

Verified Network Switch Guide

For use with Key Digital AV over IP Systems

IMPORTANT: Configure your network switch according to this guide **BEFORE** connecting your AV over IP units.

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Introduction

Thank you for purchasing a Key Digital AV over IP system.

Follow the instructions in this guide to enable the features for a reliable foundation for your AVoIP system.

Your AV over IP system MUST be integrated with one these verified network switches to function.

Network Switch setup may be different for 4K (KD-IP922, KD-IP822, KD-IP1022) and 1080p (KD-IP1080, KD-IP120) systems. There are separate setup instructions for each where applicable.

Key Digital AV over IP Supported Models:

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- 4K Systems:
 - o KD-IP922ENC, KD-IP922DEC
 - KD-IP822ENC, KD-IP822DEC
 - KD-IP1022ENC, KD-IP1022DEC
- 1080p Systems:
 - o KD-IP1080Tx, KD-IP1080Rx
 - KD-IP120Tx, KD-IP120Rx, KD-IP120POETx, KD-IP120POERx

Key Digital's AV over IP product family consists of many different models. <u>Not all models are compatible together</u>. See Key Digital <u>AV over IP Selection Guide</u> for more info

Key l	Digital [®] A	AV over	IP Solu	tions So	electior	Guide			
Key Dig systems	ital's AV ove s that can be	I에는 데이는리 MANAGEMENT SOFT	PRO VARE	KEY DIGITAL APP READY					
	KD-IP1022ENC	KD-IP1022DEC	KD-IP922ENC	KD-IP922DEC	KD-IP822ENC	KD-IP822DEC	KD-IP1080Tx	KD-IP1080Rx	
		10 0 - 11 17 1 15 10 0 0 0 0 0012					01_1_1_0*	e - •	
Encoder Tx / Decoder Rx	Encoder (ENC)	Decoder (DEC)	Encoder (ENC)	Decoder (DEC)	Encoder (ENC)	Decoder (DEC)	Encoder (Tx)	Decoder (Rx)	
System Build* /Compatibility	KD-IP1022EM Independent Audio, V	IC/DEC Only. ideo, USB Switching		Mix & Match KD-IP922ENC/	DEC with KD-IP822ENC/DEC		KD-IP1080)Tx/Rx Only	
Video Resolution	4K (10G)	4K (10G)	4K (10G)	4K (10G)	4K (10G)	4K (10G)	1080p	1080p	
Audio	External L/R In, Audio De-Embed, Pre-Amp	Independent Switch, Audio De-Embed, Pre-Amp	External L/R In, Audio De-Embed, Pre-Amp	Audio De-Embed, Pre-Amp	Audio De-Embed, Pre-Amp	HDMI Pass-Thru	HDMI Audio	HDMI Audio	HDMI Audio
Video Wall	Up to 16x16	Up to 16x16	Up to 16x16	Up to 16x16	Up to 16x16	Up to 16x16			
Control	TCP/IP, LAN, RS-232, 3 port Compass MC, IR RS Pass-Thru, Open API	TCP/IP, LAN, RS-232, 3 port Compass MC, IR RS Pass-Thru, Open API	TCP/IP, LAN, RS-232, 3 port Compass MC, IR RS Pass-Thru, Open API	TCP/IP, LAN, RS-232, 3 port Compass MC, IR RS Pass-Thru, Open API	TCP/IP, RS-232, 2 port Compass MC, IR RS Pass-Thru, Open API	TCP/IP, RS-232, 2 port Compass MC, IR RS Pass-Thru, Open API	Via KD-CX800 Control Interface	Via KD-CX800 Control Interface	
USB / KVM	1x USB-B (Host) for KVM, Data	Independent Switch, 2x USB-A (Device), KVM, Data	1x USB-B (Host) for KVM, Data	2x USB-A (Device) for KVM, Data	20				
PoE	≤ 9W - Redundant Power Connection	≤ 9W - Redundant Power Connection	≤ 9W - Redundant Power Connection	≤ 9W - Redundant Power Connection	≤ 9W - Redundant Power Connection. PS Sold Separately.	≤ 9W - Redundant Power Connection. PS Sold Separately.	≤ 6W - Redundant Power Connection	≤ 6W - Redundant Power Connection	
Compression	Motion Jpeg 2000 4K = 850Mbps 1080p = 250Mbps 720p = 125Mbps	Motion Jpeg 2000 4K = 850Mbps 1080p = 250Mbps 720p = 125Mbps	Motion Jpeg 2000 4K = 850Mbps 1080p = 250Mbps 720p = 125Mbps	Motion Jpeg 2000 4K = 850Mbps 1080p = 250Mbps 720p = 125Mbps	Motion Jpeg 2000 4K = 850Mbps 1080p = 250Mbps 720p = 125Mbps	Motion Jpeg 2000 4K = 850Mbps 1080p = 250Mbps 720p = 125Mbps	H.264 1080p ≈ 15Mbps 720p ≈ 12Mbps	H.264 1080p = 15Mbps 720p = 12Mbps	
Latency	≈ 40ms @4K	≈ 40ms @4K	≈ 40ms @4K	≈ 40ms @4K	≈ 40ms @4K	≈ 40ms @4K	≈ 400ms @1080p	≈ 400ms @1080p	

System Facts

4K Systems: KD-IP822, KD-IP922, KD-IP1022 models

- Video Compression Standard: Motion JPEG 2000
- Data Stream Bandwidth: < 900 Mbps

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Stream Resolution	Bandwidth
4K @ 60Hz/30Hz	≤ 850 Mbps
1080p @ 60Hz	≤ 250 Mbps
1080i / 720p @ 60Hz	≤ 125 Mbps

- Latency: ≈ 40ms @4K. Less at lower resolutions.
- PoE Power Consumption: ≤ 9 Watts per unit
- Required network cabling: CAT6 UTP/STP, CAT6A, CAT7

1080p Systems: KD-IP1080, KD-IP120 models

- Video Compression Standard: H.264
- Data Stream Bandwidth: < 15 Mbps

Stream Resolution	Bandwidth
1080p @ 60Hz	≤ 15 Mbps
1080i / 720p @ 60Hz	≤ 12 Mbps
480p @ 60Hz	≤ 4 Mbps

- Latency: ≈ 400ms @1080p. Less at lower resolutions.
- PoE Power Consumption: \leq 6 Watts per unit
- Required network cabling: CAT5e UTP/STP, CAT6 UTP/STP, CAT6A, CAT7

Network switch Requirements for KD AV over IP

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Key Digital's AV over IP systems utilize multicasting technology to broadcast streams throughout the network.

AV over IP **requires a network switch with IGMP (Internet Group Management Protocol) support** to direct traffic of the broadcast streams, ensuring that only the desired decoders receive the stream from the selected encoder.

If the system **spans multiple network switches**, it is <u>required</u> for the switches to be connected via **10G fiber cabling** for the purpose of stacking. You must use two of the same series of network switch in these scenarios for best compatibility.

For 1080p systems (KD-IP1080, KDIP120 models) that plan to use the video preview feature of the <u>Key Digital App</u>, IGMP v3 must be enabled. For 1080p or 4K systems that will not use the video preview feature, IGMP v2 is enabled.

KD-IP822, 922, 1022 systems require the following IP addresses to be **reserved**. They cannot be assigned to KD-IP822, 922, or 1022 units:

192.168.1.1, 192.168.1.50, 192.168.1.90, 192.168.1.100, 192.168.1.150, 192.168.1.200

Feature	4K System	1080p System			
	(KD-IP822, KD-IP922, KD-IP1022 models)	(KD-IP1080, KD-IP120 models)			
IGMP v2	Х	X (for non-video preview systems)			
IGMP v3		X (for video preview systems)			
Bandwidth	1Gbps	100BaseT			
8K Jumbo Frame	Х				
PoE	Optional	Optional (excl KD-IP120PoE models)			

Verified Network Switches

Brand	Model	Port Number	ΡοΕ	10G Fiber Stacking	Approved for KD-IP1080/120	Approved for KD-IP822/922	Approved for KD-IP1022
Araknis	AN-210-SW-R- 8-POE	8	YES	NO	YES	YES	
	AN-210-SW-F- 8-POE	8	YES	NO	YES	YES	
	AN-210-SW-R- 16-POE	16	YES	NO	YES	YES	
	AN-210-SW-F- 16-POE	16	YES	NO	YES	YES	
	AN-210-SW-R- 24-POE	24	YES	NO	YES	YES	
	AN-210-SW-F- 24-POE	24	YES	NO	YES	YES	
	AN-210-SW-F- 48-POE	48	YES	NO	YES	YES	
	AN-310-SW-R-8	8	NO	NO	YES	YES	
	AN-310-SW-F-8	8	NO	NO	YES	YES	
	AN-310-SW-R- 16	16	NO	NO	YES	YES	
	AN-310-SW-F- 16	16	NO	NO	YES	YES	
	AN-310-SW-R- 24	24	NO	NO	YES	YES	
	AN-310-SW-F- 24	24	NO	NO	YES	YES	
	AN-310-SW-R- 8-POE	8	YES	NO	YES	YES	
	AN-310-SW-F- 8-POE	8	YES	NO	YES	YES	
	AN-310-SW-R- 16-POE	16	YES	NO	YES	YES	
	AN-310-SW-F- 16-POE	16	YES	NO	YES	YES	
	AN-310-SW-R- 24-POE	24	YES	NO	YES	YES	
	AN-310-SW-F- 24-POE	24	YES	NO	YES	YES	
	AN-310-SW-F- 48-POE	48	YES	NO	YES	YES	

