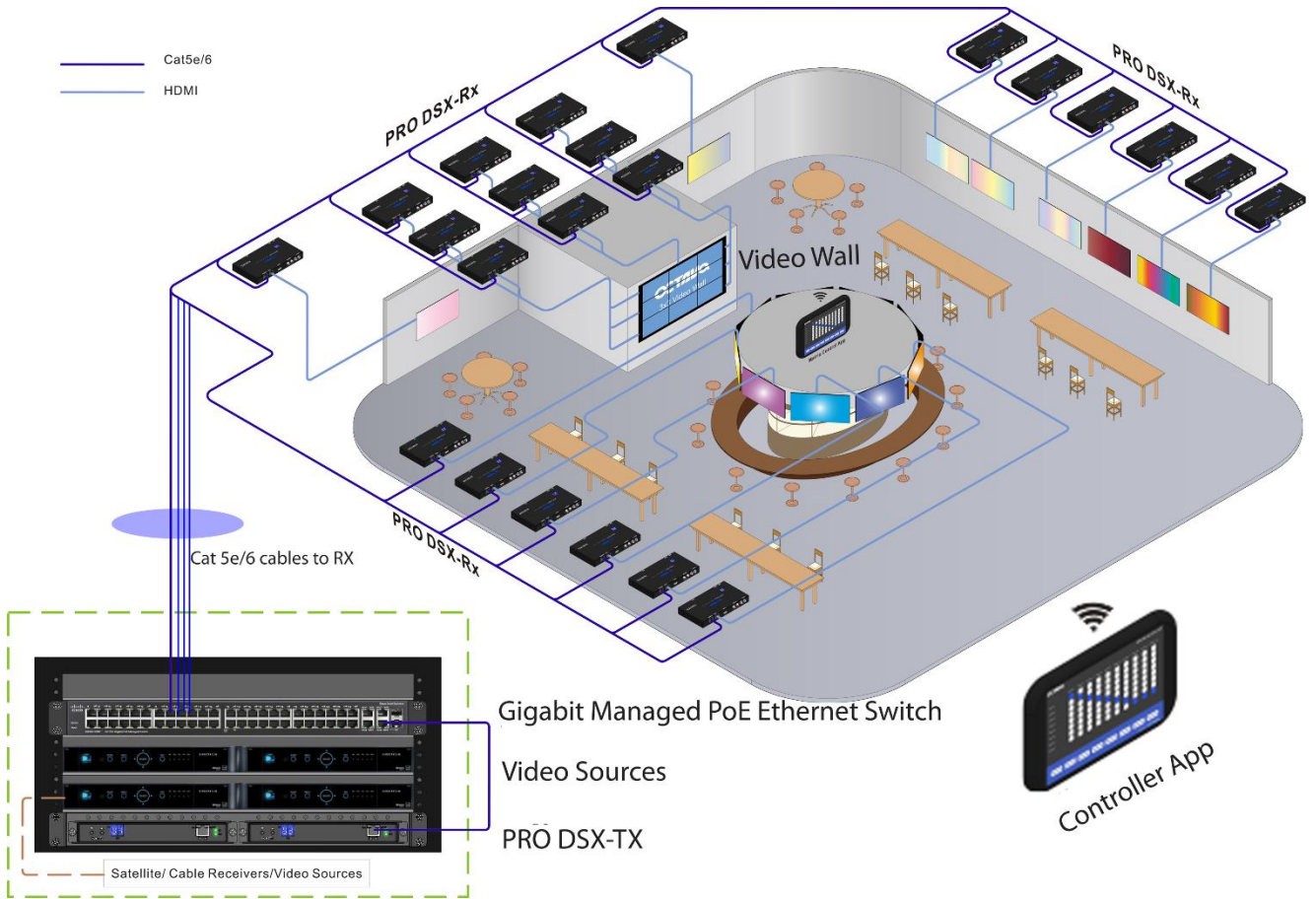


PRO DSX - HDMI Over IP Network Switch Configuration For DLINK DGS 1210-28p

Revision: 1.1



System Application Diagram



Customizable Matrix Control App (available for iOS, and Android Devices)

Introduction:

Scope: This guide provides a reference for configuring your network switch to work with the Octava PRO DSX HDMI Over IP Matrix System.

This configuration guide is based on the DLINK DGS1210-28P

In this guide we will configure the network switch so some of the advanced features are enabled:

Jumbo frame : jumbo frames are Ethernet frames with more than 1500 bytes of payload.

