimization.

WHY WE ARE BETTER

Competitive advantage

Teams based in Saudi Arabia, Europe and India, that travel on-site for commissioning and release, with remote test development support for the rest of the program lifecycle.

Importance to quality of test

-Even though we have strong command over technical capabilities of the Ultraflex, we are your partners and take special consideration to understand your device.
-Each test implementation is undergone a rigorous peer reviewed process, so that we ensure no bugs or weak tests are introduced that could lead to test escapes.

Dedicated Focus

UltraFlex is our only platform, so every engagement benefits from deep, undivided tester expertise in UltraFlex with expertise of members spanning up to 13 years.

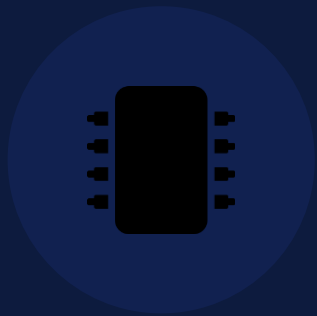
Cost Efficiency

Our optimized global delivery model leverages talent across geographies to provide top-tier expertise at highly competitive rates. You get the quality and focus of a premium provider with the efficiency of a flexible cost structure.

NEXT STEPS

Let's Scope a Program

We'd like to walk the your team through our UltraFLEX TPD experience and identify one active or upcoming test program as a starting point.



1. Review your current UltraFLEX TPD workload
2. Identify a candidate test program
3. Scope engagement and timeline

TKS | UltraFlex Engineering, Delivered globally with quality