WinDSX®

Microsoft Access™ and SQL Server™ Editions

WinDSX is a powerful access control and system monitoring application that harnesses the power of the Windows XP, Vista, and 7 Professional™ operating systems. WinDSX combines point monitoring and access control with Photo ID Badging, Time and Attendance, Alarm Graphics, DVR/NVR Integration, Elevator Control, Alarm Email/Text Message Notification, Threat Level Management, HazMat / Emergency Lockdown, and FIPS/TWIC card compatibility.

WinDSX can support your access control needs from a single PC or multi-user Local Area Network to an enterprise solution with SQL Server as the database engine. The system utilizes TCP/IP network communications to provide user interaction and real time monitoring to the workstation PC's located anywhere on the LAN or WAN. Password protection allows for operator specific capabilities at each workstation.

There are two Editions of Software. WinDSX comes standard with a Microsoft Access database engine. WinDSX SQL is designed to work with Microsoft SQL Server as the database engine. Both editions of WinDSX have similar features and capabilities. Microsoft SQL Server is user supplied.

WinDSX implements Point and Click operation with hierarchical tree views and pop up menus for ease of use. I/O monitoring and control is achieved through animated icons that depict the real time status of each input or output. I/O points can also be assigned to an Override Group to allow for multiple inputs and outputs to be monitored and controlled from a single icon.

Scheduled Overrides can be assigned to individual Inputs and Outputs as well as Override Groups. These schedules allow operators to quickly assign time and date sensitive instructions determining the open/secure status of outputs and the armed state of inputs.

Workstation Desktop

Graphic alarm maps can be configured to provide detailed information about any I/O point in the system. The graphic map displays the true real time status of each I/O point and allows the operator to perform manual overrides of the inputs and outputs directly from the map.
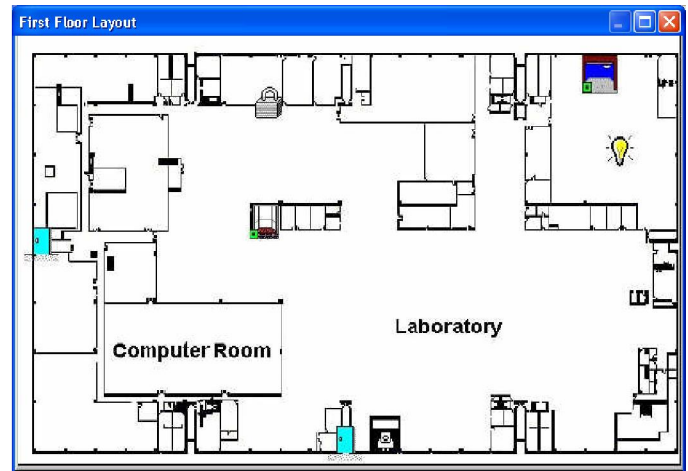
Graphic Alarm Maps

Cameras can be controlled with standard pan/tilt and zoom functions when the system is connected to a matrix type switcher. WinDSX has the ability to integrate with over 20 different DVR and NVR systems. This integration allows stored and live video from the DVR to be accessed within the WinDSX software. All video is transmitted across a network connection.

WinDSX flexible linking capabilities allow for any card, input or output in a location to link (interlock) with any other input or output in that location. Complicated applications such as mantraps are simply a matter of programming and require no additional equipment. This allows for custom solutions such as floor select elevator control and automatic handicap doors.

Custom History reports can be defined choosing any combination of locations, doors, events, and cardholders providing as general or specific a report as needed. The reports can be previewed before printing and can be sent to a local printer or any printer on the LAN. Report configurations can be saved and run at any time. History reports can be preconfigured and automatically run up to twice a day each day of the week and even Emailed from the workstation they were created on.

With the new Global Access Level Manager an unlimited number of temporary and permanent access levels can be assigned to card holders. These Access Levels now span across grouped locations. Temporary Access Levels are date controlled.
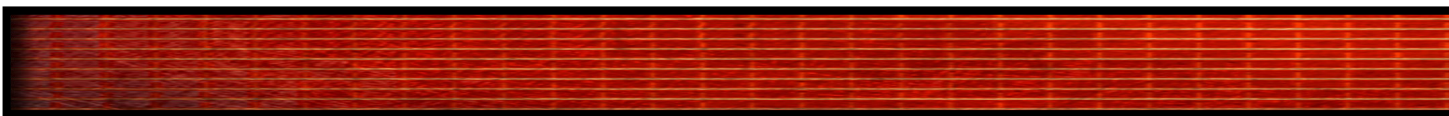
The Card Holder Name Search window is available by clicking on the Binocular Icon button in the top left corner of the Workstation Program. It can be used to Search for a Card Holder by Name, or a more in depth search can be made. Full or partial spelling can be used in the search. The results of the Name Search are displayed here along with their current In/Out Status, location of last card use, and other information.
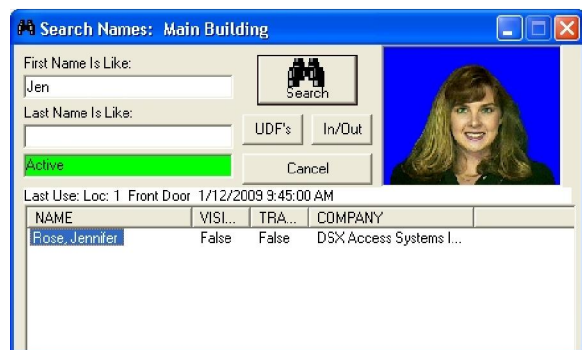

Card Holder Name Search

By clicking on the Search button without entering a name, a list of all cardholders is returned which can be scrolled through viewing UDFs and status of each card holder. If the In/Out button is selected the In/Out Status screen is displayed. The blue status bar at the top displays the door, date and time of the highlighted cardholder's last card use. Green indicates the card holder is "In" and Red indicates the cardholder is "Out". All Cardholders that are "In" (green) are alphabetically sorted to the top. All Cardholders that are "Out" are alphabetically sorted to the bottom. This In/Out display is updated once a minute. Left click one time on any cardholders name to refresh that person's information.

In / Out Status Screen

WinDSX is the one stop solution for Video Imaging/Photo ID Badging and Access Control applications. The WinDSX system can produce photo ID badges for employees and visitors. The system allows the user to create badge backgrounds (templates) on which digital images and card holder data is imposed when the card is printed. Video Imaging is a standard feature of the WinDSX system that is provided at no extra charge. Images can be captured with a digital camera and imported into the WinDSX system without any additional hardware or expense. If live video display and capture is desired a DSX Badging Camera can now be used without the need of a DSX Features Key. The DSX Camera allows the operator to capture still shots from a high resolution live feed USB connected Camera.

The following picture is the Card Holder data entry screen. This is where the card holder data is entered, images are imported or captured, and badge printing takes place.
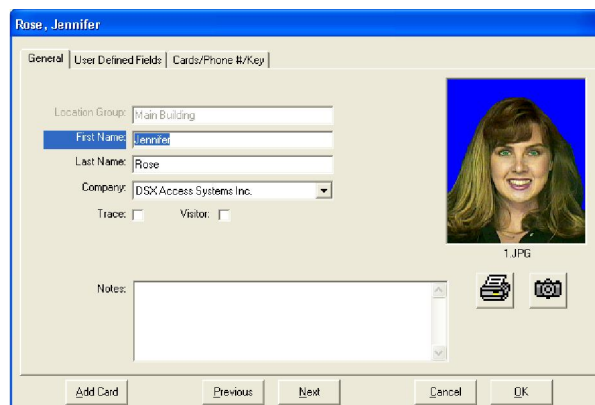
Card Holder Data Entry Screen

The digital images are permanently stored on the hard disk with other cardholder data. These images can be sized, cropped, edited, and placed anywhere on any badge background. Any number of images can be stored with each cardholder, including front and side views, signatures, finger prints, etc.

