Symmetry™ M2150 8DBC Controller

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System Overview

The multiNODE is a key feature of an access control system. It provides distributed intelligence, resilience in the event of network failure, and fast response to access requests.

The Symmetry multiNODE 2150 8DBC is an eight door intelligent controller that provides flexible configurations for up to:

- 16 Readers (with addition of 8DC 8 door controller)
- 56 Monitor Points
- 12 Auxiliary Outputs
- 250,000 Cardholders

The Symmetry multiNODE 2150 8DBC supports connections to a client PC via the Local Area Network, hard-wired communications port or remote dial-up modem.

Each Symmetry multiNODE 2150 8DBC controller fully supports connection of up to eight readers and doors. The configuration is flexible and can be expanded up to 16 readers using a range of door controllers. In addition to direct LAN connection, the controllers can be networked to form a chain of controllers. There can be one or more chains, with up to 32 controllers per chain.

Each chain of Symmetry multiNODE 2150 series controllers communicates with PCs running the feature rich Symmetry Professional or Symmetry Enterprise security management software. The security management software is used to set up the rules of access control, monitor alarms, produce reports and administer one or more facilities.

Communication schemes may be configured as follows:

- Via a LAN/WAN connection, using an optional network-interface module card
- A hard-wired single chain via an RS-232 to 20mA converter
- A direct hard-wired single chain via the on-board RS-232 port

- Fault tolerant bi-directional communications by connecting the last controller on a chain to a second port of the monitoring PC
- Dial-up via modems, providing low cost management for remote sites requiring centralized administration
- Support for fallback dial-up of alarms should the network be unavailable
- AES Encryption option available for secure LAN connection

Reader Technologies & Card Formats

The Symmetry multiNODE 2150 controller supports a full range of reading technologies including Magnetic Stripe, Smart card, Proximity, Biometrics and Wiegand (via a Wiegand Interface Module). A number of default card formats are programmed as standard and there is a capability for custom formats to be defined. This is particularly important when integrating existing cards with a new system.

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Symmetry multiNODE 2150 Configurations

The Symmetry multiNODE 2150 controller is supplied with enclosure and power supply. Enclosures have a removable hinge, lockable lid, tamper switch and power indicator as standard.

When required, enclosures can contain an integrated power supply which may be used to provide the 12VDC supply for the controller and its associated readers. The enclosure power supply board requires an 18VAC external supply. A battery recharge facility is included, with space within the enclosure to accommodate a 12V 7AH maintenance free rechargeable battery. An optional transformer is also available.

The Symmetry 8DBC can be integrated at a peer to peer level in a single enclosure with the Symmetry™ ENVS® (Edge Network Video Servers) to provide a totally integrated security management solution.

Enclosure Options

The Symmetry 8DBC and 8DC are normally supplied complete with a power supply in one of the following enclosures according to configuration:

- CAB 3 - 8DBC
- CAB 3 - 8DC
- CAB 4 - 8DBC and Symmetry ENVS

Management Software

The Symmetry M2150 8DBC is supported by Symmetry Professional and Symmetry Enterprise Security Management software, v6.0 or later.

Technical Details

The Symmetry multiNODE 8DBC contains the system databases, performs the transaction processing and controls system communications.

The Symmetry 8DBC is supplied as standard with memory for up to 20,000 cardholders. Additional memory modules support expansion to 50,000, 100,000 and 250,000 cardholders to suit requirements.

The Symmetry 8DBC incorporates Flash Memory supporting downloadable firmware and allowing firmware enhancements via a PC, simplifying upgrades and minimizing installation time.

The following options can be plugged into the 8DBC board when required:

- RS-232 - Enables a computer port to directly connect to the first NODE of a chain, direct connection to a dial-up modem for remote site applications, serial interface commands to third party systems and direct connection to the Symmetry ENVS.
- Network Interface Module - This module is used for TCP/IP network link communications to its controlling PC. The module is fitted to the first Symmetry multiNODE 2150 8DBC in a chain of controllers.
- Fallback dial-up communications is supported in the event of network failure, via an external modem. The fallback to dial-up alarm reporting is automatic when a network failure is detected.
- The Symmetry 8DBC controls communication for up to eight readers and all associated door hardware.