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Brand	Model	Port Number	ΡοΕ	10G Fiber Stacking	Approved for KD-IP1080/120	Approved for KD- IP822/922	Approved for KD-IP1022
Cisco	SF500-48	48	NO	NO	YES	NO	NO
	SG300-28		NO	NO	YES	YES	
	Catalyst 3850 Series		YES	NO	YES	YES	
	Meraki MS225	24	YES		YES	YES	
D-Link	DGS-3630- 52PC	52	YES	YES	YES	YES	YES
	DGS-3630-52TC	52		YES	YES	YES	YES
	DGS-3630- 28PC	28	YES	YES	YES	YES	YES
	DGS-3630-28SC	28	NO	YES	YES	YES	YES
	DGS-3630-28TC	28	NO	YES	YES	YES	YES
	DGS-3130-54PS	54	YES	NO	YES	YES	
Edgecore Mellanox	Edgecore AS4610-54T	48	YES	YES		YES	YES
Engenius	EGS5212P	8	YES	NO	YES	NO	NO
	EGS7228FP	24	YES	NO	YES	NO	NO
	EGS7252FP	24	YES	NO	YES	NO	NO
	EWS1200D-10T	10	NO	NO	YES	NO	NO
	EWS1200D-28T	24	NO	NO	YES	NO	NO
	EWS1200D-52T	48	NO	NO	YES	NO	NO
	EWS5912FP	8	YES	NO	YES	NO	NO
	EWS7928P	24	YES	NO	YES	NO	NO
	EWS7928FP	24	YES	NO	YES	NO	NO
	EWS7952FP	48	YES	NO	YES	NO	NO

Brand	Model	Port Number	ΡοΕ	10G Fiber Stacking	Approved for KD-IP1080/120	Approved for KD-IP822/922	Approved for KD-IP1022
Linksys	LGS552P	52	YES	YES	YES	YES	
	LGS528P	28	YES	YES	YES	YES	
	LGS326P	26	YES	NO	YES	YES	
	LGS318P	18	YES	NO	YES	YES	
	LGS326MP	26	YES	NO	YES	YES	
	LGS326P	26	YES	NO	YES	YES	
	LGS326	26	NO	NO	YES	YES	
	LGS318P	18	YES	NO	YES	YES	
	LGS318	18	NO	NO	YES	YES	
	LGS308MP	8	YES	NO	YES	YES	
	LGS308P	8	YES	NO	YES	YES	
	LGS308	8	NO	NO	YES	YES	
Luxul	AMS-4424P	24	YES	YES	YES	YES	
	SW-610-24P-R	24	YES	YES	YES	YES	
	SW-510-48P-F	48	YES	NO	YES	YES	
Netgear	GS716T	16	NO	NO	YES	YES	
	GS724T	24	NO	NO	YES	YES	
	GS748T	48	NO	NO	YES	YES	
	GS752TP	48	YES	NO	YES	YES	YES
	GS728TP	28	YES	NO	YES	YES	
	M4250-	10	YES	YES	YES	YES	YES
	10G2XF-PoE	24	(8) VES	VEC	VEC	VEC	
	26G4XF-PoE+	24	1L3	ILS	125	TLJ	
	M4250-	40	YES	YES	YES	YES	
	MS4250-	40	YES	NO	YES	YES	YES
	40G8F-PoE+						

Brand	Model	Port Number	PoE	10G Fiber Stacking	Approved for KD-IP1080/120	Approved for KD-IP822/922	Approved for KD-IP1022
Niveo	NGSME24TH- AV	24	YES	NO	YES	YES	
Pakedge	S3L-24P	24	YES		YES	NO	NO
	SX-8EP	8			YES	YES	
	SX-8P	8	YES		YES	YES	
	SX-24	24			YES	YES	
	SX-24P16	24	YES (16)		YES	YES	
	SX-24P	24	YES (24)		YES	YES	
Ciara and an	6620020	24	VEC	NO	VEC	VEC	
Signamax	SC30020	24	YES	NO	YES	YES	
Titan Networx	TNSS2400P	24	YES		YES	NO	NO
TP-Link	TL-SG2428P	24	YES	NO		YES	YES
	TL-SG3210XHP- M2	8	YES	YES		YES	
	TL-SG3428XMP	24	YES	YES		YES	
	TL-SG3452XP	48	YES	YES	YES	YES	

IGMP Setup Guide: Araknis 1080p Systems (KD-IP1080, KD-IP120)

- 1. **IMPORTANT**: Disconnect all the DHCP devices like routers, servers from the Araknis network switch.
- 2. Locate a pinhole "RESET" button at the front panel left bottom corner of your Araknis network switch. Using a paper clip press and hold a reset button for more than 10 seconds and then release. Wait while the device is restarted and ready to use (about 5min).
- 3. **IMPORTANT**: At this point all the displays should be displaying distorted randomly flashing video images.
- 4. Connect your PC to the Araknis network switch directly using a network cable.

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- If you have not done yet, configure your PC's IP address to the same range as the switch (default 192.168.20.xxx).
- 6. Enter the switch's IP address (default is **192.168.20.254**) in your browser and press ENTER.
- 7. Enter username and password (default is "araknis" for both). Then click Log In.

Cogin X	
← → C 🗋 192.168.20.254/login.html	☆ 〓
For quick access, place your bookmarks here on the bookmarks bar. Import bookmarks now	
Caraknis	*
AUTHENTICATION REQUIRED	
Username: araknis Password: ••••••	
AN-210-SW-24-POE	•

 Navigate to Settings -> System. Under IP Address Settings elect Static. Change an IP address to 192.168.1.251, Subnet Mask to 255.255.255.0, Default Gateway to 192.168.1.1 (in this case), and at the bottom click Apply. If you are setting up multiple network switches it is recommended to set first one to 192.168.1.251, second to 192.168.1.252, and so on, and each switch must be set individually same way as described below.

Arakois 210 24 Port PoF										
← → C 192.168.1.251/#2					☆ =					
Apps G Google 號 192.168.1.250/cs525d	a 🗋 TNSS-2400P 🔞 TNSS-24	400P 🌼 192.168.1.254/csb8af7 🏾 🌱 1	92.168.0.4		~ ~					
O ADVANCED	IPv4		IPv6							
Q Search	Auto Configuration	● Static 🛛 DHCP	IPv6 State	Auto Configuration						
	IPv4 Address	192.168.1.251	IPv6 Address	fe80::d66a:91ff:fe3b:75fb / 64 (1-127)						
	Subnet Mask	255.255.255.0	Default Gateway	::						
	Default Gateway	192.168.1.1	Link Local Address	fe80::d66a:91ff;fe3b:75fb						
	DNS Server 1	0.0.0.0								
	DNS Server 2	0.0.0.0								
	Date and Time Settings									
	Manually Set Date and Time									
	Date: 2001 / 1 /	03								
	Time: 18 : 25 (24-Hour)								
	Synchronize with PC	a and Time								
	NTP Server: time nist on	v v								
	Time Zone: (GMT-05:00)	Eastern Time (US and Canada)	•							
	Enable Daylight Savin	g								
	Start: March V 2r									
	UPnP Configuration									
	UPnP	Enabled 🔹								
				Apply Cancel	•					

- 9. Page will refresh. Configure your PC's IP address to the same range as the switch (default **192.168.1.xxx**). Enter the switch's IP address (default is **192.168.1.251**) in your browser and press ENTER.
- 10. Make sure the settings remain as above.

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11. Navigate to Advanced -> Multicast -> IGMP Snooping. Under Settings select Enable for Status, V3 for Version, and Enable for Report Suppression. Under VLAN Settings / VLAN ID 1 select Enable for IGMP

Snooping Status and Enable for Fast Leave. Under Querier Settings / VLAN ID 1 select Enable for Querier State, V3 for Querier Version and make sure all other setting are exactly as shown below. Click Apply.