Badge templates are created using "What You See Is What You Get" drag and drop tools with new features such as transparent backgrounds, image ghosting, text centering, text shrink to fit, right alignment, bring to front - send to back layering, and rotation to any degree. The ability to create unlimited badge templates allows for all departments and user groups to have unique badges. Single sided or two sided color and monochrome badges can be printed one at a time or in a batch mode.

Badge Print Preview/Edit

A print preview feature displays the assembled badge prior to printing. All images on the print preview can be zoomed in and out and adjusted from left to right for last minute changes.

WinDSX Software Specifications and Features

Microsoft Access or SQL Server Editions
32,000 Locations
128 Doors / Readers per location
50,000 Access Codes per location
32,000 Time Zones with 3 Holiday overrides each
32,000 Access Levels
32,000 Inputs
32,000 Outputs
32,000 Companies
32,000 Holidays
99 User Defined Fields
32,000 System Operators
32,000 Password Profiles
999 Operator Comments
32,000 Graphic Alarm Maps
32,000 Custom Action Messages
Import Graphic Alarm Maps of 21 file types
240 + Card Reader, Keypad format compatibility
FIPS/TWIC Card Compatibility up to 17 digits
32,000 ASCII Output Messages
Time and Attendance
Guard Tour
CCTV & Pager System Interface - ASCII / Relay Output
DVR/NVR Integration
Auto Incremental Downloads (changes only)
Floor Select Elevator Control and Reporting
High Level Elevator Control Interface/Report
After Hours HVAC Zone Control
Global Input/Output Linking
Global Code to Input/Output Linking
4 Zone Global Anti-Passback w/Hard, Soft, and Timed
Integral Database Backup and Restoration System –Access only
Auto-Backup procedure/ Backup to any storage media
Integral Custom Report Generator w/Report Pre-viewing
Schedule Automatic History Reports / Email using SMTP
"Who Is In" One Button Report including Input Activated
Card Holder "Photo Roster" Report
Code Tracing - Reader and User selectable
Regional Time Zones for Workstations and Remote Sites
Fail Safe or Fail Secure Relay Action
Icons for Input Normal/Abnormal states
Icons for Output On/Off states
Direct, Dial-up Modem, and TCP/IP Panel Communications
DSX-LAN(M) Interface w/ Modem Backup Communications
Schedule or defer downloads
Limit Number of Card Uses 1-10,000 / Card Disable Reader
TCP/IP Network Protocol support
Integral Photo ID Badging and Photo Verification w/Image
Auto/Manual Image Recall
Workstation Event Filtering
Operator Audit Trail
Alarm Echo - Offsite Alarm Monitoring / Remote Control
Visitor Management
Multiple De-activate Dates for Cards
Auto Incrementing Badge Number
Threat Level Management

Continued….

Global Access Level Manager
Unlimited Access Levels Per Card Holder
Date Controlled Temporary Access Levels
Card Use It or Lose It automatic deactivation by Company
Precision Start Times and Dates for Card Activation
Precision Stop Times and Dates for Card De-activation
Card Holder Biometric Enrollment Export
Embedded Hot Links in Action Messages
Multiple Dates on Scheduled Overrides
Time Zones controlled with Linking Logic
Hot-Swap Backup Communications Server – SQL only
Hidden & Predefined User Defined Fields
Alarm Email Notification / Text Messaging
Comm Server (CS.exe) runs as a Service
Bulk modification to Card Holder Access Levels
AES Encryption from Comm Server to all Controllers
AES Encryption from Comm Server to all Workstations
Startup Map (always displayed) + Custom Map Sizes
Device Locator- shows which Access Levels contain a Device

WinDSX Badge System Features

Digital Camera Pan and Tilt
Batch Card Printing
Image / Signature Importing
Multiple Video Input Compatibilities
Image Capture
Transparent Backgrounds
Multiple Images for each Person
Image Cropping and Editing
Auto Image Editing
Rotate Text and BarCodes
Encode Magstripe Track 1, 2, 3 with equipped card printer
Prints to any Windows Compatible Card Printer
Manual Image Recall by Clicking on Card Read Event
Auto Image Recall by Device, up to two time zones each
Generates 3 of 9 and interleave 2 of 5 Barcodes
Single Sided or Double Sided Badges
Color and/or Black and White Badges
Text Centering
Shrink to Fit text and data fields
Right Alignment
Font and Text Color selection for each printed field
Text Underlining
WYSIWYG + XY Coordinates
File Import using Digital Camera
Import 18 different Graphic Image file formats
Resize Image and Maintain Aspect Ratio
Shapes with custom colors available
Name field concatenation
Image Ghosting
Bring to Front / Send to Back Layering
Auto Badge Template selection
Auto-Incrementing Badge Number
Card Holder Photo Roster Report
CR-80 to CR-100 Card Sizes
USB WebCam Support – No Features Key Required

Video Imaging Components

DSX CamKit = USB Badging WebCam, Remote Control, USB Cables, and power adapter.
All components have a 1-year warranty.

Camera Specifications:

Motorized pan, tilt and zoom
USB video class (UVC) supported applications
Full HD 1080p
Camera and remote control
10-foot range remote control
Pan, tilt and zoom
Carl Zeiss Optics with 9 point auto focus
78-degree field of view
180-degree pan, 55-degree tilt
USB 2.0 compliant
8-foot USB cable
8-foot universal power adapter
9-inch extender stem for elevation
Windows 7, XP, and Vista

Printers:

WinDSX prints to any **Windows™** compatible direct card printer such as Zebra and Fargo.

CPUs Minimums	Application
Pentium 2.8 GHz Dual Core (or better)	Host PC for single PC, single location, or LAN workstation for single location system. 2G RAM
Pentium 2.3 GHz Dual Core (or better)	LAN Comm Server or File Server for single location, or workstation for multi-location system. 2G RAM
Pentium 3.3GHz Dual Core (or better)	LAN Comm Server and/or combination File Server for multi-location. 4G RAM - minimum

Memory Minimums	Application
2G	Basic System, Single PC
4G+	Multi-Location Comm Server and Badging

Drive Minimums	Application
CD/DVD 16x or better	Software Installation
1G Hard Drive Space minimum	Basic System requires 50M

LAN Communications	
Adapter 10/100Mbit or better	100M is recommended
Requires TCP/IP Protocol	MS LoopBack Adapter for no LAN
Comm Server	Static IP Address
LAN Modules	Static IP Address
Comm Server to Controller	UDP - ports 4000 to 5000
Comm Server to Workstation	TCP - ports 22223 / 22224

Sound	Application
Windows™ compatible sound card.	WAV files for input alarms.

Backup Gear	Application
Windows™ compatible Backup gear.	WinDSX can send backups to logical drive. WinDSX SQL uses SQL Server for backups.

Modem	
DSX External dial-up	DSX only supports DSX modems

Serial Ports	
DSX-USB Communications adapter USB to RS-232 / RS-485.	Direct and Dialup communications require a serial port.

Client Operating Systems	DSX Version
Windows™ 8 Professional	3.7 / 4.7 and higher
Windows™ 8 Pro 64 bit	3.7 / 4.7 and higher
Windows™ 7 Professional	3.7 / 4.7 and higher
Windows™ 7 Pro 64 bit	3.7 / 4.7 and higher
	Peripherals require 64 bit drivers.
Windows™ Vista Business Svc Pack 1	3.7 / 4.7 and higher
Windows™ XP Professional Svc Pack 2	3.5 / 4.5 and higher
The Comm Server Program can run on a Client Operating System.	

Server Operating Systems	
Server 2003	3.5 / 4.5 and higher
Server 2008	3.7 / 4.7 and higher
Server 2008 R2	3.7 / 4.7 and higher
Server Operating Systems require the use of Active Directory.	

