

ST808 | CONTROLLED IMPEDANCE TESTER



- *TDR Technology (Time Domain Reflectometry)*
- *IPC standards compliant*
- **10 Ghz and 20 Ghz** in the same instrument
- *6 channels*
- *New **ECHO-Z**[®] deconvolution algorithm*
- *New ESD protection technology*
- *High Precision also at low Impedance values*
- *Single Ended and True Differential measurements*
- *Capability of testing real traces without coupons (OBT)*
- *Measurements of traces from 15 mm up to 75 cm*
- *New range of large bandwidth probes*
- *Saving of the complete waveform in .tds files*
- *Insertion Loss testing (optional)*
- *Selfcalibration*
- *Designed for PCB manufacturers*

ST808 is an instrument for the measurement of Impedance on Printed Circuit Boards that at a convenient price allows PCB manufacturers to perform a wide range of measurements according to IPC standards.

ST808 is unique on the market, combining robustness and easy of use with high performance typical of expensive and delicate lab instruments.

In recent years, the controlled impedance test market has seen increasing demand for on-board testing of pcb product (**OBT**). This results in a need for test equipment that has the bandwidth to measure shorter traces, and probe accessories that can handle the increased bandwidth.

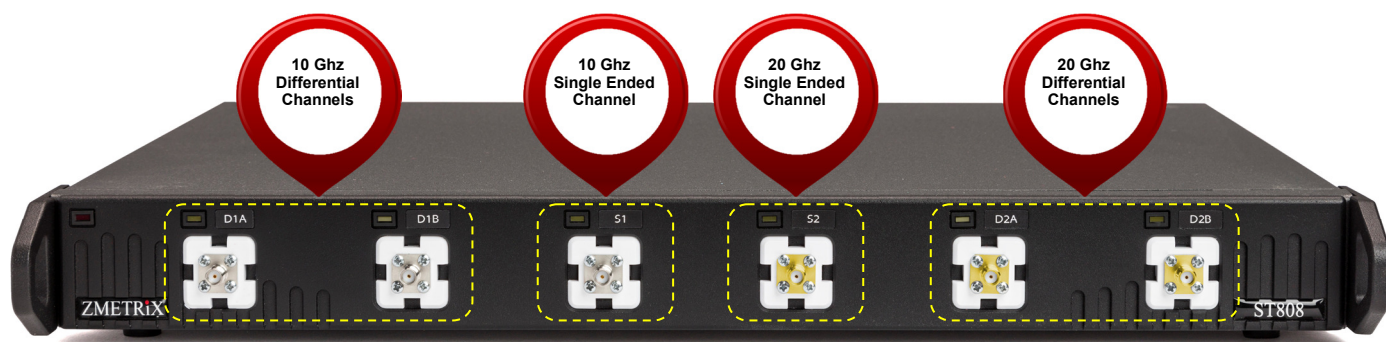
Thanks to its 20 Ghz bandwidth, **ST808** allows the test on real traces without the need for coupons. A wide range of large bandwidth probes, specifically designed by Zmetrix, make possible the test of impedance on the most varied situations. **ST808** can test traces from 15 mm up to 750 mm long.

ST808 can also be used for testing traditional coupons with the same easy of use of traditional instruments.

ST808 has been designed for a production environment with a set of innovations that allow the execution of complex measurements, previously reserved only to labs, even by non qualified personnel.

Like all other instruments of **ST** series by Zmetrix, robustness and high protection against ESD make **ST808** an instrument easily usable in lab as well as in production.

ST808 Advance performance ...within your reach !



Six Measurement channels for all needs

ST808 is equipped with 6 channels with totally independent hardware. **D1A** and **D1B** are two 10 Ghz channels for the true Differential measurement of coupons and OBT of traces down to 50 mm long. **S1** and **S2** are two Single Ended channels : the first at 10 Ghz for coupons and OBT and the second at 20 Ghz for OBT only. **D2A** and **D2B** are two channels at 20 Ghz that can test differential groundless on board traces starting at 15 mm long.

New ECHO-Z[®] deconvolution algorithm

A unique characteristic of **ST808** is the new patent-pending ECHO-Z[®] deconvolution algorithm developed by Zmetrix. ECHO-Z[®] dramatically improves the resolution of impedance transitions, whether due to probe/trace interactions, vias, or trace impedance changes. The increased resolution of the measurement results in a quicker transition to the correct impedance value, more 'flat' area to measure, and the ability to make shorter trace measurements.

New large bandwidth range of probes

ST808 has available a wide range of new probes for any measurement need. New changes in the probe structure, combined with custom probe tips now eliminates 'ringing' at the insertion point that is common to most high-bandwidth measurements. Probes are made by most advanced PCB materials for high frequencies and have a bandwidth in excess of 20 Ghz. They can take on-board measurements with pin or trace spacings from 0.020" (0.5mm) to 0.065" (1.5mm), insertion loss measurements using the latest standards, as well as coupon measurements with a variety of pin configurations. **ST808** is also compatible with Tektronix probes. Whatever the measurement, the **ST808** has a probe that's right for the job.



Selfcalibration and auto check up

High precision semi-rigid standards are now embedded in the electronic of the **ST808** which can now perform an auto-calibration at every test. A new snapshot function allows a total check up of the instrument from remote. No more worries for tedious calibrations or troubleshooting.

An open system

Thanks to its hardware and the supplied software, **ST808** is open to more complex applications like the **insertion loss** measurements and connection to automatic measuring systems. In this regard Zmetrix has developed several options for the manufacturing of large bandwidth fixtures for ATE and for the connections to Flying Probes testers.

Technical Specs

Measurement range	: 0-200 ohm
Precision	: 1% on all range
Impedance resolution	: 0,03 ohms
Linear resolution	: 3 points/mm
Trace length	: from 15 mm to 750 mm
Calibration	: four points : 25,50,75,100 ohm
Bandwidth	: 10 and 20 Ghz