Ethernet Communication for Pneumatic Tube Systems

Upgrading your network for enhanced performance

For more than 40 years, hospitals have relied on traditional serial communication lines to support their pneumatic tube systems (PTS). As functionality has evolved to improve reliability and usability, so too has the backbone of the PTS network. Slow, problematic serial lines have been replaced with Ethernet as the technology of choice.

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«After upgrading our pneumatic tube system communication lines to Ethernet, we experienced improved system uptime, fewer alarms and a reduction in calls from users. Our clinical staff is more satisfied with the performance, which means I spend less time maintaining the system.»

- William Wilkie, Director of Facilities, Lake Charles Memorial Hospital

Why Ethernet?

Ethernet is superior to serial communication in many ways. Some of the advantages that most greatly impact operations include:

Faster Communication

With Ethernet, data is transferred 10,000 times faster than serial communication. Downloads and updates are measured in seconds and minutes, not hours, as seen with serial. That means minimal interruptions and maximum station availability.

Maximum System Uptime

Ethernet has proven to be much more stable than serial communication. One of the most common complaints about traditional serial communication is that when a single device is impaired, the entire line goes down. That means significant time spent locating the source of the issue and major disruptions for clinical staff. With Ethernet, an issue is contained to only that single device.

Scalable Technology

Beyond the reliability improvements from an Ethernet upgrade, the enhancements provide flexibility for the future. Hospitals can expand virtually as system requirements change and enhanced speeds enable user-driven improvements to the hardware and software.

Greater Control

When a system is upgraded to Ethernet, it becomes part of the hospital network. A facility's Information Technology (IT) department can then monitor the system and address issues as soon as they arise. When the system is easy to troubleshoot, that means fewer calls from clinical staff and a timely return to normal operations.

Frequently Asked Questions About Ethernet Upgrades

As facilities transition from serial to Ethernet communication lines, they commonly have questions about making the change and how it will impact them.

Do I have to upgrade my entire system at one time?

Upgrading to Ethernet is simple. It can be done one device at a time, or all at once, depending on the budget and needs of a facility. Our team can develop a project plan that accommodates these requirements and schedules work when it is most convenient for you.

What will it cost to upgrade my system to Ethernet?

The size of your PTS system determines the necessary investment to upgrade. These initiatives can typically be absorbed into an operational budget, especially when a project is completed in phases.

Isn't Ethernet more expensive than serial communication?

There is a common misconception that Ethernet is more expensive than serial communication lines. For new hospital construction, there is almost no difference in investment. For facilities that upgrade to Ethernet, the cost of downtime and maintaining old, deteriorating serial lines must also be considered. In many cases, changing over to Ethernet is the lower-cost option over time.

How long will my system be down for an Ethernet upgrade?

System devices can be changed over to Ethernet communications one device at a time. This minimizes any system-wide downtime and allows much of the system to remain operational during the upgrades. In the long run, Ethernet greatly reduces system downtime. With traditional serial communication, when one device on a serial line is impaired, the entire line may be affected, interrupting communication to multiple pieces of equipment." That means major disruptions for nursing and pharmacy and significant issues for facilities management. With Ethernet, any issue is contained to that single device.

Are there any other system upgrades I should complete while transitioning to Ethernet?

When upgrading to Ethernet, many Swisslog Healthcare clients choose to evaluate their total PTS performance. Our team of system optimization specialists can identify areas for performance improvement and develop a roadmap for upgrades. On top of greater reliability, this may include user-driven enhancements such as intuitive touchscreen panels and medication tracking technology.

Lead change for better care.

About Swisslog Healthcare

Swisslog Healthcare is a leading supplier of solutions and services for medication management, combining both transport and pharmacy automation. Swisslog Healthcare has installed facility-wide transport and pharmacy automation systems in more than 3,000 healthcare institutions worldwide. The company offers integrated solutions from a single source—from consulting to design, implementation to lifetime customer service. For more information, visit swisslog-healthcare.com.

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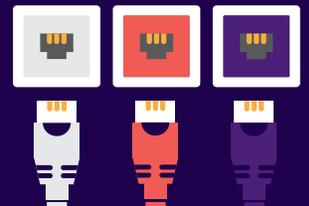
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