SQL Server	
SQL 2005 Svc Pack 3	WinDSX SQL requires Microsoft SQL Server. WinDSX uses Microsoft Access.
SQL 2008	3.7 / 4.7 and higher
SQL 2008 R2	3.7 / 4.7 and higher
SQL 2012	Additional configuration required

DSX-1022
Intelligent Two Door Controller

- ➤ **8 Supervised Programmable Inputs**
- ➤ **4 Fused Relay Outputs**
- ➤ **TCP/IP Communications**
- ➤ **240+Card/Keypad Formats also FIPS/TWIC**
- ➤ **Flexible I/O Linking - Local & Panel to Panel**
- ➤ **Installs in 1021 and 1022 Enclosure**
- ➤ **512K RAM / 512K Flash ROM**
- ➤ **Compatible with all existing DSX Controllers**
- ➤ **UL 294 / UL 1076**

General Information

The DSX-1022 is an independent processing, two door intelligent controller designed to be a cost effective building block of the DSX hardware platform that allows expansion in a scalable manner. Up to 2 doors can be controlled from 1 enclosure allowing it to be strategically deployed where a few number of readers are required such as parking garages, gates and other remote situations. This newly designed controller has several new features such as fuses in line with the common terminals on all four relay outputs. Battery Test and Load Shed are also new features incorporated into the panel to protect the panel and its backup battery. The DSX-1022 carries a Limited 2 Year Warranty.

Controller Architecture

The DSX-1022 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 DSX-1022 can be used in conjunction with all other DSX Controllers as a Master or Slave in the Controller Network. The first Controller of each location is designated as the Master. The Master is responsible for communications to the PC and to the Slave Controllers.

The unitized DSX-1022 controller contains an AM186 processor, RAM, ROM, power supply, and removable field wiring terminals. Each DSX-1022 operates as a fully distributed processing control panel that retains all data necessary for system operation in its own RAM. Each DSX-1022 checks its database to make decisions about access control, alarm monitoring, and time zone changes. The DSX-1022 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-1022 is compatible with Wiegand, Barium Ferrite, Proximity, Bar Code, Magnetic Stripe, Biometrics and Smart Card 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/or PIN controlled entry point. The DSX-1022 is compatible with over 240 different card readers / keypads and card formats which make it the perfect panel for retrofits. DSX Controllers support FIPS and TWIC Cards.

Memory

The DSX-1022 has a standard configuration of 512K of Flash ROM and 512K 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.

Inputs

The DSX-1022 has 8 EOL supervised Inputs capable of two, three, and four state point monitoring with status LEDs. 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-1022 has six Outputs. Two Outputs (output 1s) are the Form- C, fused at 1 Amp, relay outputs to control the locks for the reader controlled doors. Two Outputs (output 2s) are also Form-C, fused at 1Amp, relay outputs that are programmed and used in the same ways as all other outputs. All Relay Outputs have 1A fuses in series with the Common terminal. Two Pre-Warn Outputs of the DSX-1022 are used to indicate the controlled doors are being held open and about to go into alarm. If the door is locked, armed, and opened, 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-1022 Intelligent Controller can communicate with the Comm Server (Host PC) via TCP/IP, Direct serial port, and dial-up modem.

TCP/IP LAN Communications

TCP/IP LAN Communications can be utilized from the WinDSX Comm Server PC to a Master Controller. The WinDSX Software without the use of any additional Hardware or Software will redirect what would typically be serial port communications to a TCP/IP address. A DSX-LAN(M) serial device at the Master Controller receives the communications over the LAN converts it to RS-232/RS-485 for the Master Controller. The end result is real time communications similar to that of a direct serial port connection.

Direct Connect Communications

Direct Connect Communications to the PC from the Master 1022 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 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

Dial-Up Modem Communications from the DSX-1022 Master Controller to the PC utilizes a DSX-Modem and DSX-MCI module at the Controller and a DSX-Modem at the PC. At the DSX-1022 Master, the RS-485 Host Communications Port connects to a DSX-MCI module which converts the RS-485 of the Controller to RS-232 for the Modem (the MCI is not required for the new DSX-Modem). The DSX-MCI and Modem derive power from the 12VDC output of the DSX-1022 panel. 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

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 Quadraplexor.

DSX-1022 Specifications

Size
Cabinet 15.5" W x 13.5" H x 6.0"D
DSX-1022 10.5" W x 7.5" H x 1.5" D

Weight
Cabinet   11.00 lb.
DSX-1022   1.60 lb.
Package Total   12.60 lb.

Finish
Black Powder Coat on Enclosure and Black Enamel on Shield

Temperature/Humidity
Operating 32 to 131 F / 0 to 95% relative - Storage -35 to 150 F

Supply Voltage
Panel Voltage 16.5 VAC 40VA – For UL 1076 use two transformers.
Power Requirements 33 Watts (112.6 BTU)
Panel Current Draw 540 ma
UL Listed or CSA Certified Class II Transformer Required.

Output Voltage
Panel Output 12VDC 1A - Fused
Panel Output 5VDC 1/2A - Fused

Inputs
EOL Supervised 8
UL Installations require a Tamper Switch to be connected to an Input programmed with a 24hr Time Zone.

Outputs
Form C Relays (1-2) 4 fused at 1A
Relay Ratings 5 AMP 30 VDC
LED Outputs 6 - 3 per reader - open collector 100ma
Pre-Alarm Outputs 2 - 1 per door - open collector 100ma

Access Controlled Entry Points
Card Reader or Keypad 2 Any combination of card readers, keypads, or card and keypad controlled entry points may be used. Over 240 types available including FIPS/TWIC cards up to 17 digits.

Battery Charging Output
Trickle Charge 13.5 VDC 500ma Fused /
Standby Time 3.3 hours under maximum load.
For UL Installations, battery must be Powersonic PS-1270, Interstate PC-1270, or a SBS S-1272. For UL1076 use two batteries.

Communication Ports
RS-485 In (2) 1 for Master to PC, 1 From Slave
RS-485 Out 1 To Subsequent Slaves
DSX-1022 Master Controller requires a MCI Module for direct serial port communications.

Processor
AM186 20Mhz

RAM Memory
Standard 512K
* The transaction buffer automatically adjusts to utilize any RAM not allocated for system parameters.

Warranty
Limited 2 Years

DSX-1048
Intelligent Controllers

- ➢ **Scalable Architecture from 2 - 8 doors**

- ➢ **TCP/IP Communications**

- ➢ **Individual Intelligence**

- ➢ **512K RAM / 512K Flash ROM**

- ➢ **UL 294 / UL 1076**

- ➢ **240+ Card/Keypad Formats - FIPS/TWIC**

- ➢ **Real Time Processing and Communications**

- ➢ **Integrated Power Supply and Distribution**

- ➢ **Compatible with existing DSX Controllers**

General Information

The DSX-1048PKG Intelligent Controller is an independent processing 8 door package designed to be a cost effective building block platform that allows expansion in a scalable manner. Up to 8 doors can be controlled from 1 enclosure for an efficient space saving package. The controllers are strategically placed throughout the customer location connected together with a two twisted pair cable. Each DSX-1048 operates as a fully intelligent and independent controller that retains all data necessary for system operation in its own RAM. With its integral real-time Clock and Calendar it performs Time Zone control with Holiday overrides for inputs, outputs, and cards even when communication to the PC or other controllers is not available. The DSX-1048 carries a Limited 2 Year Warranty.

Controller Architecture

The DSX-1048 Intelligent Controller may be used in conjunction with all other DSX Controllers as a Master or Slave in the controller network. Any controller may be designated as a Master or Slave controller. The Master or Slave mode of operation is determined by the panels dip switch settings. The first panel of each location is designated as the Master while all others would be considered Slaves. The Master is responsible for communications to the PC and to the Slave panels. Up to 16 - DSX-1048PKG Intelligent Controllers can be used in a single Location providing for 128 readers. Multiple Locations can be grouped for systems that require more than 128 readers/keypads.

