

T6391 Tester for Display Driver ICs

Test solution combines advanced capabilities with high throughput for cost-efficient testing of DDIs used in high-resolution LCDs



T6391

Integration trends are accelerating for the display driver ICs (DDIs) that control the performance of high-resolution LCDs. Today's DDIs contain a large and growing number of logic/analog circuits that manage high-level functions such as touch-sensor operations. At the same time, the expanding use of LCDs in mobile electronics is driving market demand for smaller DDI sizes and more capabilities. These factors raise serious IC-testing challenges. ADVANTEST's T6391 system is designed to address these needs as well as DDIs' increasing number of pins and faster interfaces.

Versatile and extendible

The T6391 achieves broad test coverage for all kinds of applications including analog, memory and logic circuits with high pin counts and high-speed interfaces. This versatility, enabled by the system's pin-card design, makes it the industry's best test solution for both engineering and production applications.

In addition to meeting customers' current needs, the T6391 was developed with future performance requirements in mind. It is capable of testing PMIC functions embedded within DDIs, a projected advancement in next-generation devices. To simplify engineering efforts, the tester leverages the same TDL programming environment as all other testers in ADVANTEST's T6300 series.

Greater operating efficiency for high throughput

The T6391's high-speed bus enables fast data transfer and calculation for industry-leading throughput. With 512 I/O channels, it can handle several devices in parallel. The system is designed for reliable, large-volume testing of high-resolution DDIs with up to 3,584 pins, as used in full high-definition (HD), WXGA and HD720 displays.

A test solution for advanced ICs

To test DDIs that use MIPI (mobile industry process interface), the standard protocol for mobile electronics, the T6391 can handle I/O pin frequencies up to 1.6 Gbps. Using an additional measurement module, the system can test the next-generation 6.5-Gbps interfaces that are used in LCD drivers for ultra-high-definition televisions including the 4K (2160p) generation.

Testing of analog ICs is facilitated by the T6391's 16-channel arbitrary waveform generator (AWG) and digital capture feature. Scan and memory tests are enabled by scan pattern generator (SCPG), algorithmic pattern generator (ALPG) and address fail memory (AFM) features.



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ADVANTEST CORPORATION

United States Headquarters, Advantest America, Inc., 3061 Zanker Road, San Jose, CA 95134