Multicast Video: Multicast as compared to Unicast is a more efficient method of delivering video to multiple clients. Multicasting requires only 1 “channel/group” to be transmitted regardless of number of clients that will subscribe to the “channel/group”. Unicast would require 1 stream for each client , thus would increase the bandwidth requirement by N(number of clients).

IGMP (internet group management protocol): IGMP Querying/Snooping, optimizes network loading by ensuring that Multicast traffic is only forwarded to ports that are members of that Multicast group.

1. Connect a LAN cable directly from you PC to the network switch.

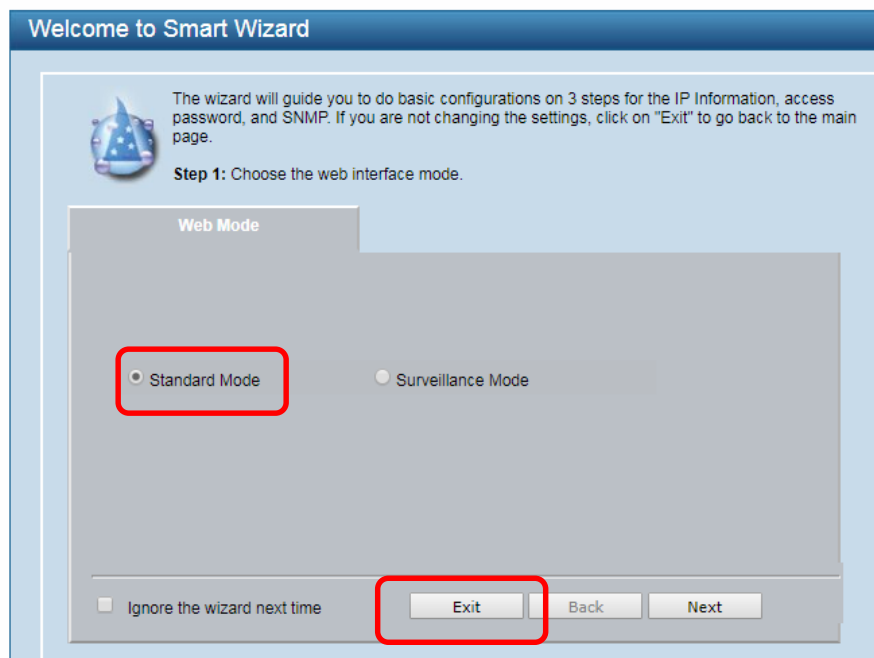


2. Set your computer network settings to :

IP Address: 10.0.0.2
Subnet : 255.0.0.0
Gateway: 10.0.0.1

3. Open a browser and enter the IP address of the DLINK: 10.90.90.90

Not secure | 10.90.90.90/homepage.htm



4. Select Standard mode and Exit

The screenshot shows the D-Link web management interface for a DGS-1210-28P switch. The left sidebar contains a tree view with 'VLAN' selected. The main content area displays 'Device Information' with the following details:

Device Information		System Name	
Device Type	DGS-1210-28P Gigabit Ethernet Switch	System Location	
Boot Version	1.00.010	System Time	01/01/2017 16:31:18
Firmware Version	6.10.007	System Up Time	0 days, 16 hours, 22 mins 5 seconds
Hardware Version	F1	Login Timeout (minutes)	5
Serial Number	S30R2I3003162		
MAC Address	18-0F-76-E9-56-A8		

IP Address Information			
IPv4 Address	10.90.90.90		
Subnet Mask	255.0.0.0		
Default Gateway	0.0.0.0		
IPv6 Global Unicast Address			
IPv6 Link-Local Address			

Device Status and Quick Configurations					
RSTP	Disabled	Settings	SNMP Status	Disabled	Settings
Port Mirroring	Disabled	Settings	802.1X Status	Disabled	Settings

5. Select VLAN

The screenshot shows the D-Link web management interface with 'VLAN' selected in the left sidebar. The main content area displays 'Device Information' with the following details:

Device Information		System Name	
Device Type	DGS-1210-28P Gigabit Ethernet Switch	System Location	
Boot Version	1.00.010	System Time	01/01/2017 16:31:18
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Hardware Version	F1	Login Timeout (minutes)	5
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MAC Address	18-0F-76-E9-56-A8		

IP Address Information	
IPv4 Address	10.90.90.90
Subnet Mask	255.0.0.0
Default Gateway	0.0.0.0

6. Select 802.1Q VLAN

802.1Q VLAN Settings Safeguard

Asymmetric VLAN [Example] Enabled Disabled

Total static VLAN entries: 1

Maximum 256 entries.