Each DSX-1048PKG includes a DSX-1040E Enclosure, a

DSX-1040CDM Communication Distribution Module and 4 DSX-1042 Intelligent Controllers. Each DSX-1048 provides 8 Reader Ports, 32 Inputs, and 16 Outputs. Each DSX-1042 has a 12 volt fused power output for its Card Readers and Keypads. The DSX-1042 contains an AM186 processor, 512K of RAM, 512K of Flash ROM, and a Real Time Clock. The DSX-1048 allows all door and field wiring connections to be made via removable terminal blocks. The DSX-1040CDM receives RS-485 communications from a possible previous panel and regenerates the 4 wire-RS485 to the next DSX-1048PKG. The DSX-1040CDM also distributes Slave Controller communication to those Slave panels located within the same enclosure.

Used in conjunction with the DSX-1048PKG Intelligent Controller is a DSX-1040PDP or Power Distribution Panel. The DSX-1040PDP houses the controller and lock power supplies, backup batteries, and fused power distribution module. The DSX-1040PDP is comprised of a DSX-1040PE enclosure, an SWS-150 15V power supply for the controllers, a SWS-150[15] or [27] for either 12V or 24V locks, and a DSX-1040PDM or Power Distribution Module.

System Power

Each Controller in the DSX-1048PKG is powered from an individually fused 12 volt output from the DSX-1040CDM distribution module located in the same enclosure. The module also provides 5 volt power for those Readers and or Keypads that require it. The DSX-1040CDM receives power from the DSX-1040PDP Power Distribution Panel.
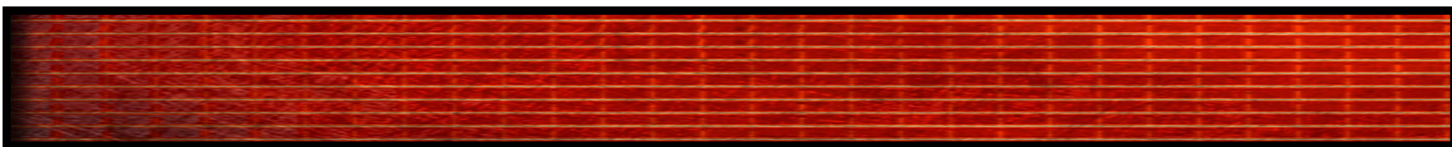
The DSX-1040PDP houses the controller and lock power supplies, backup batteries, and fused power distribution module. The DSX-1040PDP is comprised of a DSX-1040PE Enclosure, an SWS-150 15V power supply for the controllers, an SWS-150-[15] or [27] for either 12Vor 24V locks, and a DSX-1040PDM Power Distribution Module. The DSX-1040PDM performs several critical functions. First, it takes the 15V power from the SWS-150 and provides two 3A Class II, Power Limited, fused outputs to power the DSX-1040CDM which distributes the power to the DSX-1042 Controllers in the DSX-1048PKG. It provides a 12VBattery Charging Circuit to charge backup batteries for the controllers. It also provides a charging circuit for the optional batteries used to backup the 12 or 24 volt lock power from the SWS-150 lock power supply. The Power Distribution Module has 3 N.C. Relay Outputs, two to signal Loss of AC (one for lock power and one for controller power) and one to signal Low Battery. These Outputs can be connected to spare Inputs in the DSX-1048PKG. The module also has a Battery Test Input. This Input when activated shuts off the charging circuit and load tests the battery for 1 minute. This Input can be connected to a spare Output in the DSX-1048PKG and programmed by time zone to occur when desired. The DSX-1040PDM routes Lock Power through individual fuses for each of the 8 Class II, Power Limited, outputs. The module also has an input for a Fire Override relay contact to break Lock Power and has a Fire Override Output to connect to the next 1040PDM. All Outputs are Class II, Power Limited.

Reader Technologies

The DSX-1048 is compatible with Wiegand, Barium Ferrite, Proximity, Bar Code, Magnetic Stripe, Biometric, and Smart Card 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/or PIN controlled entry point. The DSX-1048 is compatible with over 240 different card readers / keypads and card formats which make it the perfect panel for retrofits. Conversion modules exist for some types of other manufacturers proprietary card readers. The panel is compatible with two wire wiegand and clock and data outputs without the use of any modules. Each reader port has 3 LED open collector outputs for Door Secure, Door Open, and Access Denied/Keypad PIN Entry. This will accommodate almost any reader and LED configuration. It is possible to connect the sounder control line of most card readers directly to the Pre-Warn output for door held open annunciation.

Memory

Each Controller has a standard configuration of 512K of Flash ROM and 512K 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. Flash ROM allows for the Controllers' operating system to be upgraded without the changing of chips (EPROMS). Having 512K of RAM eliminates the necessity of increasing the memory in controllers as the system grows.

When the Controller is in service the amount of RAM and the version of ROM can be viewed from the DSX communications software.

Inputs

The DSX-1048PKG has 32 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. Eight Inputs are designated as Door Position and eight Inputs are designated as Exit Request Inputs for the reader controlled doors. The remaining sixteen Inputs are then left for additional monitoring points.
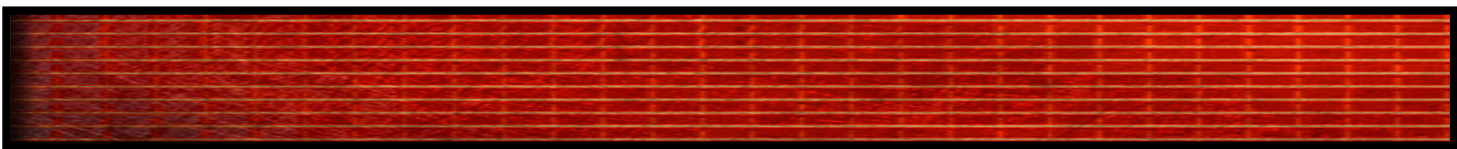
Outputs

The DSX-1048PKG has 16 Programmable Outputs. Eight Outputs are Form-C, 5 Amp rated relays used to control the locks for the reader controlled doors. Eight Outputs are the open collector type, both have an LED for status and are fully programmable. In addition to the 16 programmable Outputs there are 8 Pre-Warn Outputs, (1 for each door) and are used to indicate the reader controlled doors are being held open and are about to go into alarm. Once the door is opened the Output begins pulsing 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 (switched negative) outputs reset automatically when the door is closed.

Communications

The DSX-1048PKG Intelligent Controller can communicate with the WinDSX Communications Server via TCP/IP LAN communications, Direct Serial Port connection, and Dial-Up Phone Modem. TCP/IP LAN Communications can be performed from the WinDSX Comm Server PC to a Master Controller. The WinDSX Software without the use of any additional Hardware or Software will redirect what would typically be serial port communications to a TCP/IP address. A DSX-LAN(M) serial device at the Master Controller receives the communications over the LAN from the WinDSX PC and converts it to RS-232/RS-485 for the Master Controller. The end result is real time communications similar to that of a direct serial port connection.

Direct Connect Communications from the PC to the Master Controller is performed with a connection from the Host Port of the Master to a USB port of the PC. RS-232 is used for short distance connections. RS-485 communications is used when the direct serial port connection is from 50 to 4000 feet from Controller to PC. In order to communicate with the Master Controller with RS-485 communications requires two MCI modules. One DSX-USB module is placed at the PC to convert the USB to RS-485 and a DSX-MCI (second module) is placed at the Master Controller to convert the RS-485 back to RS-232. The Controller communicates with the PC at a default baud rate of 9600.

Dial-Up Modem Communications from the DSX-1042 Master Controller to the PC utilizes a DSX modem at the Controller and one at the PC. At the DSX-1042 Master, the RS-232 Host Communications Port connects to the Modem. The Modem derives its power from the DSX-1042 panel. The Controller auto-dials to the PC all Alarm and Supervisory conditions. The Controller can also be programmed to dial the PC when its event storage buffer is 80% full.

