

Precision Diagnostics for Failure Analysis

The failure analysis industry plays a critical role in ensuring the reliability, safety, and longevity of electronic systems across fields of industry. When systems fail—whether due to component degradation, environmental stress, manufacturing defects, or design flaws—failure analysis provides the structured methodology to uncover root causes and prevent recurrence. Analysts need tools that can safely and accurately diagnose faults at the component level—often without applying power to the device under test. Huntron’s suite of diagnostic tools use Analog Signature Analysis (ASA) as a safe power-off method to pinpoint and isolate faults on printed circuit assemblies (PCAs).

Key Challenges in Failure Analysis and How Huntron Solves Them

Industry Challenge	Huntron Solution
Finding hidden or intermittent faults in PCAs	ASA isolates and reveals changes in component behavior that are not detectable through conventional testing.
Risk of damage from conventional testing	Huntron Trackers use ASA to execute safe power-off testing and requires no power given to the device under test.
Integration with existing test systems	Huntron Workstation Software centralizes test data and supports integration with external instruments, through SDKs, and Huntron Remote.
Complex and densely populated PCAs	Access Probers automate diagnostics with micron level precision, taking the human error and time factor out of testing.



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.
- 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. Increase test coverage by isolating faults for analysis at the component level.
- 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 in Failure Analysis

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. Keep faults upstream and avoid costs downstream.

Let Huntron Help You Be Successful with ASA in Failure Analysis!

Huntron Products & Applications for Failure Analysis

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

Application: The [Huntron Tracker](#) is a valuable tool in the Failure Analysis sector, having the unmatched ability to safely diagnose faults on printed circuit assemblies (PCAs). This is especially important in preserving the state of a PCA for further analysis, where powered testing risks 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 detect marginal or intermittent faults missed by conventional tests. This non-invasive method is an indispensable tool for labs focused on root cause analysis and long-term reliability.

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 connector Scanner modules for testing connectors and ports using custom cable interfaces. Automated ASA testing is supported 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 connector Scanner modules 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: Huntron Access Probers redefine failure analysis by automating the probing of high-density, complex PCA's using micron-level accuracy. Designed for fixtureless diagnostics, capability for integration with a wide range of test instruments is available including dual head [Access DH2 Probers](#) support of 4 wire Kelvin measurements. [Access Probers](#) are optimized for low-volume, high-mix testing environments, making them suitable for failure analysis labs. Repeatable test profiles developed in [Workstation](#), simplify switching between different boards. Whether performing power-off fault isolation with ASA or executing stimulus/response tests, Access Probers streamline workflows, reduce human error, and accelerate root cause identification.

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 also be configured for 4-wire measurements.

Huntron Software – Huntron Workstation 4.3

Application: [Huntron Workstation](#) allows users to perform tests consistently and generate documents of results. Integration with other electrical measurement tools is also supported, enabling centralized management of test procedures and data. Support for test development using CAD layout data streamlines the test development process further, saving hours in developing and running tests for devices with densely populated test points.

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 as well as storing results. Built on a database foundation, Huntron Workstation is reliable, user-friendly, and adaptable to various testing needs.