

Seriplex[®] Control Bus:
The Fast, Deterministic
Choice For Distributed I/O
That Cuts Installed Costs
By Up To 70%

The Only Choice That Has It All

PLCs revolutionized manufacturing by centrally controlling hundreds of discrete mechanical functions scattered across the plant floor.

Seriplex Control Bus revolutionizes it again by giving today's agile manufacturing environments all the advantages of distributed I/O plus fast, simple design, easy configurability and total installed costs 40 to 70 percent lower than higher-level networks or other I/O control systems.

Unlike centralized control hierarchies, Seriplex Control Bus is so simple and logical, it's truly an **"electrician's network."** It installs in days instead of weeks, which slashes costs and start-up time and eliminates the chance of crossed wires. Unlike other networks, its real-time, deterministic performance can be replicated again and again, even over distances of 5,000 feet or more. It accommodates any configuration (star, loop, tree, multi-drop), and works with or without a host. It installs on top of an existing system without interrupting production, and it interfaces easily with higher-level fieldbus and LAN-based systems.

Seriplex Control Bus is easy to learn because there's no protocol. It's an open technology that works with any manufacturer's low-level control devices, and its performance is proven, with more than 2,500 installations and more than 1,000,000 points installed since 1990 for some of the world's leading manufacturers.

So Simple, It's Elegant

Seriplex Control Bus is the best, most cost-effective control choice for today's agile manufacturing environments. It offers sophisticated performance, yet is simple to understand, design, install and use.

The Seriplex bus consists of a small, four-wire cable that provides both communication and power and connects directly to over 510 devices. Logic resides at each device in the form of a small, inexpensive, application specific integrated circuit (ASIC), which provides the communication capability, addressability and intelligence to control sensors and actuators connected to the control bus.

The system eliminates the thousands of parallel wires usually run through conduit between local control cabinets and devices, including sensors, push buttons, limit switches, valves, contactors and thermocouples. It offers noise immunity and supports binary and analog device communication plus serial digital communication such as RS232/485.

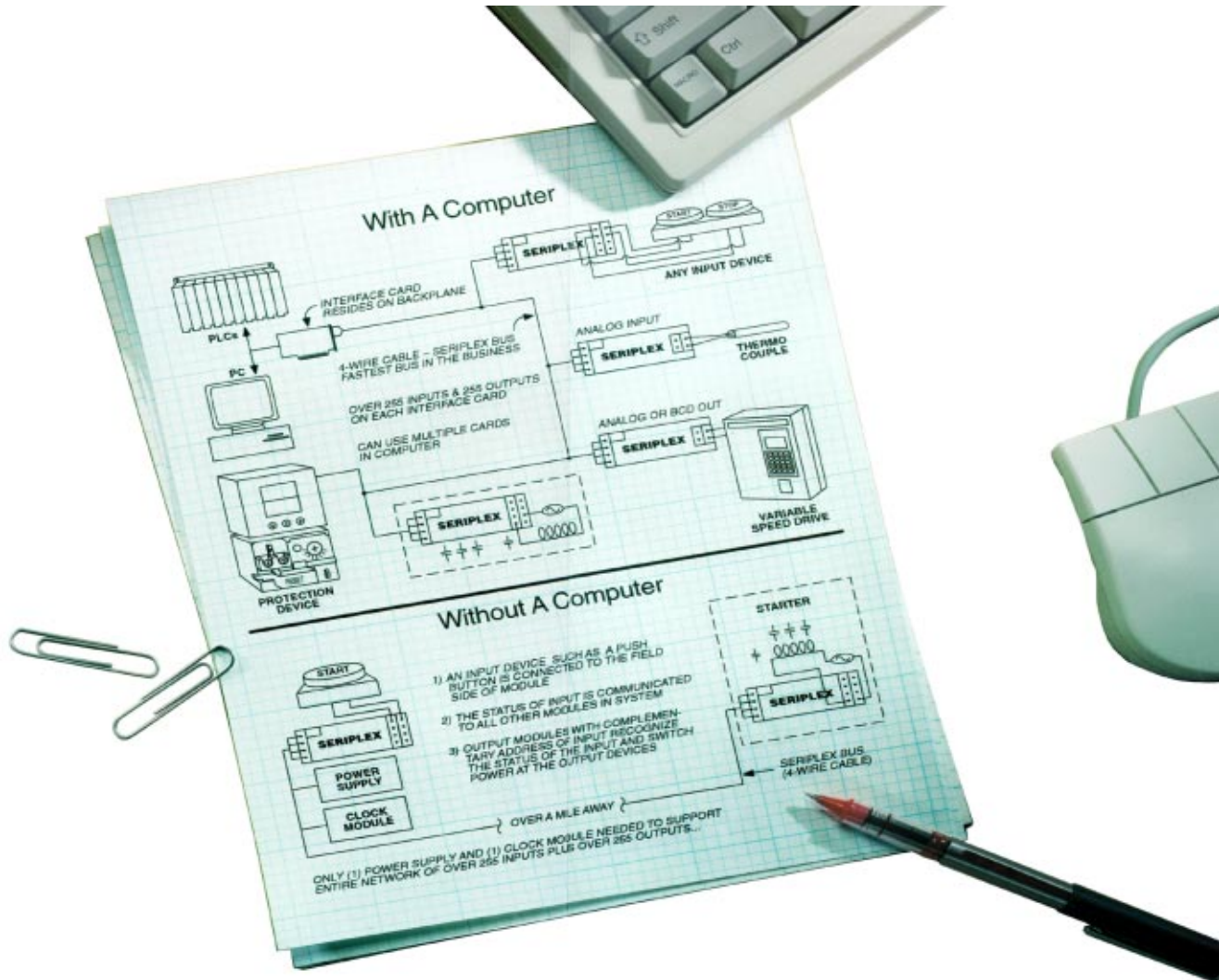
The ASIC may be embedded into the device by its manufacturer, or the device may be connected to a Seriplex I/O module containing the ASIC chip, which is then connected to the bus. Embedded and non-embedded devices may be used in any combination on a single bus, giving users unmatched application flexibility.