VID	VLAN Name	Untagged	Tagged	Delete
1	default	01-28		Delete

7. Select all ports and set as Untagged

VID Settings Safeguard

VID 1
VLAN Name default

Port	Select All	01	02	03	04	05	06	07	08	09	10	11	12	13	14
Untagged	All	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tagged	All	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Not Member	All	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Port	Select All	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Untagged	All	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tagged	All	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Not Member	All	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

8. Select L2 Functions. Set JUMBO Frame = Enable

Jumbo Frame Settings Safeguard

Jumbo Frame Enabled Disabled

Maximum Length is 10000 bytes.

9 . Go to Multicast and set as follows:

- Set IGMP Snooping = Enable
- Host Time Out = 260
- Robustness Variable = 2
- Query Interval= 125
- Router Timeout = 125
- Last Member Query Interval = 1
- Max Response Time = 10

The screenshot shows the configuration interface for IGMP Snooping on a DGS-1210-28P switch. The left sidebar shows a tree view with 'Multicast' > 'IGMP Snooping' selected. The main panel is titled 'IGMP Snooping Configuration' and includes a 'Safeguard' indicator.

IGMP Snooping Global Settings

IGMP Snooping: Enabled Disabled Report to all ports

Host Timeout (130-153025): sec Router Timeout (60-600): sec

Robustness Variable (2-255): Last Member Query Interval (1-25): sec

Query Interval (60-600): sec Max Response Time (10-25): sec

*When Querier state is enabled, the Host Timeout is calculated as the formula :
(Host Timeout = Robustness Variable * Query Interval + Max Response Time)*

IGMP Snooping VLAN Settings

VLAN ID	VLAN Name	State	Querier State	Fast Leave	Router Ports	Multicast Entries
1	default	Enabled	Enabled	Enabled	28	<input type="button" value="View"/>

10. Goto / Multicast / IGMP Snooping

State = Enabled

Querier State = Enabled

Fast Leave = Enabled

IGMP Snooping VLAN Settings Safeguard

VLAN ID: 1
VLAN Name: default
State: ▼
Querier State: ▼
Fast Leave: ▼ Apply

Static Router Ports

01	02	03	04	05	06	07	08	09	10	11	12	13	14
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	16	17	18	19	20	21	22	23	24	25	26	27	28
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Dynamic Router Ports

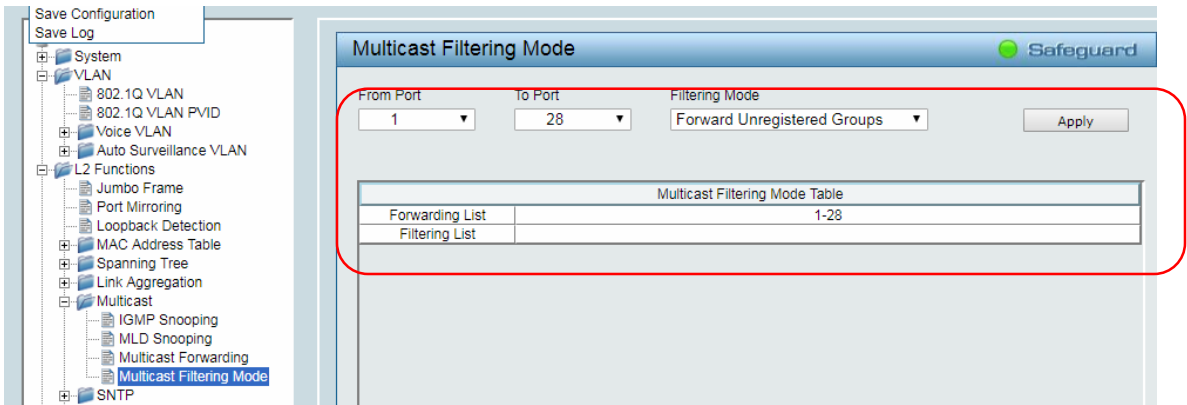
01	02	03	04	05	06	07	08	09	10	11	12	13	14
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	16	17	18	19	20	21	22	23	24	25	26	27	28
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Back Apply

11. Set port 28 as Static Router Port . Leave other ports unselected

12. Goto Multicast / Multicast Filtering Mode

Set Filtering mode = Forward Unregistered Groups



13. Save

14. Reboot Device

