



DSX Access Systems, Inc.

DSX-LAN-D

Programming and Commissioning the DSX-LAN-D

The **DSX-LAN-D** is the latest in DSX IP Communications module that supports UDP Controller communication and VLAN configurations. This Module supports RS-232/RS-485 and can be used at Master or Sub Controllers.

1. The DSX-LAN-D Module comes with a preset IP Address of 192.168.1.25 and can be programmed with a Web browser. Connect the module to your laptop or switch and connect using a browser. The Module requires **5-12VDC @ 300ma**. Power the Module from the **5VDC** output of the 1040-CDM or 1022 Controller. 12VDC will work if 5VDC is not available.

2. The Module has a default IP Address of 192.168.1.25. Connect with a Laptop or PC that has the same IP schema and subnet (255.255.255.0). Using a Web browser such as "Chrome", enter the IP address and press enter. The LAN Module will respond with a Login page where you will enter: User - master, Password - master. The screen shots below show the default Settings for the Module.

3. Once you have logged in with User - master and Password - master, you will be able to program the Module. On the Communications Settings Tab - Do Not change the top 5 items unless instructed to do so. The Serial Port Speed should be 9600, the Internet Protocol should be **IPv4**, the Addressing Mode should be **Static(v4 or v6)** and the Link Speed should be **Auto Negotiate**.

Communication Settings	Security Settings
Device name for DHCP:	<input type="text" value="DSX-00-08-66-10-00-F0"/>
Serial Port Speed:	<input type="text" value="9600"/> <small>Serial Port Speed must match DSX Panel Serial Speed</small>
Internet Protocol:	<input type="text" value="IPv4"/>
Addressing mode:	<input type="text" value="Static(v4 or v6)"/>
Link Speed/Duplex:	<input type="text" value="Auto Negotiate"/>

4. Under IP Settings assign a Static IP Address, Subnet mask, Gateway, and DNS server. Leave VLAN at 0 unless you are placing the module on a VLAN. Perform "IPConfig" from a command prompt to find the data below.

IP Settings	IP Values
Device IP address:	<input type="text" value="192.168.1.25"/> <small>MAC Address:00-08-66-10-00-F0</small>
Device subnet mask:	<input type="text" value="255.255.255.0"/>
Device gateway:	<input type="text" value="255.255.255.255"/>
DNS server:	<input type="text" value="255.255.255.255"/>
VLAN ID:	<input type="text" value="0"/> <small>Enter 0 to disable VLAN</small>

5. Under the UDP Settings enter the **Receive Port** which should be the same as the TX IP Port from the Comm Port settings at the Comm Server. Set the **Transmit Port** to the same. Leave the "**Send to this IP address**" blank and select **Dynamic IP**. This will work with most Master Controller deployments and for Hot Swap Comm Servers. **All 4 Ports should have the same port #**

The screenshot shows the 'UDP Settings' section of a configuration interface. A red box highlights the 'Receive Port' and 'Transmit Port' fields, both of which contain the value '4003'. Below these fields, the 'Send to this IP address' field is set to 'IPv4,IPv6 or DNS lookup' and the 'Dynamic IP' checkbox is checked. A 'Submit New Settings' button is visible at the bottom right.

6. Click on **Submit New Settings** to save. You must save your settings before going to another screen or your settings will be lost.

Example of DSX Master Communications

This block contains two screenshots. The left screenshot is titled 'New Comm Port' and shows the 'General' tab with 'Port #' set to 42 and 'Port Type' set to 'LAN (UDP) (Comm)'. The 'TX IP Port #' and 'RX IP Port #' fields are both set to 4003 and are highlighted with a red box. The right screenshot is titled 'DSX-LAN-D module at Master Controller' and shows the 'UDP Settings' section with 'Receive Port' and 'Transmit Port' both set to 4003, also highlighted with a red box. Red arrows point from the 'TX IP Port #' field in the first screenshot to the 'Receive Port' field in the second, and from the 'RX IP Port #' field to the 'Transmit Port' field.

Comm Server - Comm Port

DSX-LAN-D module at Master Controller

Example of PC Master / L85 Communications

PC Master requires the use of Two Ports. The Transmit from PC Master to LAN-D is one port and the Transmit from the LAN-D to PC Master is a different port. The same is true with L85 and Lockset Communications to PIMs. Both Ports must be allowed In the Windows FireWall or other security software.

```

pcmini.txt - Notepad
File Edit Format View Help
[NAME Main Location
.MYPORT 4001
.LO 1
.DE 2 .IP 182.25.16.137 .PO 4003 .RLP 4004 .CRS 3 .MRS 0 .MRF 3 .IMD 0

```

PC Master Config

LAN-D at PIM/Sub Controller>

The screenshot shows the 'DSX-LAN-D module at Master Controller' configuration screen. The 'UDP Settings' section has 'Receive Port' set to 4003 and 'Transmit Port' set to 4004. The 'Dynamic IP' checkbox is checked. A 'Submit New Settings' button is at the bottom right.

