

Semiconductor lifecycle testing, technology migration, quality, reliability, device analysis, and product obsolescence solutions for the defense, aerospace, industrial, medical, and commercial markets.

Our core engineering and manufacturing strengths provide advanced solutions in areas such as electrical test and specialty packaging, as well as component, board, and reliability qualification testing, services, and solutions.

Lifecycle Test Solutions

- Three expansive test floors
- More than 30 ATE platforms
- Peripheral engineering and production equipment
- Equipment is available to rent for developing test programs and next-generation products
- In-house test engineers develop prototype, characterization and production test programs for external customers
- ATE-ATE program conversions support cost reduction or end-of-life needs
- Production solutions including drop ship and inventory management

High-Speed, High-Density Solutions

Our in-house test engineering and hardware design teams are very experienced in developing production-ready solutions for high-speed digital and RF devices such as network processors, transmitters, receivers, and line drivers.

For wafer sort, we design vertical probe cards and develop programs for RF devices running as fast as 6 GHz. Final test solutions include multi-site loadboard design and assembly, socket selection and program development for high speed digital ICs running up to 10 GB/s.

Fully-Configured ATE Platforms

- Advantest 93000: Single Density, Pin Scale, Port Scale, Smart Scale
- Credence: D10, Fusion CX, Octet, Quartet, Valstar

Peripheral Equipment

- Seiko-Epson: 8040
- Synax: SX1211, SX1701N, SX3100
- TSK: UF200, UF300EX, UF300EX-cold
- High speed oscilloscopes
- Temperature forcing units

Industry-Certified Quality

ISO9001, AS9100, ISO13485, ISO 17025, DLA, DSCC, ITAR



STS
Silicon Turnkey Solutions

"Our guiding principle is building collaborative partnerships with our customers to contribute to their success."

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Engineering Expertise

- Vector Generation
- ATPG
- Wafer probe hardware design
- Final Test hardware design
- ATE-ATE conversion
- Device characterization
- Final test
- Hardware design & build
- Product engineering
- Prototype analysis
- RMA evaluation
- Test engineering
- Test program development
- Wafer sort
- Yield analysis

Specialty Assembly

- BGA
- Ceramic
- Flip Chip
- Hermetic
- MCM
- Micro BGA
- SIP
- SOC
- Stacked die

Program Management

- Customized systems
- Dedicated personnel

Conventional Reliability

- Autoclave
- Ball/die shear
- Constant acceleration
- Drop
- EFR Analysis
- ESD
- HAST
- HTOL
- HTS
- Latch-up
- Mechanical shock
- Moisture level
- Preconditioning
- Salt atmosphere
- Solderability
- Temp cycle
- THB
- Thermal shock
- Torque
- Vibration
- Wire/die pull

Next-Generation Reliability

- Chamberless burn-in
- Liquid burn-in
- System level reference design
- Thermal-electric cooling

Analytical Solutions

- Auger
- Construction analysis
- CSAM
- EDAX
- Emission microscopy
- Failure analysis
- FMI
- Material analysis
- OBIC
- Raman spectroscopy
- SEM
- Shadow Moire
- X-ray Next-Generation Reliability
- Chamberless burn-in
- Liquid burn-in
- System level reference design
- Thermal-electric cooling
- Processors
- RISC

Production Solutions

- Bake & pack
- Drop ship
- Final test
- Incoming QC
- Inventory management
- Lead/ball scan
- Quality assurance
- Test platform rental
- Wafer sort



Digital & Mixed Signal Devices

- Microprocessors, DSP, Microcontroller, Graphic Engines
- Communications (Ethernet, DSL, Base Band, Networking)
- Consumer (Games, Digital Audio, Digital TV, Set Top Box)
- System-On-a-Chip (SOC), High Performance ASIC
- FPGAs

Memory

- SDRAM, DDR2, 3, SRAM, SSRAM
- EEPROM, EPROM, Serial
- Flash

RF Test Support

- LTX-CX
- Verigy Portscale
- 6/8ghz
- Receiver
- Transmitter
- Power Amplifier
- Frequency Generator
- Transceiver
- In Socket De-embedding (open, short, load and thru)
- 6GHz Wafer Sort
- Low Jitter Clock Source
- ACPR, EVM, Noise Figure, Power, IIP2, IIP3, P1db, Downconvert, Upconvert, PLL, Noise, In Band Spurious, PAE, Turning Curves, RF Frequency, QPSK
- Modulation/Demodulation, I/Q mod/demod
- Custom Frequency Calibration

RF 10+ GHz Capability (Expandable to 80 GHz)

- PA, LNA, Filter, Mixer, Digital TV
- Wireless LAN, Bluetooth Product Test Program

Mixed Signal Support

- Low Speed Digitizer
- High Speed Digitizer
- High Resolution Digitizer
- Low Speed AWG
- High Speed AWG
- Multiwave
- M8AV8
- DCTM

Linear

- DAC, ADC, Op-Amps, Comparators
- Switches, Multiplexers, Interface
- Discrete, Arrays

