Automated Test Systems for Electrical Appliances

Location: Worldwide
Customer: Agilent Technologies

Introduction:

Electronic products need to be tested during the manufacturing process to ensure quality before release into the consumer market. A cellular phone, for example, has many electronic components that require thorough quality assurance. To keep pace with the production line, up to 300 items will need to be processed in less than one minute, a rate at which human operators are simply too slow to maintain. Computer automated testing is the only way to keep up with 24/7 production lines and still retain high standards of quality testing.
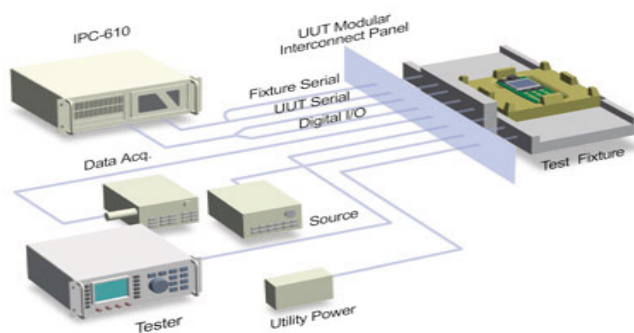

Solution:

Agilent Technologies has designed and implemented an automated test system, Agilent GS-8000, to provide non-stop operation on the manufacturing site for quality testing 2G and 3G phones. Each Agilent GS8000 can test two handsets simultaneously using multithreaded computing. The system requires industrial-grade hardware that is durable enough to operate without interruption, and consists of one computer and two sets of test instruments mounted on one rack to save floor space. Since system integrators will support their testing system for three to five years, they need a system with reliable, long-lasting parts that can be serviced or replaced if necessary. High-quality products are needed to reduce or eliminate the down-time of a manufacturing plant. Due to its excellent system design, the Agilent GS-8000 solution has been widely accepted by cellular phone manufacturers worldwide since 2000.

System:

The Agilent testing system uses an industrial PC controller, two isolated digital I/O counter cards, and an RS-232 PCI Communications Card from Advantech. The system is housed in the IPC-610, a 4U rack-mountable chassis from Advantech that supports up to fourteen cards and a single PS/2 or redundant ATX power supply.

Benefit:

- Advantech manufactures quality products that are tested over long periods of time and under adverse conditions
- Advantech supports its customers by providing system design and integration expertise at the local level.