7. Under Security Settings - set the **User** Name and Password and the **Admin** User Name and Password. The User can change Communication Settings and the Admin can change Security and Communications Settings. Use the **Password Format** section at the bottom to set the complexity and length of both passwords. 6 to 19 keyboard characters. Select the attributes that must be part of the password. Be careful not to lock yourself out as the Module will have to ship to DSX to be reset.

Communication Settings	Security Settings										
Passwords											
User name:	123456										
Password: <small>Leave blank for no password</small>										
Repeat password:										
Admin User name:	master										
Admin Password: <small>Leave blank for no password</small>										
Repeat Admin password:										
Password Format	<table border="1"> <thead> <tr> <th>Upper</th> <th>Lower</th> <th>Special</th> <th>Numeric</th> <th>Length</th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td>0</td> </tr> </tbody> </table>	Upper	Lower	Special	Numeric	Length	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0
Upper	Lower	Special	Numeric	Length							
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0							

7a. The User Password allows the changing of the Network Settings only.

Default is > User - 123456 Default Password - 123456

7b. The Admin Password allows the changing of the Security Settings and the Network Settings.

Default is > Admin User - master Default Password – master

Encryption	
Encryption Key:	Upto 32 characters long <small>Leave blank for no encryption</small>
<small>Changing Encryption Key will initiate a reboot.</small>	

8. Future Use - This Encryption Key is in addition to DSX Comm Encryption. DO NOT SET

Log Settings	
UDP Log Address:	IPv4,IPv6 or DNS lookup
UDP Log Port:	0 <small>Enter '0' to disable logging</small>
Heartbeat Frequency (in seconds):	0

9a. The Security Log Settings allow for an optional IP Address and Port to be defined. Once defined The Module will send all Login attempts and notification of changes made to that Log address. Each time you switch between pages it will send a Login. Enter the IP Address and IP Port number to send the information. This is not the Comm Server Address.

9b. Enter the number of seconds that the Module will send a supervisory message to the Security Log IP Address. This continual heartbeat supervises the communication and notification path.

Time Settings	
Daylight Savings Time	<input type="checkbox"/> Daylight savings Valid only for TimeZones in US & Canada
NTP server Enable	<input type="checkbox"/> Changing NTP Settings may cause a reboot
Security Log UTC Timezone offset:	0
NTP server Address	IPv4,IPv6 or DNS lookup <small>Leave blank for time.google.com</small>
System Time:	16:11:54
System Date:	01 / 05 / 2018

- 10a.** Enter the UTC Time Zone so these logs have the proper time and date stamp.
-6 for Central Time, -5 for Eastern Time, -7 for Mountain Time, and -8 for Pacific Time
- 10b.** Enter the IP Address of the Time Server where the Module can get the proper time.
If you enter a NTP Time Server IP Address you must restart (repower) the module.
- 10c.** Click on **Display System Time** to get the time from the module. Enter the time if a Time Server is not available. Once you have entered the date and time click on **Manually Set System Time** at the bottom. Once the time has been set manually do not power the Module down and up.

Example: Sample of the Security Log Supervision Message.

DEVICE:DSXLAN-00-03-F4-09-4D-7D HB Thu Feb 11 10:14:39 2016

Performance Settings	
Packet Mode Enable	<input checked="" type="checkbox"/> Enabling Packet Mode can decrease network traffic but can also increase serial response times. Changing Packet Mode State will initiate a reboot.
Serial Compatibility Mode Enable	<input checked="" type="checkbox"/> Changing Serial Compatibility Mode State will initiate a reboot.
Serial Debug Mode Enable	<input type="checkbox"/> **FOR DSX INTERNAL USE ONLY**

- 11a.** Select **Packet Mode Enable** for DSX controller communication that is using the Internet or busy WAN for communications backbone.
- 11b.** Select **Serial Compatibility Mode Enable** for Communications to Schlage Integrated Locksets and PIMs using DSX-L85 software.
- 11c.** Do Not Select **Serial Debug Mode**. Do Not Use.
- Once the Passwords and Log Settings have been entered click on **Submit New Settings** at the bottom. When finished, close the browser completely.

DSX-LAN-D Wiring Information

RS-232 Master Comm

DSX-1040 Master Controllers

DSX-LAN	1042	1043	1044
Tx	4	16	4
Rx	3	15	3
Gnd	5	17	5

DSX-1020 / 1032 Master Controllers

DSX-LAN	1022	1021	1032
Tx +	49	51	55
Tx -	48	52	56
Rx +	51	49	53
Rx -	50	50	54

RS-485 Sub Comm for PC Master and IP Hub

DSX-1040 Sub Controllers via CDM

DSX-LAN	CDM 485 In
Tx+	Rx+
TX-	RX-
Rx+	Tx+
RX-	Tx-

DSX-1020 and 1032 Sub Controllers

DSX-LAN	1022	1021	1032
Tx +	57	43	43
Tx -	56	44	44
Rx +	59	41	41
Rx -	58	42	42