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IGMP SN	IGMP SNOOPING												
Settings													
Status							1	Enabled Obisat	bled				
Version						⊖V2 ⊙ V3							
Report S	Suppression						1	Enabled Obisat	oled				
Unregist	tered Multicast Beha	vior					1	OFlood ODrop					
2													
VLAN Se	ttings												
VLAN ID			IGM	P Snooping Status				Fast Leave					
1			Er	abled				✓ Enabled ✓					
Querier S	Querier Settings												
VLAN ID	Querier State	Querier Version	Querier Status	Querier IP	Robustness	Interval	Oper Interval	Max Response Interval	Oper Max Response Interval	Last Member Query Counter	Oper Last Member Query Counter	Last Member Query Interval	Oper Last Member Query Interval
1	Enabled V	[V3 v]	Quarter	102 109 1 251		[405	105		10				

- 12. **IMPORTANT**: At this point all the displays should be displaying stable running video from the selected sources. If you do not have them displaying properly, than network switch is configured incorrectly.
- 13. Navigate to **Maintenance** -> **Restart Device** and click Restart Switch. After the reboot is complete, check all settings again.

🔞 Araknis 210 24 Port PoE 🛛 🗙 📃				
← → C 🗋 192.168.1.250/ir	ndex.html?160219-1935#11			ය =
For quick access, place your bookmarks here or	n the bookmarks bar. Import bookmarks now			
araknis	RESTART DEVICE	CLOUD SERVER: No Connection	System Time: 2000-12-31 19:08:46	• System Uptime: 0d 00:09:10
STATU S SYSTEM PORTS	Reboot the device			
BETTINGS SYSTEM PORTS POE	Caution: Pressing this button will cause the device to react Restart Switch	boot.		

- 14. IMPORTANT: Now you can connect back you DHCP equipment (routers, servers and so on).
- 15. Power down Araknis network switch and power it up back again. Wait for the whole system to start and until you can see video on your displays.
- 16. Log in to your Araknis network switch again and make sure that IGMP settings are intact.
- 17. Rescan your components with Key Digital Management Software and make sure HDMI video switch is functional.
- 18. At this point your Araknis network switch is set and ready to use
- 19. Connect your encoders, decoders, allow approx 3 mins for bootup, and perform a network scan using KD Management Software.

IGMP Setup Guide: Araknis 4K Systems (KD-IP822/922/1022)

- 1. **IMPORTANT**: Disconnect all the DHCP devices like routers, servers from the Araknis network switch.
- 2. Locate a pinhole "RESET" button at the front panel left bottom corner of your Araknis network switch. Using a paper clip press and hold a reset button for more than 10 seconds and then release. Wait while the device is restarted and ready to use (about 5min).
- 3. **IMPORTANT**: At this point all the displays should be displaying distorted randomly flashing video images.
- 4. Connect your PC to the Araknis network switch directly using a network cable.

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- If you have not done yet, configure your PC's IP address to the same range as the switch (default 192.168.20.xxx).
- 6. Enter the switch's IP address (default is **192.168.20.254**) in your browser and press ENTER.
- 7. Enter user name and password (default is "araknis" for both). Then click Log In.

Cogin X	
← → C 🗋 192.168.20.254/login.html	☆ =
For quick access, place your bookmarks here on the bookmarks bar. Import bookmarks now	
AUTHENTICATION REQUIRED	- 1
Username: araknis Password: ••••••	
AN-210-SW-24-POE	ļ

 Navigate to Settings -> System. Under IP Address Settings elect Static. Change an IP address to 192.168.1.251, Subnet Mask to 255.255.255.0, Default Gateway to 192.168.1.1 (in this case), and at the bottom click Apply. If you are setting up multiple network switches it is recommended to set first one to 192.168.1.251, second to 192.168.1.252, and so on, and each switch must be set individually same way as described below.

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			R
IK I:			

Auto Configuration Static DHCP IPv6 State Auto Configuration IPv6 Address IPv6 Address			IPv6			
IPv4 Address 192.168.1.251 IPv6 Address 1680.: d66.a.91ff.fe3b.75fb Subnet Mask 255.255.255.0 Default Gateway :: Default Gateway 192.168.1.1 Link Local Address fe80:: d66.a.91ff.fe3b.75fb DNS Server 1 0.0.0 Intel Settings fe80:: d66.a.91ff.fe3b.75fb DXS Server 2 0.0.0 Intel Settings fe80:: d66.a.91ff.fe3b.75fb Date and Time Settings Intel Settings Intel Settings Synchronize with PC Intel Settings Intel Settings Automatically Get Date and Time Intel Set	Auto Configuration	● Static ○ DHCP	IPv6 State	Auto Configuration		
IPv4 Address 192.168.1.251 IPv6 Address / 64 (1-127) Subnet Mask 255.255.0 Default Gateway : Default Gateway 192.168.1.1 Link Local Address fe80:: d66a.91ff.fe3b:75fb DNS Server 1 0.0.0 Image: Server 2 0.0.0 Image: Server 2 Date and Time Settings Image: Server 2 0.0.0 Image: Server 2 Image: Server 2 Date and Time Settings Image: Server 2 0.0.0 Image: Server 2 Image: Server 2 Synchronize with PC Image: Server 2 Image: Server 2 Image: Server 2 Image: Server 2 Synchronize with PC Image: Server 2 Image: Server 2 Image: Server 2 Image: Server 2 Synchronize with PC Image: Server 2 Image: Server 2 Image: Server 2 Image: Server 2 Image: Server 1 Image: Server 2 Image: Server 2 Image: Server 2 Image: Server 2 Synchronize with PC Image: Server 2 Image: Server 2 Image: Server 2 Image: Server 2 Image: Server 1 Image: Server 2 Image: Server 2 Image: Server 2 Image: Server 2 Image: Server 1 Image: Server 2				fe80::d66a:91ff:fe3b:75fb		
Subnet Mask 255.255.0 Default Gateway ::::::::::::::::::::::::::::::::::::	IPv4 Address	192.168.1.251	IPv6 Address	/ 64 (1-127)		
Default Gateway 192.168.1.1 Link Local Address fe80:: d66a:91ff:fe3b:75fb DNS Server 1 0.0.0 0 0 DNS Server 2 0.0.0 0 0 Date and Time Settings 0 0 0 • Manually Set Date and Time 0 0 0 Date: 201 / 1 / 03 0 0 Time: 18 : 25 (24-Hour) 0 0 Synchronize with PC 0 0 0 • Automatically Get Date and Time 0 0 0 NTP Server: time.nist.gov v 0 Time Zone: (GMT-05:00) Eastern Time (US and Canada) v 0 Enable Daylight Saving 5 0 0 0 Start: March 2 nd v 0 v 0 0 End: November 1 st v 0 v 0 v 0	Subnet Mask	255.255.255.0	Default Gateway			
DNS Server 1 0.0.0 DNS Server 2 0.0.0 Date and Time Settings • Manually Set Date and Time Date: 2001 / 1 / 03 Time: 18 : 25 (24-Hour) Synchronize with PC • Automatically Get Date and Time NTP Server: time_nist.gov * Time Zone: (GMT-05:00) Eastern Time (US and Canada) • Enable Daylight Saving Start: March * 2nd * Sun * 02 *: 00 * End : November * 1 st * Sun * 02 *: 00 *	Default Gateway	192.168.1.1	Link Local Address	fe80::d66a:91ff:fe3b:75fb		
DNS Server 2 0.0.0 Date and Time Settings • Manually Set Date and Time Date: 2001 / 1 / 03 Time: 18 : 25 (24-Hour) Synchronize with PC • Automatically Get Date and Time NTP Server: time.nist.gov ▼ Time Zone: (GMT-05:00) Eastern Time (US and Canada) ▼ • Enable Daylight Saving Start: March ▼ 2nd ▼ Sun ▼ 02 ▼: 00 ▼ End: November ▼ 1st ▼ Sun ▼ 02 ▼: 00 ▼	DNS Server 1	0.0.0	1.1.1.000			
Date and Time Settings • Manually Set Date and Time Date: 2001 1 1 03 Time: 18 25 24-Hour) Synchronize with PC • Automatically Get Date and Time NTP Server: Time nist_gov Time Zone: (GMT-05:00) Eastern Time (US and Canada) • Enable Daylight Saving Start: March 2 nd * Sun * 02 *: 00 * End: November 1st * Sun * 02 *: 00 *	DNS Server 2	0.0.0				
Synchronize with PC Automatically Get Date and Time NTP Server: imme nist.gov Time Zone: (GMT-05:00) Eastern Time (US and Canada) Enable Daylight Saving Start: March + 2nd + Sun + 02 + : 00 + End : November + 1st + Sun + 02 + : 00 +	Time: 18 : 25	(24-Hour)				
Image: 18 : 25 (24-induit) Synchronize with PC • • Automatically Get Date and Time NTP Server: time.nist.gov Time Zone: (GMT-05:00) Eastern Time (US and Canada) • Enable Daylight Saving Start: March • 2nd Image: November • 1st • November • 1st	Date: 2001 / 1					
 Automatically Get Date and Time NTP Server: imme nist.gov * Time Zone: (GMT-05:00) Eastern Time (US and Canada) * Enable Daylight Saving Start: March * 2nd * Sun * 02 *: 00 * End : November * 1st * Sun * 02 *: 00 * 	Synchronize with PC					
NTP Server: time.nist.gov Time Zone: (GMT-05:00) Eastern Time (US and Canada) Enable Daylight Saving Start: March Y 00 * End : November Ist Sun * 02 * 00 *	 Automatically Get 	t Date and Time				
Time Zone: (GMT-05:00) Eastern Time (US and Canada) ■ Enable Daylight Saving Start: March Image: Constraint of the start of the	NTP Server: time.ni	st.gov 🔻				
□ Enable Daylight Saving Start: March ♥ 2nd ▼ 00 ▼ End: November ♥ 1st ♥ 02 ♥ 00 ♥	Time Zone: (GMT-0	5:00) Eastern Time (US and Can	ida) 🔹			
Start: March 2nd Sun 02 : 00 • End: November 1st Sun 02 : 00 •	🔲 Enable Daylight S	aving				
End: November 🔻 1st 🔻 Sun 🔻 02 🔻 : 00 🔻	Start: March •	2nd 🔻 Sun 🔹 02 🔹	00 🔻			
	End: November 🔻	1st 🔻 Sun 🔻 O2 🔻 :	• • •			
		UPnP Configuration				

