SR9000 Smart Star™

Modular and Expandable Embedded Control System

The Smart Star is a modular and expandable embedded control system designed for demanding real-time control and data acquisition applications. Multiple I/O card options—including digital, A/D, D/A, and relays—allow users to closely match their specific I/O needs. The Smart Star CPU card comes in both Ethernet and non-Ethernet versions. A cost-effective keypad/display is also available.

Features

- Ethernet connectivity—CPU card with or without Ethernet
- Flexible functionality—modular configuration to easily interchange or replace individual I/O cards
- Multiple I/O card options—digital I/O, A/D, D/A, relay
- Expandable—up to 168 I/O
- Cost-effective—low cost per I/O
- Optional keyboard/display—backlit 122 x 32 pixel graphic LCD with 7 user-relegendable keys, 7 LEDs

To make integration easy, the Smart Star has been designed with careful consideration given to configuration, implementation, and maintenance requirements. Modular expansion allows you to use the same Smart Star architecture in both small and large applications. The Smart Star is especially appropriate where cost and physical size are critical. Unprecedented I/O density is provided with up to 168 I/O supported in a panel size less than 27.3 square inches.

The basic Smart Star system consists of a rugged backplane with power supply, a CPU card, and one or more I/O cards of your choice. The Smart Star backplane is available in two models, the 8-slot SR9010 and the 4-slot SR9050. With one slot on the backplane reserved for the CPU, remaining slots can be utilized for any combination of I/O cards, giving designers a customizable platform for their applications. The CPU card is powered by the Rabbit 2000™ microprocessor operating at 22.1 MHz and features 512K of Flash memory and up to 512K of SRAM for program and data storage.

Connections to I/O cards are via pre-assembled flat ribbon-cable assembly or optional field wiring terminals (FWTs). Ribbon-cable provides the lowest cost connection for high-volume applications with no variation in wiring from unit to unit. FWTs provide pluggable or screw-type terminals for discrete, customized connections and easy field maintenance.

Programming the Smart Star

Programs are developed using Z-World's industry-proven Dynamic C® software development system. An extensive library of drivers and sample programs is provided, along with royalty-free TCP/IP stack with source. The Smart Star can be programmed and debugged over Ethernet/Internet using appropriate accessory hardware. For optional keypad/display, software libraries and a built-in converter program facilitate display of international characters, bitmap images, and graphic constructs such as circles, lines, and squares.