HUNTRON Products for the Medical Electronics Field

Medical Electronics Precision Diagnostics

In the medical electronics industry, accuracy and reliability are paramount. Medical device manufacturers, repair/maintenance technicians, and QA managers face the challenge of maintaining and troubleshooting complex printed circuit assemblies (PCAs) in life-critical devices. Huntron provides proven, non-invasive, power-off diagnostic tools that help detect faults precisely, meet regulatory compliance, and improve operational performance.

Key Challenges in Medical Electronics and How Huntron Solves Them

Industry Challenge	Huntron Solution
Diagnosing faults in sensitive PCAs	Analog Signature Analysis (ASA) enables safe, power-off testing
Maintaining legacy systems with limited to no documentation	Huntron Trackers provide ASA fault detection without requiring schematics
Ensuring compliance with strict safety and regulatory standards	Huntron Workstation Software centralizes test data and supports traceability through documentation generated from testing.
Reducing downtime and improving diagnostic accuracy	Access Probers automate diagnostics, taking the human error factor out of testing and speeding up the repair-cycle

Huntron Features and Benefits

- PCAs of the current era continually get smaller and more complex. Automated micron level probing eliminates the error and time factor from manual hand probing for diagnostic or parametric testing.
- Huntron tools accelerate troubleshooting, providing a targeted area to look for issues on a PCA and reduce equipment downtime. Automated testing via Access Probers further reduces this downtime and allows for reducing the repair process.
- Completely customizable test routines can be integrated with existing test procedures.
- Troubleshoot undocumented or obsolete circuit boards by comparing to a known- good reference board. Isolate faults and repair at the component level instead of discarding the entire board.
- Huntron Trackers equipped with a Scanner enable the ASA power-off testing of device's electronic ports.
- Multiple options available for training and onboarding onto Huntron systems as well as world-class support.

New Perspectives: Unlocking Success for the Medical Electronics Industry

Huntron products offer alternatives to the traditional fault-repair process. Its product suite supports preventative maintenance and fault prediction, helping identify issues before they occur. The open architecture system allows users to expand testing capabilities and choose solutions that best fit their needs.

Let Huntron Help You Be Successful in Test and Repair of Medical Electronics!

Huntron Products and Applications for Medical Electronics

Huntron Tracker – Models: 2800, 2800S, & 3200S

Application: The Huntron Tracker is used in medical electronics manufacturing, repair, and maintenance to safely diagnose faults on printed circuit assemblies (PCAs). This is especially important for devices such as patient monitors, infusion pumps, and imaging systems, where powered testing could cause further damage. The Tracker helps technicians identify component-level faults without requiring circuit diagrams, even on mixed signal boards. It supports preventative maintenance by comparing baseline electronic signatures and can verify refurbished equipment before it is returned to service. This non-invasive method helps extend equipment lifespan, reduce downtime, and protect the reliability of critical medical systems.

Description: The Huntron Tracker is a benchtop diagnostic tool that uses power-off Analog Signature Analysis (ASA) to identify component-level faults on PCAs.

Tracker 3200S is Huntron's most advanced model, offering expanded ASA capabilities and flexibility. It includes two 64-pin IDC connectors and supports automated ASA testing when integrated with the Access 2 Prober.

Tracker 2800S is a durable entry-level model suitable for general troubleshooting and includes two 40-pin IDC connectors for scanning connectors and ports using custom cable interfaces.

Tracker 2800 is a durable entry-level model suitable for general troubleshooting.

Huntron Access Prober – Models: Access 2, DH2

Application: Medical devices often contain compact and densely populated PCAs. Access Probers use micro-stepping motors and linear encoders to place probes on the device under test with high precision. With micron level accuracy, these systems automate the testing process, allowing technicians to focus on other tasks while tests are performed independently. Access Probers are optimized for low-volume, high-mix testing environments, making them suitable for medical repair and maintenance centers as well as research and development laboratories. Repeatable test profiles developed in Workstation, simplify switching between different boards. These systems can also be configured to work with external electronic measurement instruments such as oscilloscopes, digital multimeters (DMMs), and LCR meters, enabling integration with existing workflows.

Description: The Access Probers automate the testing of printed circuit assemblies (PCAs), achieving speeds up to ten times faster than manual methods. Using Huntron Workstation, a built-in camera is used to target probing locations, when CAD files are not available. Maintenance is straightforward, requiring occasional lubrication of the axis rails.

Access 2 Prober includes a single flying probe head for benchtop testing. When paired with the Tracker 3200S, it enables automated, power-off Analog Signature Analysis (ASA) testing in Workstation.

Access DH2 model features two flying probe heads and can test across components with a minimum spacing of 50 mils (0.050 inches / 1.27 mm). It is housed in a mobile cabinet and includes integrated ASA testing. This system can be configured for 4-wire measurements.

Huntron Software – Huntron Workstation 4.3

Application: Regulatory compliance is a major concern in the medical electronics industry. **Huntron Workstation** allows users to perform tests consistently and record results to meet traceability requirements. It also supports integration with other electrical measurement tools, enabling centralized management of test procedures and data.

Description: **Huntron Workstation** is the central software platform used with Huntron Trackers and Access Probers. It provides a unified system for managing and executing test procedures. Built on a database foundation, Huntron Workstation is reliable, user-friendly, and adaptable to various testing needs.