- 9. Page will refresh. Configure your PC's IP address to the same range as the switch (default **192.168.1.xxx**). Enter the switch's IP address (default is **192.168.1.251**) in your browser and press ENTER.
- 10. Make sure the settings remain as above.

11. Navigate to Advanced -> Multicast -> IGMP Snooping. Under Settings select Enable for Status, V2 for Version, Enable for Report Suppression, and Flood for Unregistered Multicast Behavior. Under VLAN Settings / VLAN ID 1 select Enable for IGMP Snooping Status and Enable for Fast Leave. Under Querier Settings / VLAN ID 1 select Enable for Querier State, V2 for Querier Version and make sure all other setting are exactly as shown below. Click Apply.

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araknis	IGMP SI						tion (System *	Time: 2000-12	2-31 19:02:28	🕓 Sy	vstem Uptim	e: 0d 00:03
STATUS SYSTEM	Settings												
PORTS	Status							Enable	d ODisabl	ed			
SETTINGS SYSTEM	Version							O V2 (⊃V3				
PORTS	Report	Suppression						Enable	d ODisabl	ed			
VLANS	Unregis	tered Multicast	Behavior					Flood	ODrop				
LINK AGGREGATION													
	VLAN Se	ettings											
PING TEST	VLAN I)		IGMP S	nooping Status				Fast Lea	ave			
TRACE ROUTE	1			Enabl	ed			~	Enable	ed			
FILE MANAGEMENT													
RESTART DEVICE	Querier	Settings											
ADVANCED PORT STATISTICS									Max	Oper Max	Last Member	Oper Last Member	Last Member
RUNNING CONFIG	VLAN ID	Querier State	Querier Version	Querier Status	Querier IP	Robustness	Interval	Oper Interval	Response Interval	Response Interval	Query Counter	Query Counter	Query Interval
D NEIGHBORS	1	Enabl V	V2 V	Querier	192,168,200,254	2	125	125	10	10	2	2	1
MULTICAST				1,1,51101								-	<u> </u>
IGMP SNOOPING													

12. Enter **Settings -> Ports** and set Jumbo Frame size to 9216 bytes, enabling the required 8K jumbo frame support feature.

🔞 Araknis 2	0 24 Port PoE ×	θ - □
$\leftrightarrow \Rightarrow {\tt G}$	① 192.168.1.251/index.html?160219-1935#3	९ ☆ ७
arak	CLOUD SERVER: No Connection System Time: 2000-12-3	.1 19:23:21 (System Uptime: 0d 00:24
STATUS	PORT SETTINGS	
SYSTEM PORTS	Jumbo Frame	
SETTINGS SYSTEM	0100 bytes (1522-9210)	
PORTS	Basic Port Settings Spec	ed Duplex
VLANS LINK AGG	EGATION 1 Port 1 Au	to V Auto V

- 13. **IMPORTANT**: At this point all the displays should be displaying stable running video from the selected sources. If you do not have them displaying properly, then network switch is configured incorrectly.
- 14. Navigate to **Maintenance** -> **Restart Device** and click Restart Switch. After switch is rebooted and back to normal log in again, check all the settings again.

∽ =

e: 0d 00:09:10

Araknis 210 24 Port PoE X				<u>_</u>
← → C 🗋 192.168.1.25	0/index.html?160219-1935#11			
For quick access, place your bookmarks he	ere on the bookmarks bar. Import bookmarks now			
araknis.	RESTART DEVICE	CLOUD SERVER: No Connection	⊙ System Time: 2000-12-31 19:08:46	System Uptim
STATU S SYSTEM PORTS	Reboot the device			
	Caution: Pressing this button will cause the device to reboot.			
SYSTEM	Restart Switch			
POE	. <u></u>			
VIANS				

- 15. IMPORTANT: Now you can connect back you DHCP equipment (routers, servers and so on).
- 16. Power down Araknis network switch and power it up back again. Wait for the whole system to start and until you can see video on your displays.
- 17. Log in to your Araknis network switch again and make sure that IGMP settings are intact.
- 18. Rescan your components with Key Digital Management Software and make sure HDMI video switch is functional.
- 19. At this point your Araknis network switch is set and ready to use.

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20. Connect your encoders, decoders, allow approx 3 mins for bootup, and perform a network scan using KD Management Software.

Cisco Meraki series

After gaining access to the Cisco Dashboard, navigate to the following and applied settings as depicted:

Multicast settings	5		
IGMP Snooping	Switches/Stacks	IGMP snooping	Flood unknown multicast traffic
membership report messages	Default	Enabled V	Disabled v
subset of interfaces on which interested hosts reside.	Set multicast settin	ngs for another swi	itch or stack
MTU configuratio	n		
MTU size The Maximum Transmission	Switches	мти	Size

The Maximum Transmission Unit (MTU) is the maximum payload allowed in an ethernet frame.

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Default MTU Size	9578	\sim
Set the MTU size	for another set of switches	

IGMP Setup Guide: Cisco SG and SF Series 4K Setup for SG Series 1080p Setup for SF Series

Note: SF Series is Compatible with KD-IP1080, KD-IP120 AV over IP Systems Only

Key digibal'

- 1. **IMPORTANT**: Disconnect all the DHCP devices like routers, servers from the Cisco network switch.
- Locate a pinhole "RESET" button at the front panel left bottom corner of your Cisco network switch. Using a
 paper clip press and hold a reset button for more than 10 seconds and then release. Wait while the device
 is restarted and ready to use (about 5min).
- 3. **IMPORTANT**: Make sure the green "SYSTEM"LED next to the pinhole "RESET" button is flashing.
- 4. **IMPORTANT**: At this point all the displays should be displaying distorted randomly flashing video images.
- 5. Connect your PC to the Cisco network switch directly using a network cable.
- If you have not done yet, configure your PC's IP address to the same range as the switch (default 192.168.1.xxx).
- Enter the switch's IP address in your browser and press ENTER (check the user manual for a default IP address - it is usually 192.168.1.254).
- 8. Enter user name and password (check the user manual for a default user name and password; it is usually "cisco" for both). Then click Log In.

dul: 192.168.1.	254/csb8af766d/c ×		٨	
← → C	192.168.1.254/csb8af766d/config/log_off_pag	e.htm		☆ 〓
For quick access,	place your bookmarks here on the bookmarks bar. Import bookmarks no	<u></u>		
	ululu Switch cisco	Username: Password: Language:	cisco ••••• English ▼ Log In Secure Browsing	1 (HTTPS)
	© 2010-2013 Cisco Systems, Inc. All Rights Reserved. Cisco, Cisco Systems, and the Cisco Systems logo are registered in the United States and certain other countries.	d trademarks or trade	emarks of Cisco Systems, Inc.	and/or its affiliates

9. **Change Password** screen will appear. Enter old and then new password two times as at the picture below and click Apply.

