

Precision Diagnostics for Data-Com

In high-performance computing environments, where high speed signal integrity and reliability are vital, even the smallest fault can disrupt performance across networks, where uptime is critical and downtime is costly. As designs grow more complex and densely packed, traditional testing methods often fall short in identifying subtle component-level issues. Whether maintaining hyperscale data centers, AI server clusters, or enterprise networking infrastructure, the ability to quickly and accurately diagnose faults in printed circuit assemblies (PCAs) is essential. Huntron’s diagnostic solutions—powered by Analog Signature Analysis (ASA)—offer a non-invasive, power-off approach that can test and isolate faults with precision.

Key Challenges in Data-Com and How Huntron Solves Them

Industry Challenge	Huntron Solution
Diagnosing faults on dead or unbootable boards	ASA testing requires that the device under test be powered off. Faults are detected at the component level using analog signatures, even on “dead” boards.
Maintaining legacy or proprietary systems with limited to no documentation	Huntron Trackers provide ASA fault detection without requiring schematics using comparison to known-good boards.
Fine pitch components and densely populated PCA’s	Huntron Access Probers test with micron-level precision at speeds greater than a human.
Reducing downtime and improving diagnostic accuracy	ASA fault isolation provides a targeted area to look for faults, reducing the mean time to repair.

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 PCAs and reduce equipment downtime.
- 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 testing of devices' electronic ports.
- Multiple options available for training and onboarding onto Huntron systems as well as world-class support.



New Perspectives: Unlocking Success for the Data-Com 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 Data-Com Test and Repair!

Huntron Products and Applications for Medical Electronics

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

Application: The [Huntron Tracker](#) brings unmatched versatility to the Data-Com industry in safely diagnosing faults on printed circuit assemblies (PCAs). Using Analog Signature Analysis (ASA), 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 streamline diagnostics in both repair and manufacturing environments.

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 scanning connectors and ports using custom cable interfaces. The [Tracker 3200S](#) 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 connector Scanner modules for scanning connectors and ports using custom cable interfaces.

[Tracker 2800](#) is a durable entry-level model suitable for general ASA troubleshooting.

Huntron Access Prober – Models: Access 2, DH2

Application: [Huntron Access Probers](#) bring micron-level precision automation to Data-Com diagnostics, streamlining the testing of densely populated PCAs found in routers, switches, and other datacom infrastructure. [Access Probers](#) use micro-stepping motors and linear encoders to place probes on a device under test with high precision. These systems automate the testing process, reducing test time and error, and 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 service centers, repair depots, or Data-Com support teams. 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: [Huntron Workstation](#) is a robust, model-driven platform that allows users to perform board level diagnostic tests consistently to isolate faults at the component level. Support for integration with other electrical measurement instruments enables centralized management of test procedures and data. SDK's and Huntron Remote enable integration with existing workflows.

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.