Controller Communications is handled at each DSX-1048 by a DSX-1040CDM (communications distribution module) using true point to point, regenerative, RS-485, 4-wire communications. This module has 2 RS-485 ports for in and out 4 wire communications to other Controllers. The Controller network communications is regenerated at each DSX-1040CDM allowing up to 4000 feet of distance between Controllers over two twisted pair cable. The DSX-1040CDM has 2 RS-232 Communication Ports. One is used to connect to the Master Controller and is only used in the DSX-1048PKG Enclosure where the Master Controller resides. The other RS-232 port connects to the RS-232 port of each Slave Controller in that same enclosure. DSX-1048PKG Controllers are connected in a series loop configuration unless a DSX-1035 Quadraplexor is used for Star wiring.

DataBase Downloads
The Controllers utilize a synchronized database that is maintained with the incremental and automatic or scheduled downloading of changes only. This intelligent, independent processing increases the speed of the panel's actions and reactions, providing more stability and security to the overall system. The Controllers are downloaded with all parameters the first time they are brought on-line. Once the initial full download occurs all database changes such as the adding and deleting of card holders are sent to the Controllers by way of incremental downloads. The Controllers' transaction buffer automatically adjusts its size to utilize any RAM not allocated for data.

Diagnostic, Supervisory and Status LEDs
The DSX-1048 has 88 diagnostic LEDs to indicate panel status. Thirty two are for Input Status, and sixteen are for Output Status. The rest are for Communications, Fuse Status, and Processor Status.

DSX-1048 Specifications
Size
DSX-1040E Cabinet 15.5" W x 22.5" H x 6" D
DSX-1040CDM 11" W x 4.5" H x 1.5" D
DSX-1042 11" W x 4.5" H x 1.5" D
Weight
DSX-1040E Cabinet   19.2 lb.
DSX-1040CDM   1.0 lb.
DSX-1042   1.2 lb.
DSX-1048 - Total   25.0 lb.

Finish
Black Powder Coat with White Silkscreen on Enclosure and Black Enamel on DSX-1042.
Enclosure / Conduit Knockouts
Concentric knockouts in Top, Bottom, and Sides.
Knockouts accommodate 1/2, 3/4, 1, 1 3/4 inch conduit.
Nema Type 1 equivalent enclosure with lift-off hinged door, lock/key, and tamper switch.
Temperature
Operating 32 to 131 F
Storage -35 to 150 F
Humidity
Operating 0 to 95%, relative
Power Requirements
DSX-1042 13.5 VDC @ 300ma from 1040CDM
DSX-1040CDM 13.5 VDC @ 150ma from 1040PDP
Total Maximum Current 13.5 VDC @ 6.0A
Output Voltage
Panel outputs provide a regulated, fused, DC voltage.
DSX-1042 9-13.5VDC - 12VDC nominal - 1A Fused
DSX-1040CDM 9-13.5VDC - 12VDC nominal - 1.5A Fused
DSX-1040CDM 5VDC - .5A Fused
All Outputs are Class II, Power Limited
Inputs
EOL Supervised 32
16 Inputs are used for standard point monitoring.
16 Inputs are used for door position and exit request monitoring.
All Inputs support two, three, and four state monitoring with five programmable circuit types.
Outputs
Form C Relays 8
Relay Output Ratings 5 AMP - 30VDC
Open Collector Outputs 8 - negative 100ma
LED Outputs 24 - 3 per reader port - negative 100ma
Pre-Alarm Outputs 8 - 1 per door - negative 100ma
Access Controlled Entry Points
Card Reader or Keypad 8
Card and Reader Formats 240+ including FIPS/TWIC
Any combination of card readers, keypads, or card and keypad controlled entry points may be used.
Communication Ports
DSX-1042
RS-232 In 1 Master to PC
RS-232 Out 1 Panel to DSX-1040CDM
1040CDM
RS-232 In 1 Master to DSX-1040CDM
RS-232 Out 1 Slave Communications
RS-485 In 1 From previous DSX-1048 Package
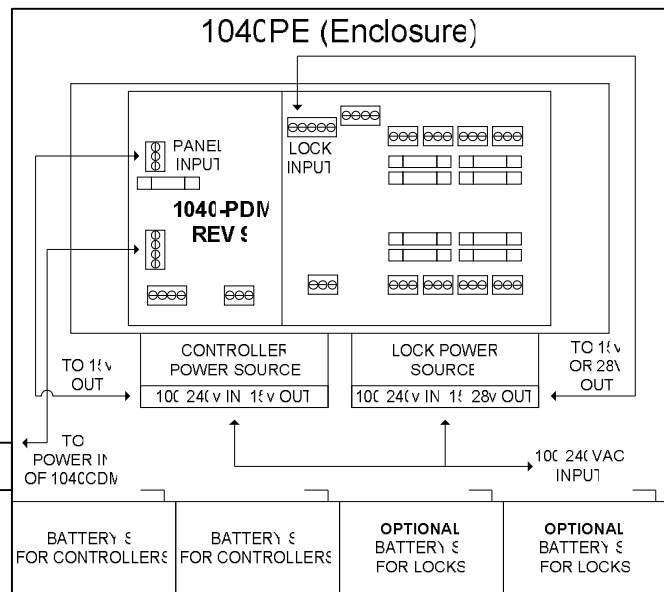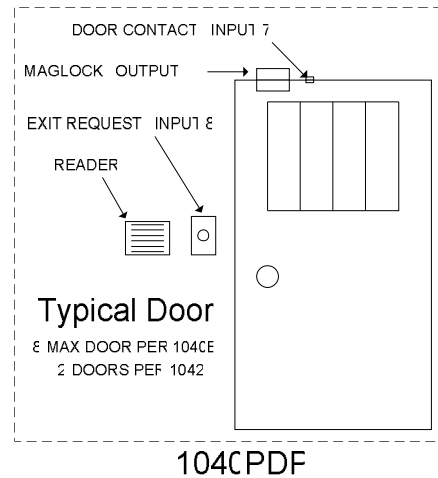RS-485 Out 1 To subsequent DSX-1048 Packages
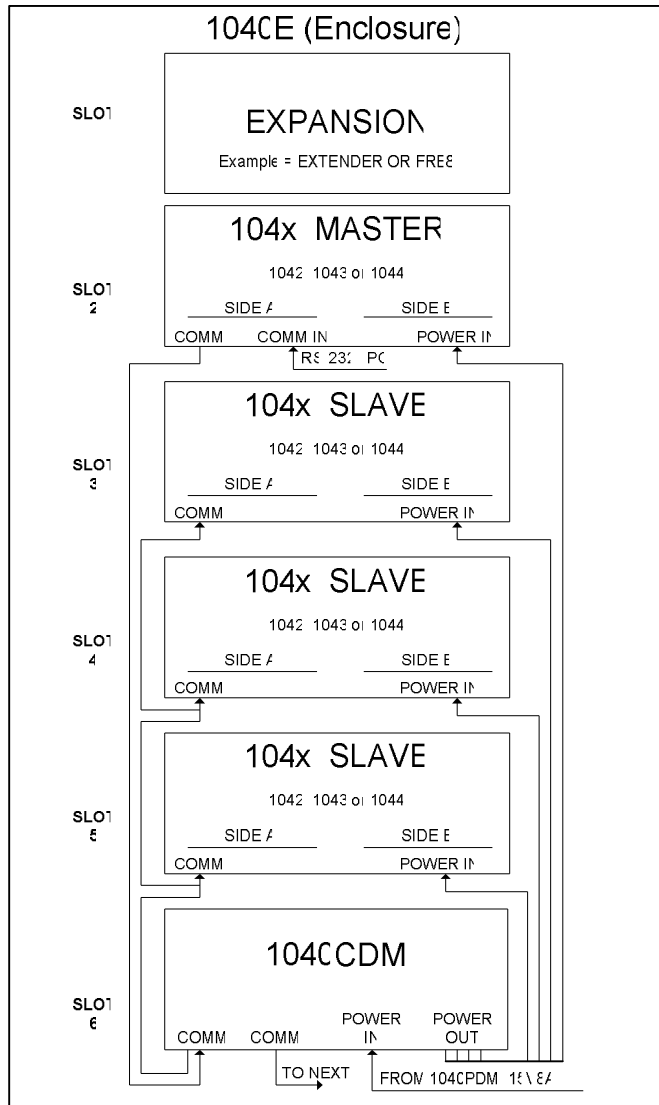**Processor**
AM186 20Mhz
RAM/ROM Memory
Flash ROM 512K
Standard RAM 512K
Warranty - Limited 2 Years