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10/100 Sta ×		
← → C 🗋 192.168.1.2	54/csb8af766d/home.htm	¶ ☆] =
Hps G Google 🔜 192.168.1.	250/cs525da 🗋 TNSS-2400P 📋 TNSS-2400P	une 192.168.1.254/csb8af7
small Business cisco SF500-48 4	_{cisco} 8-Port 10/100 Stackable M	Language: English Logout About Help anaged Switch
Change Password	Change Password	
	Please change your password from the de The minimum requirements are as follows • Cannot be the same as the user name. • Cannot be the same as the current passv • Minimum length is 8. • Minimum number of character classes is	fault settings for better protection of your network : vord. 3. Character classes are upper case, lower case, numeric, and special characters.
	New Password Configuration	
	Old Password:	
	New Password:	
	Confirm Password:	
	Password Strength Meter:	Below Minimum
	Apply	
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10. Getting Started screen will appear.

👑 SF500-48 48-Port 10/100 Sta 🗙		A - X				
← → C D 192.168.1.2	54/csb8af766d/bome.btm	무 숫인 =				
*** Apps G Google 192,168,1.	1 Apr. 6 Goods *** 1021691260126564 District Anno District 2000 *** 10216912691269126912691269126912					
Small Business	cisco Lang	guage: English 🔻 Logout About Help				
cisco SF500-48.4	8-Port 10/100 Stackable Managed Switch					
Getting Started	Cotting Startod					
 Status and Statistics 	Getting Started					
 Administration 						
Port Management	i nis page provides easy steps to configure your device					
Smartport Management	🔊 Initial Setun					
Shanning Tree						
MAC Address Tables	Change System Mode and Stack Management	Change Device Password				
Multicast	Change Management Applications and Services	Upgrade Device Software				
▶ IP Configuration	Change Device IP Address	Backup Device Configuration				
► Security	Create VLAN	Create MAC-Based ACL				
 Access Control 	Configure Port Settings	Create IP-Based ACL				
 Quality of Service 		Configure QoS				
▶ SNMP	📊 Device Status	Configure Port Mirroring				
	System Summary					
	Port Statistics					
	RMON Statistics					
	100w Lon					
	New Log					
	Other receive act . Our and L Caruma					
	and resources, apport reams					
	Do not show this page on startup					
© 2010-2013 Cisco Systems, Inc. A	All Rights Reserved.					

11. Navigate to **Configration Wizards** to access the **Gettting Started Wizard**, which will be used to set the desired IP address of the switch.

Ken	

cisco SG350-28P	Q Save Admini1234 switch6401c3 Language: English ✓ Deplay Mode: Basic ✓ Logout SNA FindIT About Help 28-Port Gigabit PoE Managed Switch Q <
Getting Started	Configuration Wizards
Configuration Wizards	Getting Started Wizard
Status and Statistics Administration	Launch Wizard This wizard can be used to perform the initial set-up of the switch.
System Settings User Accounts	VLAN Configuration Wizard
 Time Settings System Log 	Launch Wizard This wizard can be used create and manage VLANs.
 File Management Firmware Operations File Operations 	ACL Configuration Wizard
File Directory FindIT Network Probe Setti	Launch Wizard This wizard can be used create and manage ACLs.
Reboot Discovery - Bonjour	
 Discovery - LLDP Discovery - CDP 	
Ping Traceroute	
Port Management	
Error Recovery Settings	
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Not secure 10.100.1.	.254/csbf57f8cb/mts/wizard/g	etting_started_wizard.htm		2
1. General Information	Use this screen to create	a new IP interface for the system. The None opti	on will keep the current	configurati
2. IP Settings	Interface:	○ Port GE1 ∨ ○ LAG 1∨ ● VL	AN 1 🗸 🔿 None	
3. User Account	IP Interface Source:	 DHCP Static 		
4. Time Settings	IP Address:			
5. Summary	Network Mask:			
6. Finish	Administrative Default Gate	way:		
	DNS Server:			
			Back Next	Cance



12. Log in again using new password and new IP address.

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dela 192.168.1.254/csb8af766d/∈ ×	
← → C 🗋 192.168.1.254/csb8af766d/config	n/log_off_page.htm 🏠 🗄
For quick access, place your bookmarks here on the bookmarks bar. In	nport bookmarks now
رابیایی Switch دisco	Username: <mark>cisco</mark> Password:
	Language: English Log In Secure Browsing (HTTPS)
© 2010-2013 Cisco Systems, Inc. All Rights Re Cisco, Cisco Systems, and the Cisco Systems in the United States and certain other countries	served. ogo are registered trademarks or trademarks of Cisco Systems, Inc. and/or its affiliates

13. Navigate to Multicast -> IGMP Snooping. Check the IGMP Snooping Status: Enable box and click Apply.

🖿 🗰 SG350-28P 28-P 🗙	🔍 cisco sg350 ju	imb 🗙	SG350XMP ju	imbo 🗙 🎰	Configure Jum	∞ × Ⅲ	What are Jumbo	🗙 🔍 yout	tube - Search	🗙 🖸 cisco j	jumbo fram 🗙	+	- 0	×
\leftrightarrow \rightarrow \mathbf{C} \blacktriangle No	t secure 10.10	0.1.254/csł	of57f8cb/mts/h	ome.htm							AN TO .	ć= @	↓ ₀ (2)	
sG350-28P	28-Port Gi	gabit F	oE Mana	ed Sw	Admin1	234 switch6	401c3 Language	English	~	Display Mode: E	Basic 🗸	Logout SNA	FindIT About	Help Q
Health and Power Diagnostics RMON View Log Administration	IGMP Snoo IGMP Snooping is IGMP Snooping	p ing only operat	ional when Bridge Enable	e Multicast Filt	ering is enabled. I	Bridge Multica	st Filtering is curre	ently disabled.						
← Port Management Port Settings Error Recovery Settings Link Aggregation PoF	IGMP Querier S	tatus: Z	Enable											
Green Ethernet Smartport Properties	Entry No.	VLAN ID	IGMP Snooping Administrative Enabled	Status Operational Disabled	MRouter Ports Auto Learn Enabled	Immediate Leave Disabled	Last Member Query Counter 2	IGMP Querier S Administrative Enabled	Status Operational Disabled	IGMP Querier Election Disabled	IGMP Querier Version	Querier IP Address 192.168.1.254		
VLAN Management VLAN Settings Interface Settings Port to VLAN	Copy Sett	ings	Edit)										
Port VLAN Membership Voice VLAN Spanning Tree MAC Address Tables														
Multicast IPv4 Multicast Configuration ICMP Snooping Multicast Router Port Forward All														
© 2011-2019 Cisco Systems, Inc. Al	I Rights Reserved.													
🕂 🔎 Type here to searc	:h		O H	i 💿	🥅 🔯 (9	🔁 🎉	🗘 🛄 4	a	🌰 31°C	^ @ 🌰 ⊑) 🦟 🗘) ENG	7:55 PM 25/10/2022	\Box

14. Click on a radio button on the left and then click Edit. New window will appear. Select "1" for VLAN ID. Check Enable box under IGMP Snooping Status. Check Enable box under Immediate Leave. Check Enable box under IGMP Querier Status. Select User Defined next to Administrative Querier Source IP Address: and select 192.168.1.1. For IGMP Querier Version: select IGMPV3 for IP1080 system. If using IP922 system, select IGMPV2. Then click Apply and Close. Make sure all the setting are exactly as shown

🕒 Edit IGMP Snooping Settings -	Work - Microsoft Edge	⊻⊚	-	0	×
A Not secure 10.100.1.				A∥	
VLAN ID: IGMP Snooping Status: MRouter Ports Auto Learn: Immediate Leave: Atast Member Query Counter:	1 Image: Second Secon				
IGMP Querier Status: IGMP Querier Election: IGMP Querier Version: Querier Source IP Address:	 Enable Enable v2 v3 Auto User Defined 192.168.1.254 • 				_
Apply Close					

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atts SF500-48 48-Port 10/100 Sta													8	- 0 ×
← → C 🗋 192.168.1.251/	/csb8af766d/home.h	tm												¶☆ =
🗰 Apps Ġ Google 🎎 192.168.1.250/c	cs525da 🗋 TN55-2400P	TN55-2400P ditte 1	92.168.1.254/csb8	Baf7										
small Business cisco SF500-48 48-F	Port 10/100 Sta	ackable Mana	aged Swit	ch						cisco	Language: Eng	ish	▼ Logout	About Help
Getting Started Status and Statistics Administration Port Management Smartport VLAN Management Smartport VLAN Management Samatport Multicast Multicast IMP Properties MAC Address IMP Stroop Address IMD Snooping IOMPMLD IP Multicast Gro Multicast Route Port	SMP Snooping Success. To perm IGMP Snooping Status: Apply Cancel KGMP Snooping Table Entry No. VLAN ID 1 1 Copy Settings	I Enable I Enable IOMP Snooping Operational Status Enabled Edit.	nfiguration, gc Router IOMP Version v3	Nouter Ports Auto Learn Enabled	Query Robustness 2	Query Interval (sec) 125	the Save Icon. Guery Max Response Interval (sec) 10	Last Member Query Counter 2	Last Member Query Interval (mSec) 1000	Immediate Leave Enabled	IGMP Querier Status Enabled	IGMP Querier Version v3	Querter IP Address	
© 2010-2013 Cisco Systems, Inc. All Rij														

