WHITE PAPER Bigfoot Spectral Cell Sorter

Bigfoot Spectral Cell Sorter

Rapid response for service and support

Introduction

Groundbreaking flow cytometry research involves time-sensitive, expensive, and rare samples that require timely investigation with stable instrumentation. Unexpected downtime can ruin experiments, upend schedules, and overrun costs. The Invitrogen™ Bigfoot Spectral Cell Sorter was designed to enable research workflows with minimal downtime. Meeting this goal requires reliable instrumentation paired with rapid response for service and support.

First-class instrumentation design and manufacturing

The Bigfoot Spectral Cell Sorter was designed using high specification standards for flow cytometry instrumentation, with ongoing input from industry leaders throughout development. The Bigfoot Spectral Cell Sorter was designed by in-house engineers with knowledge about the principles and demands of flow cytometry. Better instrument design and manufacturing lead to superior quality and maximum uptime.



The Bigfoot Spectral Cell Sorter has cameras, sensors, and software that work together to continually track system health. In-depth information is collected by six cameras, eight temperature sensors in the electronics subsystem, and hundreds of embedded sensors and registers that collect and report instrument status. System health information is sent to the Bigfoot support team daily via the cloud. It is then evaluated by software that monitors performance trends and flags issues for further evaluation by expert technical support. The purpose of tracking system data is solely to monitor product performance and to provide rapid service response when problems arise. No personal or scientific data are accessed or stored.

Remote support

Support personnel are quickly available via email, video call, or telephone, and can access the instrument remotely if you prefer. This enables the team to quickly evaluate the situation and, if necessary, test, calibrate, and remedy more than 85% of issues without a service visit. In the rare instance when a service engineer must travel to the laboratory, it is likely that system health information and remote diagnostics have already helped the engineer identify the problem. If parts must be replaced, they can be ordered and shipped overnight while the engineer travels to the site to reduce downtime.





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Cloud Services

Cloud Services and support were introduced on our systems in 2017, and as of March 2021, all Bigfoot Spectral Cell Sorters make use of the technology. Cloud Services allow our service and support team to securely provide responsive, high-quality assistance.

Data flow between a Bigfoot Spectral Cell Sorter and Cloud Services makes use of two-way communication. The first is a one-way protocol that is used for all system health communication. The second is a two-way protocol that not only includes status communication but also allows for control of the hardware via remote application. Note that accessing this second type of communication can be controlled by the user; no experiments, protocols, or sample data are retained by Cloud Services.

An in-depth white paper on cloud security and consultation with Bigfoot software engineers are available on request. Cloud Services include:

- High-level security provided by Microsoft[™] Azure[™] servers and support
- Multiple firewalls
- Data encryption
- A team of experienced professionals, including field service engineers, design engineers, applications scientists, and software engineers

Summary

The Bigfoot Spectral Cell Sorter provides outstanding quality as well as a new approach to service and support that is superior to traditional modes. Timely service allows researchers to stay efficient and within their budgets.