Basic Architecture

104CE (Enclosure)

SLOT 1 — EXPANSION — Example = EXTENDER OR FREE

SLOT 2 — 104x MASTER — 1042 1043 or 1044 — SIDE A / SIDE B — COMM COMM IN POWER IN — RS 232 PC

SLOT 3 — 104x SLAVE — 1042 1043 or 1044 — SIDE A / SIDE B — COMM POWER IN

SLOT 4 — 104x SLAVE — 1042 1043 or 1044 — SIDE A / SIDE B — COMM POWER IN

SLOT 5 — 104x SLAVE — 1042 1043 or 1044 — SIDE A / SIDE B — COMM POWER IN

SLOT 6 — 104CCDM — COMM COMM POWER IN POWER OUT — TO NEXT FROM 104CPDM 15V 8A

Typical Door
8 MAX DOOR PER 104CE
2 DOORS PER 1042

DOOR CONTACT INPUT 7
MAGLOCK OUTPUT
EXIT REQUEST INPUT 8
READER

104CPDF

104CPE (Enclosure)
PANEL INPUT — LOCK INPUT — 1040-PDM REV 9
CONTROLLER POWER SOURCE — 100 240v IN 15v OUT
LOCK POWER SOURCE — 100 240v IN 15 28v OUT
TO 15v OUT TO 15v OR 28V OUT
TO POWER IN OF 104CCDM
100 240VAC INPUT
BATTERY 9 FOR CONTROLLERS — BATTERY 9 FOR CONTROLLERS — OPTIONAL BATTERY 9 FOR LOCKS — OPTIONAL BATTERY 9 FOR LOCKS

The DSX-1048PKG includes a DSX-1040E Enclosure, a DSX-1040CDM Communication Distribution Module and 4 – 1042 Intelligent Controllers. This provides 8 Reader Ports, 32 Inputs, and 16 Outputs. The DSX-1048 Package comes complete with 32-1K ohm EOL Resistors, Lock & Key, Wire Ties, Tamper Switch, an External Power Indicator and a DSX-1040PDP Power Distribution Panel.

The DSX-1040CDM receives RS-485 communications from a possible previous panel and regenerates the 4 wire-RS485 to the next DSX-1048PKG. The DSX-1040CDM module also distributes Slave Controller communication to the Slave panels within the same enclosure. Each DSX-1042 is powered from an individually fused 12 volt output from the DSX-1040CDM Communications Distribution Module. The DSX-1040CDM receives power from the DSX-1040PDP Power Distribution Panel.

Used in conjunction with the DSX-1048PKG is a DSX-1040PDP or Power Distribution Panel. The DSX-1040PDP houses the panel and lock power supplies, backup batteries, and fused power distribution module. The DSX-1040PDP is comprised of a DSX-1040PE Enclosure, an SWS-150 15V power supply for the Controllers, an SWS-150-[15] or [27] for either 12Vor 24Vlocks, and a DSX-1040PDM. The DSX-1040PDM performs several critical functions such as supervising Power Supplies and Batteries, distributing power through fused outputs, and providing battery charging circuits. All Outputs are Class II, Power Limited.

DSX-1040PDP
Power Distribution Panel

- ➤ **12VDC / 6A Power for Controllers**

- ➤ **Battery Backup for Controllers**

- ➤ **Optional Battery Backup for Locks**

- ➤ **Lock Power 12VDC-8A/24VDC-4A-8A**

- ➤ **UL 294 / UL 1076**

- ➤ **AC Loss/Low Battery Supervisory Outputs**

- ➤ **All Outputs - Class II, Power Limited**

- ➤ **Fire Override Input & Output**

General Information
The DSX-1040PDP Power Distribution Panel is the supervised power plant for the DSX-1048PKG Intelligent Controller. The DSX-1040PDP houses the panel and lock power supplies, and backup batteries. The DSX-1040PDP is comprised of a DSX-1040PE enclosure, an SWS-150 15VDC power supply for the controllers, an SWS-150-[15] or [27] for either 12 or 24VDC locks, and a DSX-1040PDM Power Distribution Module. The DSX-1040PDP carries a Limited 2 Year Warranty.

Power Architecture
The DSX-1040PDP contains an SWS-150 Power Supply that converts 115VAC to 15VDC for Controller Power. Also present is an SWS-150 15/27 Power Supply which converts 115VAC to either 12 or 24VDC for Lock Power. Both Power Supplies feed power to the DSX-1040PDM Power Distribution Module. The DSX-1040PDM provides fused 12VDC/6A power to the DSX-1040CDM located in the DSX-1048 enclosure. The DSX-1040CDM redistributes the power through individually fused outputs to each Controller in the DSX-1048. The Controllers have 12VDC/1A fused power outputs for Card Readers and Keypads.

Power Distribution Module
The DSX-1040PDM performs several critical functions. First, it takes the 15VDC power from the SWS-150 and provides two 12VDC 3 amp, Class II, Power Limited, Fused Outputs to power the DSX-1040CDM which distributes the power to the DSX-1042 Controllers in the DSX-1048PKG. It provides a 12VDC Battery Charging Circuit to charge backup batteries for the Controllers. It also provides a charging circuit for the optional batteries used to backup the 12 or 24 volt lock power from the SWS-150 power supply. The Power Distribution Module has outputs to signal Loss of AC and Low Battery.

The module also has a Battery Test Input and Load Shed capabilities. The DSX-1040PDM routes Lock Power through individual fuses for each of the 8 outputs. All Outputs are Class II, Power Limited.

Inputs
The DSX-1040PDM has a Battery Test Input. This Input when activated shuts off the charging circuit and load tests the battery for 1minute. This Input can be tied to a spare Output in the DSX-1048PKG Controller and programmed by Time Zone to occur when desired. The module also has connection points for a Lock Power Fire Override Relay to break Lock Power to all 8 Outputs.

Outputs
The DSX-1040PDM Power Distribution Module has 3 normally closed Relay Outputs, two to signal Loss of AC (one for panel power and one for lock power) and one to signal Low Battery. These Outputs can be connected to three spare Inputs in the DSX-1048PKG. The DSX-1040PDM routes Lock Power through individual fuses for each of the 8 Outputs with connection points for the lock wiring and for the Output relays located in the DSX-1048. There is also an output from the Lock Power Fire Override that can be connected to an input in the 1048 or can be used to connect to the Fire Override Input on the next 1048 and 1040PDP.

Diagnostic, Supervisory and Status LEDs
The DSX-1040PDP has 17 diagnostic LEDs for power and blown fuse indication. There are Power On LEDs for each of the two power inputs, LEDs for Low Battery and Battery Test, and for AC Loss, and Fire Override. The DSX-1040PDM also has 1 LED for each of the eight fused Outputs for Lock Power.