15. If using KD-IP922 system, enable jumbo frames in the Port Management section.

cisco SG350-28P	Admin1234 switch6401c3 Language: 28-Port Gigabit PoE Managed Switch										
Getting Started	Port Settings										
Dashboard											
Configuration Wizards	Jumbo Frames: 🔽 Enable										
Search											
 Status and Statistics 	Jumbo names computation changes will take enect after saving the computation and repooling the switch.										
 Administration 	Apply Cancel										
✓ Port Management											
Port Settings	Port Settings Table										
Error Recovery Settings	Entry No. Port Port Type Operational Status Port Duplex LAG Protection										
 Link Aggregation Doc 	Speed Mode State										

16. On the top of the page click on flashing "x Save". For Source File Name: select Running configuration. For Destination File Name: select Startup configuration. Check the selections and make sure they are exactly as shown below. Click Apply.

cisco SG350-28P	28-Port Gigabit F	oE Managed Switch	Admin1234	switch6401c3	Language:	English	~	Display Mode: E	Basic 🗸	Logout	SNA	FindIT	About	Help Q
Getting Started	File Operations													
Dashboard														
Configuration Wizards	Operation Type: (Update File												
Search	(Backup File												
 Status and Statistics 		Duplicate												
✓ Administration	Source File Name: (Running Configuration												
System Settings		Startup Configuration												
User Accounts	(Mirror Configuration												
Idle Session Timeout	Destination File Name:	Running Configuration												
▶ Time Settings		Startup Configuration												
▶ System Log														
 File Management Firmware Operations 	Apply Cancel													

17. Click **Apply** to confirm.

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18. Click Done.



- 19. Power down Cisco network switch and power it up back again. Wait approx 5 minutes to reboot, and connection your Encoders, Decoders, and DHCP equipment (routers, servers and so on). After approx 2 minutes of bootup for the AV over IP equipment, you should see image on your displays
- 20. Log in to your Cisco network switch again and make sure that IGMP settings are intact:

해방 SF500-48 48-Port 10/100 Sta 🗙	🏦 5F500-48 48-Port 10/100 St. X 🔳														- 🗆 X
← → C 🗋 192.168.1.251/csb8af766d/home.htm 🕴 🏠													¶☆ ≡		
III Apps G Google 🗱 192.168.1.250/cs525da 🗅 TN55-2400P 🛗 TN55-2400P 🗱 192.168.1.254/csb8af7															
small Business cisco Language English Cogout About He													About Help		
Getting Started Status and Statistics	IGMP SI	noopii	ng												
Administration Port Management	IGMP Sno	IGMP Snooping Status: 🗹 Enable													
► Smartport	Apply		Cancel]											
VLAN Management Spanning Tree	IGMP Snot	ping Ta	able												
MAC Address Tables Multicast	Entry	No. V	/LAN ID	IGMP Snooping Operational Status	Router IGMP Version	MRouter Ports Auto Learn	Query Robustness	Query Interval (sec)	Query Max Response Interval (sec)	Last Member Query Counter	Last Member Query Interval (mSec)	Immediate Leave	IGMP Querier Status	IGMP Querier Version	Querier IP Addres
Properties MAC Group Address IP Multicast Group Address	Cop	1 / Setting	1 gs	Enabled Edit	v3	Enabled	2	125	10	2	1000	Enabled	Enabled	v3	
Original Class Systems, Inc. A	I Rights Rese	rved.										_			•

- 21. Rescan your components with Key Digital Management Software and make sure HDMI video switch is functional.
- 22. At this point your Linksys network switch is set and ready to use.
- 23. Connect your encoders, decoders, allow approx 3 mins for bootup, and perform a network scan using KD Management Software.

IGMP Setup Guide: Cisco C3850 Series 4K Systems (KD-IP822/922/1022)

Cisco Catalyst 3850 series

This guide describes how to use **Express Setup** to initially configure your Catalyst 3850 switch. We have modified original Express Setup guide from Cisco to help out you install it easily. For more installation and configuration information, see the Catalyst 3850 documentation on Cisco.com.

Running Express Setup & Configuration Setup for KD-IP822, KD-IP922, KD-IP1022

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Use Express Setup to enter the initial IP information. This action enables the switch to connect to local routers and the Internet. You can access the switch through the IP address for further configuration. **Note** : Even you already finish Express Setup on your switch, please check every step one by one.

Step 1	Make sure that nothing is connected to the switch.	Long R
Step 2	 During Express Setup, the switch acts as a DHCP server. If your PC or laptop has a static IP address, temporarily change your PC or laptop settings to DHCP. Note. Do not connect LAN cable from your PC or laptop to Cisco's switch until Step 7. 	Internet Protocol (TCP/IP) Properties ? × General Alternate Configuration You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings. © Obtain an IP address automatically © Use the following IP address: IP address: Internet Subnet mask: Internet Default gateway: Internet © Obtain DNS server address automatically
Step 3	Install the power supply modules. See the Switch Hardware Installation Guide for in http://www.cisco.com/go/cat3850_hw	e "Power Supply Installation" chapter in the <i>Catalyst 3850</i> structions.

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Step 4	Power the switch. AC power switches: Plug the AC power cord into the switch power supply and into a grounded AC outlet. DC power switches: See the wiring instructions in Step3	
Step 5	Observe the POST results. Approximately self-test (POST), which can take up to 5 m During POST, the SYSTEM LED blinks gree The ACTV LED is green if the switch is acti Note Before going to the next step, wait u Troubleshooting: If the SYST LED does not turn solid green, representative or reseller.	30 seconds after the switch powers on, it begins the power-on inutes to complete. n. When POST is complete, the SYSTEM LED turns solid green. ng as the active switch. until POST is complete. or turns amber, the switch failed the POST. Contact your Cisco
Step 6	Press and hold the Mode button until all the LEDs next to the Mode button turn green. You might need to hold the button for more than 3 seconds. The switch is now in Express Setup mode.	
	Troubleshooting: If the LEDs next to the Mode button blink the switch is already configured and cann <u>"Resetting the Switch" section</u> .	when you press the button, release it. Blinking LEDs mean that ot go into Express Setup mode. For more information, see the
Step 7	Connect a Category 5e/6 Ethernet cable to first port on the front panel of Cisco Switch. Connect the other end of the cable to the Ethernet port on your PC or laptop. Wait until the port LEDs on the switch and your PC or laptop or laptop are green or blinking green. Green LEDs indicate a successful connection. Troubleshooting: If the port LEDs do not turn green after about 30 seconds, make sure that: You are using an undamaged Category 5 or 6 Ethernet cable (Do not connect console ports)	asset O the

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Connection-specific	DNS	Suffix		
IP Address				: 192.168.180.1
Subnet Mask			-	: 255.255.255.0
Default Gateway			-	:

Ethernet adapter UMware Network Adapter UMnet1:

Connection-specific	DNS	Suffix	-	:
IP Address				: 192.168.119.1
summet nask				. 200.200.200.0
Default Gateway				=

Ethernet adapter Local Area Connection:

Connection-specific DNS Suffix IP Address. . Subnet Mask 10.0.2.2 255 255 0 Default Gateway 10.0.2.1 C:\Documents and Settings\M60-USER> C:\Documents and Settings\M60-USER> C:\Documents and Settings\M60-USER>

[www.keydigital.com]

Step 9	Start a bi and ente Gateway Note: As address o our IP ad When a p 10.0.2.1" skip the I enter the Troubles If the Exp appear, r blockers that any PC or lap	rowser session on r the IP address of I mentioned on St of Default Gatewar dress. pop-up dialog wind appear, User name and e default password hooting: press Setup window make sure that any or proxy settings a wireless client is d top.	the PC or laptop, your Default ep8, your IP y may differ with dow "Connect to dow "Connect to , " cisco " w does not y browser pop-up are disabled and isabled on your	Internet Explorer cannot display the webpage - Windows Internet Explorer technology Image: Antiperiod Street St	
Stop 10	Click "Co	ntinuo" hutton on	Startun Panart na	OK Cancel	
Step 10	Step 10 Click "Continue" button on Startup Report page.			t	
		JavaScript	JavaScript has	been enabled.	
	Â	Internet Browser	The device manager will not run with this Internet browser. Click <u>here</u> for more information. Click continue to launch with the unsupported browser:		
	Ø	Operating System		The operating system is supported.	
	\bigtriangledown	Read Write Access	Note: The device manager is being accessed in read-write mode.		
				Copyright (c) 2004-2014 by Cisco Systems, Inc.	
Step 11	Select the Basic Settings on the Express Setup window and change the network settings as you like, the go Step12.				