The Fastest Bus in the Business

Seriplex Control Bus delivers the perfect combination of features and benefits for today's agile manufacturing environment, a combination unmatched by either conventional control or higher-level systems:

- **Seriplex Control Bus is economical.** Its total installed cost is up to 70 percent less than traditional hard-wired systems and about half that of higher-level systems. As a bit-level system, which covers 80 percent of your device-level control needs, Seriplex Control Bus is right-sized to the application. It allows you to maximize performance while minimizing your investment. It's also the perfect complement to higher-level systems designed to handle less time-critical, non-process functions.
- **Seriplex Control Bus is fast.** System throughput time is 0.4 msec for 32 sensors plus 32 actuators (5msec for 510 I/O), compared to 26 msec or more for higher-level systems.
- **Seriplex Control Bus is deterministic.** It performs a function in exactly the same way at exactly the same speed each and every time. Because of their arbitration structure, higher-level systems can't replicate performance in this manner.

- **Seriplex Control Bus has reach.** It is effective at distances of 5,000 feet or more, compared to a maximum reach of 1,640 feet for higher-level systems.
- **Seriplex Control Bus is flexible.** It accommodates any topology, including any combination of tree, loop, star, and multi-drop; and it works with or without a computer.
- **Seriplex Control Bus is a proven performer.** More than 1,000,000 I/O points are at work in many of the world's leading manufacturing plants. Meanwhile, some higher-level systems are still on the drawing board.



Check Us Out

As an open technology, the information needed to develop Seriplex compatible devices is available at no charge to any manufacturer who signs a technology partner agreement; development kits are available for a small materials charge. ASIC chips are available to sensor and actuator manufacturers through American Microsystems Inc. or Square D Company. This ensures Seriplex Control Bus users unmatched flexibility in choosing I/O devices, and the ability to mix and match different manufacturers' devices on a single system with guaranteed interoperability.

For more information on Seriplex Control Bus systems and applications, a list of current technology partners or details on becoming a technology partner, contact STO at 800-775-9462, or see our web site, www.seriplex.org.