Basic Architecture
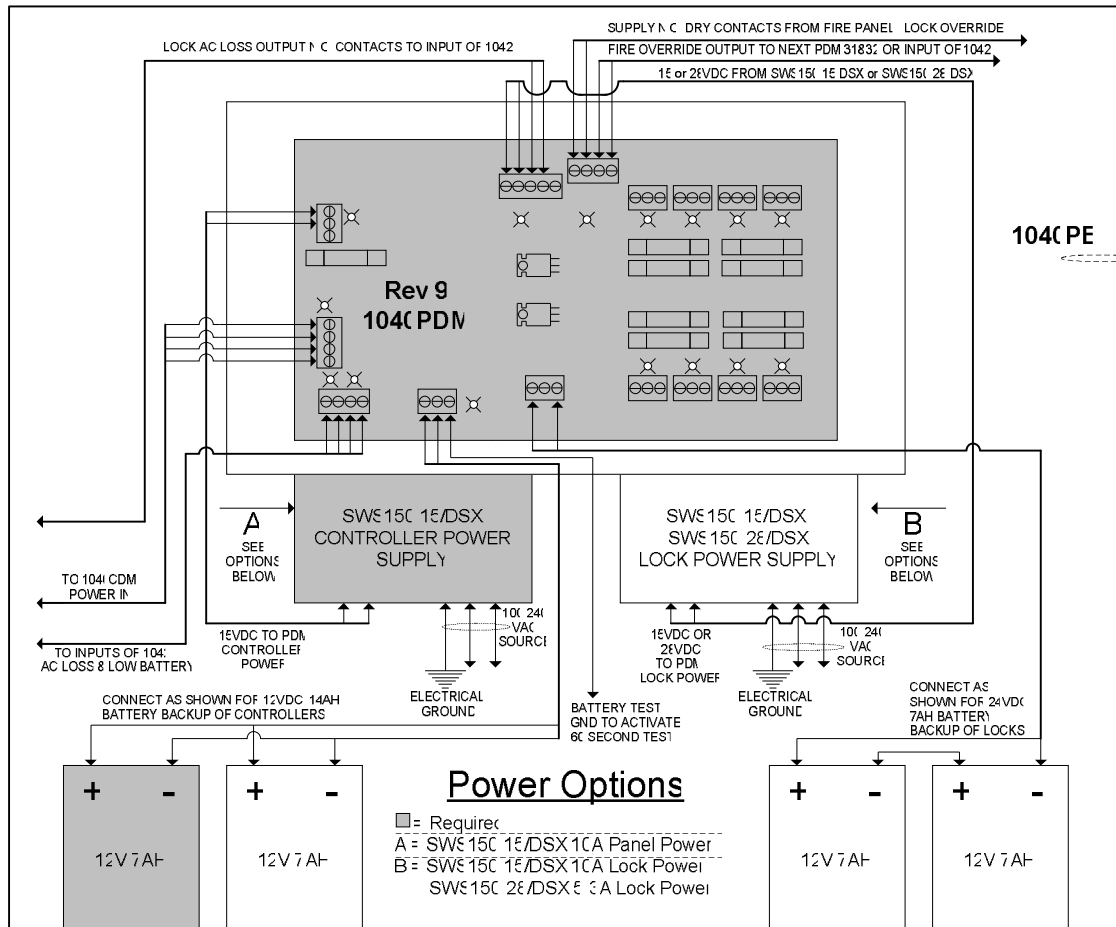
Size
DSX-1040PE Cabinet 15.5" W x 14" H x 6" D
DSX-1040PDM 8" W x 4" H x 1.5" D
SWS-150-15/27 3.9" W x 7.8" H x 2.0"D

Weight
DSX- 1040PE Cabinet 11.00 lb
DSX-1040PDM   1.30 lb
SWS-150 15/27   1.60 lb

Finish
Black Powder Coat with White Silkscreen

Enclosure / Conduit Knockouts
Concentric knockouts in Top, Bottom, and Sides.
Knockouts accommodate 1/2, 3/4, 1, 1 3/4 inch conduit.
Nema Type 1 equivalent enclosure with lift-off hinged door,
lock/key, and tamper switch.

Supervisory Outputs
Low Battery N.C. Relay
Loss of AC 2 - N.C. Relays

Power Input Requirements
DSX-1040PDM 15VDC/6A for Panels
15VDC/8A or 27VDC/ 4 - 8A for Locks
SWS-150 120VAC (88-264VAC) auto

Power Outputs
DSX-1040PDM 10-15VDC, 12VDC nominal 2 – 3A outputs
8 - 12VDC@8A or 24VDC@4 -8A for Locks
12VDC/3A Panel Battery Charging Circuit
12/24VDC/3A Lock Battery Charging Circuit
SWS-150/15 15VDC 8.0A 150 Watts 511.8 BTUs
SWS-150/27 27VDC 4.0A 150 Watts 511.8 BTUs
SWS-320/27 27VDC 8.0A 320 Watts 1091.8 BTUs
*All 1040PDM Outputs are Class II, Power Limited

Inputs
Battery Test Active Low from spare Output on DSX-1048
Fire Override Connection point for N.C. relay contact to
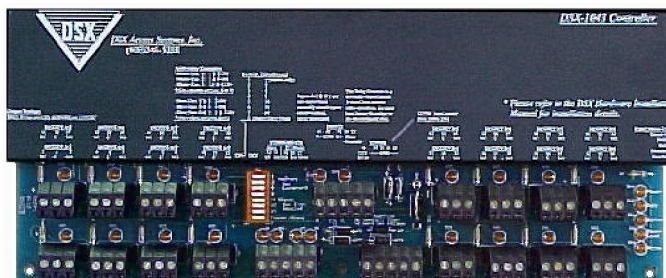control PDM relay that enables all Lock Power

Warranty
Limited 2 Years

DSX-1043
Intelligent Output Controller

- ➢ **16 Programmable Form C Relays**

- ➢ **4 Time/Day Schedules per Output**

- ➢ **Output Control (Override) Input**

- ➢ **Two Inputs for supervision**

- ➢ **UL 294 / UL 1076**

- ➢ **Flexible I/O Linking**

- ➢ **Individual Intelligence**

- ➢ **512K RAM / 512K Flash ROM**

- ➢ **Scalable Architecture**

General Information
The DSX-1043 is an independent processing, 16 output, intelligent controller designed to be a cost effective building block in the DSX hardware platform that allows expansion in a scalable manner. Up to 64 outputs can be controlled from 1 enclosure for an efficient space saving package. Each DSX-1043 operates as a fully intelligent and independent controller that retains all data necessary for system operation in its own RAM. With its integral real-time Clock and Calendar it performs Time Zone control with Holiday overrides for outputs even when communication to the PC or other controllers is not available. The DSX-1043 carries a Limited 2 Year Warranty.

Controller Architecture
The DSX-1043 Intelligent Controller may be used in conjunction with all other DSX Controllers as a Master or Slave in the controller network. Any controller may be designated as a Master or Slave controller. The Master or Slave mode of operation is determined by the panel's dip switch settings. The first panel of each location is designated as the Master while all others would be considered Slaves. The Master is responsible for communications to the PC and to the Slave panels. Up to 64 Controllers can be used in a single Location.

Up to four DSX-1043 controllers can be placed in a DSX-1040E Enclosure along with a DSX-1040CDM Communication Distribution Module. The controller can be placed in a 1042PKG mixed with DSX-1042 and DSX-1044

Controllers. The DSX-1043 contains an AM186 processor, 512K of RAM, 512K of Flash ROM, and a Real Time Clock. The DSX-1043 allows all door and field wiring connections to be made via removable terminal blocks. The DSX-1040CDM receives RS-485 communications from a possible previous panel and regenerates the 4 wire RS-485 to the next DSX Controller. The DSX-1040CDM also distributes Slave Controller communication to those Slave panels located within the same enclosure.

Outputs
The DSX-1043 has 16 Programmable, Form-C, 5 Amp rated Relay Outputs. The on/off state of the outputs can be controlled by up to 4 Time Zones, I/O & Card Linking, and Manually from the PC. The Relay Override Input requires a closure for the outputs to operate. When the Override Input is open the outputs are de-energized. All Outputs have an LED for status.

Inputs
The DSX-1043 has 2 non-supervised inputs for tamper monitoring. The armed status of each input can be controlled by up to 4 Time Zones, I/O & Card Linking, and Manually from the PC.

System Power
Each DSX-1043 is powered from an individually fused 12 volt output from the DSX-1040CDM distribution module located in the same DSX-1040E enclosure.