	Note. Please do not click "Submit" button in this step.					
	🥖 10.0.2.1 : Cisco Device Manager - Express Setup Catalyst 3850 Series Express Setup					
	Refresh 😓 Print 🦞 Help					
	Basic Settings Advanced Settings					
	Network Settings					
	Management Interface (VLAN ID) 1 IP Address: 192, 168, 1, 251 Subnet Mask: 255 255 255 0					
	Default Gateway: 192 , 168 , 1 , 1					
	Switch Password:					
	Optional Settings					
	Host Name: Switch					
	System Date (DD/MMM/YYYY): 11 • / Oct • / 2017 • System Time (HH:MM): 12 • : 29 • PM • Time Zone: (GMT - 05:00) Eastern Time (US & canada) • •					
	Daylight Saving Time: F Enable					
Step 12	 Select the Advanced Settings tab on the Express Setup window In the Telnet Access field, click Enable to use Telnet to manage the switch by using the command-line interface (CLI). If you enable Telnet access, you must enter a Telnet password. In the Telnet Password field, enter a password. The Telnet password can be from 1 to 25 alphanumeric characters, is case sensitive, allows embedded spaces, but does not allow spaces at the beginning or end. In the Confirm Telnet Password field, reenter the Telnet password. And click Submit to save your changes and to complete the initial setup. 					
	Basic Settings Advanced Settings					
	Telnet Access: © Enable © Disable					
	SNMP: C Enable C Disable					
	SNMP Read Community: SNMP Write Community:					
	System Contact: System Location:					
	Submit Cancel					

Step 13	 After you click Submit : The switch is configured and exits Express Setup mode. The browser displays a warning message and tries to connect with the earlier switch IP address. Typically, connectivity between the PC or laptop and the switch is lost because the configured switch IP 	Internet Protocol Version 4 (TCP/IPv4) Properties	
is lost because the configured switch IP address is in a different subnet from the IP address on the PC or laptop. Now, change IP address of your PC or laptop to static IP address in same subnet of the Switch.	Subnet mask: 255 . 255 . 0 Default gateway: . Obtain DNS server address automatically Image: Obtain DNS server addresses: Preferred DNS server: Alternate DNS server: Validate settings upon exit Advanced OK		
Step 14	To configuring Multicast IGMP Snooping and Jumbo Frame setting at the switch for KD-IP922 devices, you have to connect to the Switch via Telnet. Note . To access Telnet, you can use PuTTY or Tera Term software. We recommend to use Tera Term software and you can download it as below link. <u>https://osdn.net/projects/ttssh2/downloads/68252/teraterm-4.96.exe/</u> Run Tera Term software, and press Alt + N keys to open new connection. 14-1. Select "TCP/IP" on Tera Term:New Connection Window. 14-2. Type the IP address of the Switch at the field of Host: Ex) 192.168.1.251 14-3. Type 23 at the field of TCP Port# and select "Telnet". 14-4. Then click OK button.		

	Tera Term - [disconnected] VT Image: Control Window Help
	Tera Term: New connection
	C Serial Port:
Step 15	When you connect to the switch via Telnet successfully, you have to log in to Telnet server of the switch. 15-1. Enter your Telnet password you assigned at Step12 if prompted. 15-2. Enter "enable" on Switch> prompt to enable privileged EXEC mode 15-3. Enter your Telnet password once again. Then 'Switch>' prompt will turn into 'Switch#' prompt as below. 192.168.1.251:23 - Tera Term VT File Edit Setup Control Window Help User Access Verification Password: Switch>enable Password: Switch>enable
Step 16	To Enable Jumbo Frame for IP922. Note: IP922 requires Jumbo Frame(8K) for video/audio transmission via 1G-BaseT with the Switch. 16-1. Enter "configure terminal" on Switch# prompt 16-2. Enter "system mtu 9000" on Switch(config)# prompt 16-3. Enter "end" on Switch(config)# prompt 16-4. Enter "copy running-config startup-config" on Switch# prompt 16-5. Press Enter key on the question of "Destination filename [startup-config]?"

	📜 192.168.1.251:23 - Tera Term ¥T	
	File Edit Setup Control Window Help	
	Switch#	
	Switch#configure terminal	
	Enter configuration commands, one per line. End with ${ m CNTL/Z}$.	
	Switch(config)#system mtu 9000	
	Global Ethernet MTU is set to 9000 bytes.	
	Note: this is the Ethernet payload size, not the total	
	Ethernet frame size, which includes the Ethernet	
	header/trailer and possibly other tags, such as ISL or	
	802.1q tags.	
	Switch(config)#end	
	Switch#copy running-config startup-config	
	Destination filename [startup-config]?	
	Building configuration	
	Compressed configuration from 3614 bytes to 1620 bytes[OK]	
	Switch#	
	Switch#	
Step 17	To confirm Jumbo Frame setting on the switch.	
	17-1. Enter "show interfaces vlan 1" on Switch# prompt	
	You can check MTU 9000 bytes in the status of Vlan1 interface	
Step 17	Switch#copy running-config startup-config Destination filename [startup-config]? Building configuration Compressed configuration from 3614 bytes to 1620 bytes[OK] Switch# Switch# To confirm Jumbo Frame setting on the switch. 17-1. Enter "show interfaces vlan 1" on Switch# prompt You can check MTU 9000 bytes in the status of Vlan1 interface	T

	📜 192.168.1.251:23 - Tera Term ¥T
	File Edit Setup Control Window Help
	Switch#show interfaces vlan 1
	Vlan1 is up, line protocol is up
	Hardware is Ethernet SVI, address is 00a3.d19b.2347 (bia 00a3.d19b.2347)
	Internet address is 192.168.1.251/24
	MTU 9000 bytes, BW 1000000 Kbit/sec, DLY 10 usec,
	reliability 255/255, txload 1/255, rxload 118/255
	Encapsulation ARPA, loopback not set
	Keepalive not supported
	ARP type: ARPA, ARP Timeout 04:00:00
	Last input 00:00:00, output never, output hang never
	Last clearing of "show interface" counters never
	Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
	Queueing strategy: fifo
	Output queue: 0/40 (size/max)
	5 minute input rate 466196000 bits/sec, 10971 packets/sec
Step	To Enable Multicast IGMP Snooping for IP922.
18	Note: IP922 requires Multicast IGMP Snooping for matrix switch configuration.
	18-1. Enter "configure terminal" on Switch# prompt
	18-2. Enter "ip igmp snooping" on Switch(config)# prompt
	18-3. Enter "ip igmp snooping vlan 1" on Switch(config)# prompt
	18-4. Enter "ip igmp filter" on Switch(config)# prompt
	18-5. Enter "ip igmp snooping tcn query solicit" on Switch(config)# prompt
	18-6. Enter "ip igmp snooping querier" on Switch(config)# prompt
	18-7. Enter "ip igmp snooping querier version 2" on Switch(config)# prompt
	18-8. Enter "ip igmp snooping vlan 1 immediate-leave" on Switch(config)# prompt
	18-9. Enter "end" on Switch(config)# prompt
	18-10. Enter "copy running-config startup-config" on Switch# prompt
	18-11. Press Enter key on the question of "Destination filename [startup-config]?"
	Now, we are all set.

	🖳 192.168.1.251:23 - Tera Term ¥T
	File Edit Setup Control Window Help
	Switch#configure terminal
	Enter configuration commands, one per line. End with CNTL/Z.
	Switch(config)#
	Switch(config)#ip igmp snooping
	Switch(config)#ip igmp snooping vlan 1
	Switch(config)#ip igmp filter
	Switch(config)#ip igmp snooping tcn query solicit
	Switch(config)#ip igmp snooping querier
	Switch(config)#ip igmp snooping querier version 2
	Switch(config)#ip igmp snooping vlan 1 immediate-leave
	Switch(config)#
	Switch(config)#end
	Switch#
	Switch#copy running-config startup-config
	Destination filename [startup-config]?
	Building configuration
	Compressed configuration from 3737 bytes to 1689 bytes[OK]
	Switch#
	Switch#
Step	To confirm multicast IGMP Snooping setting on the switch.
	19-1. Enter "show ip igmp snooping detail" on Switch# prompt
	You can check global IGMP Snooping configuration on the switch.

