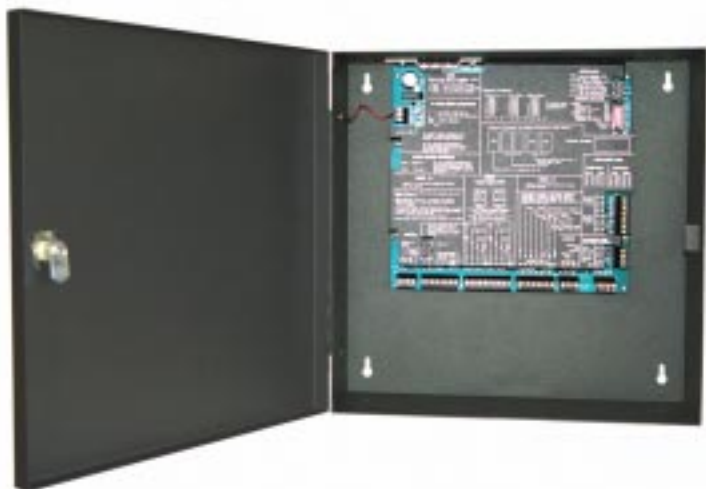




DSX-1021 Intelligent Controller

- ▽ **Two Door Controller**
- ▽ **Access Verification performed at each panel**
- ▽ **Input/Output/Code Linking - Local/Panel to Panel**
- ▽ **Supports 4 State Input Monitoring**
- ▽ **UL 294 Listed**
- ▽ **Real Time Clock and Calendar**
- ▽ **Dynamic Memory Allocation**
- ▽ **Incremental Downloading of Changes Only**
- ▽ **Point to Point RS-485 4-wire Panel Communications**



General Application

The DSX-1021 Intelligent Controller is designed for two door reader/keypad applications. This panel is ideal for garages and other locations where two readers are required but few extra inputs and outputs are needed. The 1021 is ideal for slave panel locations and applications such as gates where lock power is not needed. This panel has most of the features of the larger panels but with fewer inputs and outputs. Besides the many features talked about this controller has integral 5 & 12 V power supplies and a charging circuit for a standby battery.

Controller Architecture

The DSX-1021 Intelligent Controller (panel) is designed as a unitized (processor and i/o board combined) controller with small space requirements that accommodates two discreet reader/keypad controlled doors. The 1021 can be used in conjunction with all other DSX Controllers as a Master or Slave in the panel network. The first panel of each location is designated as the Master. The Master is responsible for communications to the PC and to the Slave panels.

The unitized 1021 controller contains a V20 processor, RAM, ROM, power supply, and removable field wiring terminals. Each DSX-1021 operates as a fully distributed processing control panel that retains all data necessary for system operation in it's own RAM. Each DSX-1021 checks it's database to make decisions about access control, alarm monitoring, and time zone changes. The DSX-1021 has an integral real-time clock and calendar which allows Time Zone control with Holiday overrides for inputs, outputs, and cards even when communication to the PC or other controllers is not available.

Reader Technologies

The DSX-1021 is compatible with Wiegand, Barium Ferrite, Proximity, Bar Code, Magnetic Stripe, and Biometrics readers. Any combination of reader technologies may be used in the same system. A keypad may be added to most readers to create a Card and PIN controlled entry point. The DSX-1021 is compatible with over 120 different card readers / keypads and card formats which makes it the perfect panel for retrofits.

Memory

The DSX-1021 has a standard configuration of 64K of ROM and 64K of RAM. The RAM memory allocation is dynamic between database and event storage and set for optimum use by the Host PC according to data entered for that location. The RAM memory may be expanded from 64K to 96K by adding a 32K RAM chip. The memory can be expanded up to 192K of RAM with the use of the 1021MX memory expansion module which can handle up to 4 additional RAM chips. The 1021 can be ordered with the 1021MX already installed.

Inputs

The DSX-1021 has 8 EOL supervised inputs capable of two, three, and four state point monitoring with trouble reports. The armed status of each input can be controlled by up to 4 Time Zones, I/O & Card Linking, and Manually from the PC. Two Inputs (input 7s) are designated as the Door Position Inputs for the reader controlled doors. Two Inputs (input 8s) are designated as the Exit Request Inputs for the reader controlled doors. The remaining four inputs are then left for point monitoring of any contact closure output device.



Outputs

The DSX-1021 has six Outputs. Two Outputs (output 1s) are the Form-C, 5 Amp rated relay outputs to control the locks for the reader controlled doors. Two Outputs (output 2s) are Open Collector Outputs that are programmed and used in the same ways as all other outputs with the only difference being the outputs are open collector instead of relays. The two Pre-Warn Outputs of the 1021 are used to indicate the controlled doors are being held open and about to go into alarm. If the door is locked, armed, and open the output pulses low starting at 1/3 of the door open too long time and changes to a steady low anytime the door is in alarm. These open collector outputs reset automatically when the door is closed.