DSX-1044
Intelligent Input Controller

- ➢ **32 Programmable Inputs**

- ➢ **2, 3, and 4 State Monitoring**

- ➢ **4 Digital (open collector) Outputs**

- ➢ **LED Status for each Input**

- ➢ **UL 294 / UL 1076**

- ➢ **Flexible I/O Linking**

- ➢ **Individual Intelligence**

- ➢ **512K RAM / 512K Flash ROM**

- ➢ **Scalable Architecture**
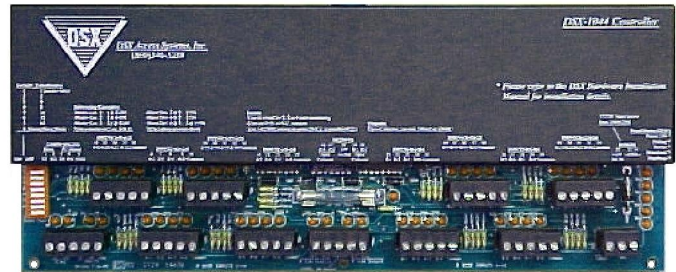
General Information
The DSX-1044 is an independent processing, 32 input, intelligent controller designed to be a cost effective building block in the DSX hardware platform that allows expansion in a scalable manner. Up to 128 inputs can be controlled from 1 enclosure for an efficient space saving package. Each DSX-1044 operates as a fully intelligent and independent controller that retains all data necessary for system operation in its own RAM. With its integral real-time Clock and Calendar it performs Time Zone control with Holiday overrides for inputs even when communication to the PC or other controllers is not available. The DSX-1044 carries a Limited 2 Year Warranty.

Controller Architecture
The DSX-1044 Intelligent Controller may be used in conjunction with all other DSX Controllers as a Master or Slave in the controller network. Any controller may be designated as a Master or Slave controller. The Master or Slave mode of operation is determined by the panel's dip switch settings. The first panel of each location is designated as the Master while all others would be considered Slaves. The Master is responsible for communications to the PC and to the Slave panels. Up to 64 Controllers can be used in a single Location.

Up to four DSX-1044 controllers can be placed in a DSX-1040E Enclosure along with a DSX-1040CDM Communication Distribution Module. The controller can be placed in a 1042PKG mixed with DSX-1042 and DSX-1043 Controllers. The DSX-1044 contains an AM186 processor,

512K of RAM, 512K of Flash ROM, and a Real Time Clock. The DSX-1044 allows all door and field wiring connections to be made via removable terminal blocks. The DSX-1040CDM receives RS-485 communications from a possible previous panel and regenerates the 4 wire RS-485 to the next DSX Controller. The DSX-1040CDM also distributes Slave Controller communication to those Slave panels located within the same enclosure.

Inputs
The DSX-1044 has 32 Programmable Inputs. The armed status of each input can be controlled by up to 4 Time Zones, I/O & Card Linking, and Manually from the PC. Each input has its own status LED that is on when the input is normal. Each input individually supports 2, 3, and 4 state point monitoring.

Outputs
The DSX-1044 has 4 digital (open collector) outputs that have the same programmability and functionality as all other DSX outputs. The on/off state of each output is reflected by their status LEDs. The outputs can be controlled by up to 4 Time Zones, I/O & Card Linking, and Manually from the PC.

System Power
Each DSX-1044 is powered from an individually fused 12 volt output from the DSX-1040CDM distribution module located in the same DSX-1040E enclosure.

DSX-1043 Specifications

Size
DSX-1043 11" W x 4.5" H x 1.5" D

Weight
DSX-1043 1.6 lb.

Finish
Black Powder Coat with White Silkscreen on Enclosure and Black Enamel on DSX-1043.

Temperature
Operating 32 to 131 F
Storage -35 to 150 F

Humidity
Operating 0 to 95%, relative

Power Requirements
DSX-1043 13.5 VDC @ 800ma from 1040CDM

Inputs
Non-Supervised 2
2 Inputs are used for standard point monitoring.
Relay Override Input 1
UL Installations require a Tamper Switch to be connected to an Input programmed with a 24hr Time Zone.

Outputs
Form C Relays 16
Relay Output Ratings 5 AMP 30 VDC

Communication Ports
RS-232 In 1 Master to PC
RS-232 Out 1 Panel to DSX-1040CDM

Processor
AM186 20Mhz

RAM/ROM Memory
Flash ROM 512K
Standard RAM 512K

Warranty
Limited 2 Years

DSX-1044 Specifications

Size
DSX-1044 11" W x 4.5" H x 1.5" D

Weight
DSX-1044 1.2 lb.

Finish
Black Powder Coat with White Silkscreen on Enclosure and Black Enamel on DSX-1044.

Temperature
Operating 32 to 131 F
Storage -35 to 150 F

Humidity
Operating 0 to 95%, relative

Power Requirements
DSX-1044 13.5 VDC @ 550ma from 1040CDM

Inputs
Supervised 32
2, 3, 4 State Monitoring
UL Installations require a Tamper Switch to be connected to an Input programmed with a 24hr Time Zone.

Outputs
Digital (open collector) 4
Output Ratings 12VDC @ 100ma sinking

Communication Ports
RS-232 In 1 Master to PC
RS-232 Out 1 Panel to DSX-1040CDM

Processor
AM186 20Mhz

RAM/ROM Memory
Flash ROM 512K
Standard RAM 512K

Warranty
Limited 2 Years

DSX-LAN (M)
LAN Communications Interface

- ➤ **Powered from DSX Controller**

- ➤ **Auto-sensing 10/100 / Auto-Duplexing**

- ➤ **RS-232/RS485 Controller Communication**

- ➤ **UL 294 / UL 1076**

- ➤ **Dial-Up Modem Backup – Optional**

- ➤ **Static or Dynamic IP Communications**

- ➤ **Password Protected Programming**

General Application

The DSX-LAN(M) module is typically used to connect a Master Controller to the Host or Comm Server PC over a Local or Wide Area Network. The WinDSX software is inherently TCP/IP capable and redirects communications that would normally be transmitted out a serial port, over a LAN/WAN to a particular IP address. The DSX-LAN(M) module receives that communication and converts it to RS-232 or RS-485 that connects directly to the Master Controller. This adds another avenue of flexibility to WinDSX by utilizing TCP/IP communications as well as dial-up modem and direct serial port connectivity. All three means of communication can be used at the same time in the same system. The DSX-LAN(M) is powered from the DSX Controller which can provide battery backup.

The DSX-LAN(M) module is sold in two different configurations. The DSX-LAN has IP as the only method of connectivity. The DSXLAN(M) has dial up modem backup. The DSX-LAN module must be ordered with the (M) option along with the DSX modem to support the dial-up backup feature.

Other Applications

The DSX-LAN can also be used at Slave Controllers with the use of the PC Master Software. PC Master is a DSX software application that emulates a Master Controller. It gets its download from the Comm Server PC and communicates with all of the Slaves just like a Master Controller does. What is different about the PC Master software is its ability to communicate with each Slave Controller via TCP/IP or with a serial port connection. This allows Slave Controllers to be placed on the LAN and each one or each group of controllers to have a LAN connection using a LAN module. Modem backup is not available for slave controller communication.

Dial-up Modem Backup

The DSX-LAN(M) module has a 9 pin serial port that is used to connect a DSX modem for communications redundancy. When the LAN(M) module determines a loss of network connectivity it switches to "Modem Mode" which allows the controller to call the Comm Server or Host PC via the modem when necessary. When the Network connection is re-established the Controller reconnects over the LAN. The modem and the LAN(M) module are powered from the Controller and are connected to each other via the supplied serial cable.

Power

The DSX-LAN(M) is powered from one of the Controllers 12VDC outputs requiring a mere 300ma. Powering the module from the DSX Controller provides a good stable battery backed up source.

Mounting

The DSX-LAN(M) is designed to fit in the same Equipment Cabinet as the DSX-1048 and DSX-1022 Controllers. It can mount on the inside or rest in the bottom of the enclosure. It has three mounting holes and removable terminal blocks.

Size

DSX-LAN(M) 5.5" W x 3.5" H x 1.0" D

Weight

DSX-LAN 12.0 oz.

Temperature/Humidity

Operating 0 to 70 C

Power Requirements

DC Input Voltage 12VDC @ 300ma