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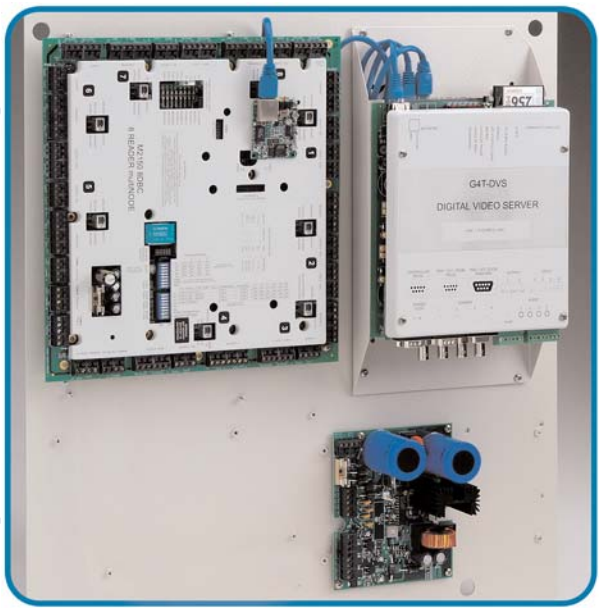

Symmetry multiNODE 2150 8DBC Controller integrated with Symmetry ENVS (Edge Network Video Server)

Option modules include:

- Input/Output Module - Allows alarm monitoring inputs and programmable output switching to be integrated. The module provides eight monitor points and four auxiliary relay outputs. One I/O module can be fitted to each 8DBC.
- Wiegand Interface Module (WIM8) - Enables connection of up to eight OEM readers via a Wiegand Electrical Interface.

Alarms Controller (AC 24/4) provides 24 monitor points and four auxiliary relay outputs. Monitor points can be programmed for 2/3/4/6-state supervision, dependent upon requirements.

An eight door controller (8DC) provides a means of extending a Symmetry multiNODE 2150 to a maximum of 16 readers. The Symmetry 8DC interfaces directly with readers and provides all door control inputs and outputs. The Symmetry 8DC communicates with its decision making database unit via a twisted pair RS-485 link. In the event of a communication failure between an 8DBC database unit and its door controller it can be further configured to verify on customer code only, or the doors can be put into a permanent locked or unlocked state.

The Symmetry 8DC can be fitted with the following plug-in option boards:

- A WIM8 board for connection of up to eight Wiegand readers
- An Input/Output board for eight monitor points and four auxiliary relay outputs

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Specifications

Symmetry multiNODE 2150 Controller Includes Enclosure

CAB-3

- Width: 16.5in (420mm)
- Height: 21.7in (550mm)
- Depth: 3.7in (95mm)

Operating Environment

- +32°F to +122°F (0°C to +50°C)
- 15% to 90% humidity, non-condensing

Transmission Speed (Controller to Client PC or Server)

- Switch-selectable (9600/19200/38400 baud)

Communication Distances

- Symmetry 8DBC to PC/Modem (RS-232) = 50ft (15m)
- Symmetry 8DBC to 8DBC (RS-485) = 3000ft (1000m)
- Symmetry 8DBC Controller board to 8DC or AC 24/4 board (RS-485) = 3000ft (1000m) total line length
- Door Controller to Current Loop Reader = 3000ft (1000m)
- Door Controller board to Wiegand Reader (via WIM) = 325ft (100m)

Storage Capacities

- 20,000 cardholders memory configuration as standard. Optional modules increase to 50,000, 100,000 or 250,000 cardholders.

Controller Inputs/Outputs

- Reader supply outputs 12V@200mA max
- Reader ports 20mA current loop*
- Door monitor inputs 2/3/4 - state supervision
- Exit Request inputs 2/3/4 - state supervision
- Door Release relay outputs (rated at 30VDC, 3A max)
- Bypass / shunt relay outputs (rated at 30VDC, 3A max)
- AC 24/4 Inputs 2/3/4/6 - state supervision

*Wiegand when optional WIM8 Wiegand Interface Module is purchased.

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