Communications:

The DSX-1021 Intelligent Controller can communicate with the Comm Server (Host PC) via direct serial port or dial-up modem communications.

Direct Connect Communications to the PC from the Master 1021 Controller is performed with the use of the MCI module which connects to the comm port of the PC and converts the RS-232 signal from the PC to RS-485. The RS-485 communications from the MCI to the Master 1021 utilizes two twisted pair cable for the data and one pair for power. The RS-485 output of the MCI will support up to 4000 feet of cable distance. The controller communicates with the PC at a default baud rate of 9600. As long as the communications signal arrives at the Master as RS-485 and RS-232 at the PC in an asynchronous, full duplex mode, operating at 9600 baud, the method of communication in between can be just about any mode of transport such as Direct Wire, T1, Lease Line, or Fiber Optics.

Dial-Up Modem Communications from the DSX-1021 Master Controller to the PC utilizes a DSX 9600 baud modem and MCI module at the Controller and the same modem at the PC. At the 1021 Master, the RS-485 Host Communications Port connects to a MCI module which converts the RS-485 of the Controller to RS-232 for the Modem. The MCI derives its 12 volt power from the 1021 panel. The MCI subsequently supplies power to the modem. The Controller will auto-dial to the PC all Alarm and supervisory conditions. The controller can also be programmed to dial the PC when its event buffer is 80% full.

Panel to Panel Communications is a true point to point, regenerative, RS-485, 4-wire, communications method. This allows the panel to panel network communications to be regenerated at each controller providing up to 4000 feet of distance between controllers over two twisted pair cable. Panel to Panel communications can be configured in a series loop, star configuration, or both. Star configurations require a DSX-1035 Quadplexor.

DataBase Downloads

Each DSX-1021 Intelligent Controller is part of a distributed intelligence panel network. The Controllers are downloaded with all parameters the first time they are brought on-line. Once the full initial download occurs all database changes such as the adding and deleting of card holders are sent to the controllers by way of incremental downloads. In other words the panels are downloaded just the changes and only require a full download on power up or in the event that the system data integrity check determines there is a discrepancy in the synchronized database held by one of the panels.

DSX-1021 Specifications

Size

Cabinet	14.5" W x 14.5" H x 4.375" D
1021	10.5" W x 10" H x 1.5" D

Weight

Cabinet	11.00 lb.
1021	.75 lb.
Package Total	11.75 lb.

Finish

Black Powder Coat with White Silkscreen.

Temperature

Operating	32 to 131 F
Storage	-35 to 150 F

Humidity

Operating	0 to 95%, relative
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Supply Voltage

Panel Voltage	16.5 VAC 40VA
Power Requirements	33 Watts (.031 BTU)
Panel Current Draw	540 ma (Current will vary depending on panel voltage output loads). UL Listed or CSA Certified Class II Transformer Required.

Output Voltage

Panel outputs provide a regulated DC voltage.	
Panel Output	12VDC1A - Fused
Panel Output	5VDC 300ma - Fused

Inputs

EOL Supervised	8
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Inputs 5 and 6 are used for point monitoring.

Inputs 7 and 8 are used for door contact and exit request monitoring.

All Inputs support two, three, and four state monitoring, five programmable circuit types and trouble signals.

UL Installations require a Tamper Switch to be connected to an Input programmed with a 24hr Time Zone.

Outputs

Form C Relays (#1s)	2
Relay Output Ratings	5 AMP 24 VDC / 5 AMP 115 VAC
LED Outputs	4 - 2 per reader
Pre-Alarm Outputs	2 - 1 per door - open collector 100 ma
Open Collector Outputs (#2s)	2 - programmable - 100ma

Access Controlled Entry Points

Card Reader or Keypad	2
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Any combination of card readers, keypads, or card and keypad controlled entry points may be used.

Battery Charging Output

Trickle Charge	13.5 VDC 500ma Fused
Standby Time for the 1021 under Maximum Load	is 3.3 hours.

For UL Installations, battery must be Powersonic PS-1270 or an Interstate PC-1270.

Communication Ports

RS-485 In	2	1 for Master, 1 for Slave
RS-485 Out	1	For Subsequent Slaves
Output Extender	1	To drive 1033EX or 1036 - only one DSX-1021 Master Controllers always require a MCI module.

Processor

Intel 80C88 or V20	8Mhz
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RAM Memory

Standard	64K
Expandable to	96K / 192K with 1021MX Memory Expansion Module

* The transaction buffer automatically adjusts to utilize any RAM not allocated for system parameters.

Packaging

The DSX-1021 comes complete with 8 EOL Resistors, Enclosure, Lock and Key, Tamper Switch, and External AC Power Indicator.