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🖳 192.168.1.251:23 - Tera Term ¥T		
File Edit Setup Control Window Help		
Switch#		
Switch#show ip igmp snooping	letail	
Global IGMP Snooping configur	ation:	
IGMP snooping	Enabled	
IGMPv3 snooping (minimal)	Enabled	
Report suppression	Enabled	
TCN solicit query	Enabled	
TCN flood query count	2	
Robustness variable	2	
Last member query count	2	
Last member query interval	1000	
Vlan 1:		
IGMP snooping	: Enabled	
IGMPv2 immediate leave	: Enabled	
Multicast router learning mod	e : pim-dvmrp	
CGMP interoperability mode	: IGMP_ONLY	
Robustness variable	: 2	
Last member query count	: 2	
Last member query interval	: 1000	
Topology change	: No	
Switch#		
Switch#		

Connect your encoders, decoders, allow approx 3 mins for bootup, and perform a network scan using KD Management Software.

D-Link DGS-3630 Series Network Setup Guide

Login to the switch:

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- **1.** Plug an Ethernet cable into any of the ports of the switch
- 2. Plug the other end into the Ethernet port of your computer
- **3.** Power on the switch
- 4. Check to see that the IP address of the computer is within this network Subnet: 10.90.90.xxx ("xxx" ranges 1~254). For example, 10.90.90.10

Internet Protocol Version 4 (TCP/IPv4) Properties						
General						
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.						
Obtain an IP address automatica	lly					
Ose the following IP address:						
IP address:	10 . 90 . 90 . 10					
Subnet mask: 255.255.0.0 Default gateway: 10.90.90.1						
				Obtain DNS server address autor	Obtain DNS server address automatically	
Ose the following DNS server add	dresses:					
Preferred DNS server:	192.168.0.23					
Alternate DNS server:						
Validate settings upon exit Advanced						
OK Cancel						

5. Open the Web browser and enter **10.90.90.90** (default IP address of D-Link DGS-3630-52PC). The login window appears as below.

Connect to 10.90	0.90.90			
User Name				
Password				
	Login	Reset		

6. Leave the user name and password fields empty. They are NOT required. Click "**Login**" to login to the switch configuration window.

Enable Jumbo Frame:

Key digital

7. Find System -> Port Configuration -> Jumbo Frame in the menu on left side of the window. (IP922 requires Jumbo Frame(8K) for video/audio transmission via 1G-BaseT).


8. Select the last 52 port "**eth 1/0/52**" in the menu on To Port, then enter "**12288**" in Maximum Frame Size on the right side of the Jumbo Frame window as below. And then click "**Apply**" button.

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Fuzzy Search	Jumbo Fram	e			_	_
- DGS-3630-52PC	Jumbo Frame -					
🖻 🎾 System						
System Information Se	From Port	To Port	Ma> (64-	kimum Rece -12288)	eive Frame Size	
Peripheral Settings	eth1/0/1 🔻	eth1/0/13	122	88	bytes	Apply
Port Settings		eth1/0/33				
Port Status	Port	eth1/0/34		Maximum	n Receive Frame Si	ze (bytes)
Port GBIC	eth1/0/	eth1/0/36			12288	
Port Auto Negotiati	eth1/0/	eth1/0/37			12288	
Error Disable Settin	Curror	eth1/0/38	_		12200	
Jumbo Frame	eth1/0/	eth1/0/39			12288	
Interface Description	eth1/0/	eth1/0/40			12288	
···· 📰 Loopback Test	eth1/0/	eth1/0/41			12288	
🕀 📁 🚰 PoE	oth 1/0/	eth1/0/42			40000	
🕀 🃁 System Log	etrition	eth1/0/43			12200	
Time and SNTP	eth1/0/	eth1/0/44			12288	
···· 📄 Time Range	eth1/0/	eth1/0/45			12288	
🕀 🃁 PTP (Precise Time Pro	eth1/0/	eth1/0/40			12288	
USB Console Settings	Currier and Currier	eth1/0/47	_		12200	
🕀 🃁 SRM	eth1/0/1	eth1/0/49			12288	
🕀 📁 Management	eth1/0/*	eth1/0/50			12288	
🛨 🃁 L2 Features	eth1/0/	eth1/0/51			12288	
E Seatures	eth1/(/	eth1/0/52			12288	



9. After applying, you should see Maximum Receive Frame Size **12288** for all ports as below.

-					
	Jumbo Frame				
	Jumbo Frame				
	From Port	To Port	Maximum Receive Frame Size (64-12288)		
	eth1/0/1 🔻	eth1/0/52 ▼	12288 bytes		
		Port		Maximum Receive Frame Size (bytes)	
		eth1/0/1		12288	
		eth1/0/2		12288	
		eth1/0/3		12288	
		eth1/0/4		12288	
		eth1/0/5		12288	
		eth1/0/6		12288	
		eth1/0/7		12288	
		eth1/0/8		12288	

Enable IGMP Snooping:

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10. Find L2 Features -> L2 Multicast Control -> IGMP Snooping -> IGMP Snooping Settings in the menu on left side of the window. (KD-IP922 requires IGMP Snooping for multicasting video/audio transmission via 1G-BaseT). Check the **Global State Enabled** box of Global Settings in IGMP Snooping Settings window as below. Click "Apply" button on the right side of IGMP Snooping Settings window.

T System	IGMP Snooping Settings			
E 2 Features	Global Settings			
E S VLAN	Global State	Enabled Disabled		Apply
Image: WLAN Tunnel Image:	MI AN CARANA Cattings			
ERPS (G.8032)	VLAN Status Setungs			
Link Aggregation	VID (1-4094)	Enabled Disabled		Apply
L2 Protocol Tunnel	IGMP Snooping Table			
E V IGMP Snooping	VID (1-4094)			Find Show All
GMP Snooping Settings	Total Entries: 1			
IGMP Snooping Groups Settings	VID	VLAN Name	Status	
 IGMP Snooping Filter Settings IGMP Snooping Mrouter Settings 	1	default	Enabled	Show Detail Edit
IGMP Snooping Statistics Setting				1/1 < < 1 > > Go
T I I I I I I I I I I I I I I I I I I I				

11. To add VLAN of the IGMP Snooping at the switch, **enter "1"** in VID of VLAN Status Settings. (VLAN must be added in IGMP Snooping). Then select "**Enabled**" and click "**Apply**" button.

IGMP Snooping Settings		
Global Settings		
Global State	Enabled ODisabled	Apply
VLAN Status Settings	©Enabled ODisabled	Apply
GMP Snooping Table		Find Show All
VID (1-4034)		



12. Click "Edit" button in IGMP Snooping Settings window.

IGMP Snooping Settings			
Global Settings			
Global State	•Enabled ODisabled		Apply
VLAN Status Settings			
VID (1-4094)	Enabled Disabled		Apply
IGMP Snooping Table			
VID (1-4094)			Find Show All
Total Entries: 1			
VID	VLAN Name	Status	
1	default	Enabled	Show Detail Edit
			1/1 < < 1 > > Go

13. In the IGMP Snooping VLAN Settings window, select below options as depicted below in red and then click "**Apply**" button:

- Minimum Version: 2
- Fast Leave: Enabled
- Report Suppression: Enabled
- Querier State: Enabled
- Query Version: 2
- Ignore Topology Change: Enabled

IGMP Snooping VLAN Settings VID (1-4094) 1 Status Enabled Disabled Minimum Version 2 Fast Leave Enabled Disabled Report Suppression Enabled Disabled Suppression Time (1-300) 10 Querier State Enabled Disabled Query Version 2 Query Version 2 Query Interval (1-31744) 125 Max Response Time (1-25) 10 Robustness Value (1-7) 2 Last Member Query Interval (1-25) 1 Proxy Reporting Enabled Disabled Source Address Rate Limit (1-1000) Imable Disabled Source Address Ignore Topology Change Enabled Disabled	IGMP Snooping VLAN Settings	S
VID (1-4094) 1 Status Enabled Minimum Version 2 Fast Leave Enabled Report Suppression Enabled Suppression Time (1-300) 10 Querier State Enabled Query Version 2 Query Interval (1-31744) 125 Max Response Time (1-25) 10 Robustness Value (1-7) 2 Last Member Query Interval (1-25) 1 Proxy Reporting Enabled Proxy Reporting Enabled Rate Limit (1-1000) Image: No Limit Ignore Topology Change Enabled	IGMP Snooping VLAN Settings	
VID (1-4094) 1 Status Enabled Disabled Minimum Version 2 • Fast Leave Enabled Disabled Report Suppression Enabled Disabled Suppression Time (1-300) 10 0 Query Version 2 • Query Version 2 • Query Interval (1-31744) 125 sec Max Response Time (1-25) 10 sec Robustness Value (1-7) 2		
Status Enabled Disabled Minimum Version 2 Fast Leave Enabled Disabled Report Suppression Enabled Disabled Suppression Time (1-300) 10 Querier State Enabled Disabled Query Version 2 Query Interval (1-31744) 125 sec Max Response Time (1-25) 10 sec Robustness Value (1-7) 2	VID (1-4094)	1
Minimum Version 2 Fast Leave Enabled Disabled Report Suppression Enabled Disabled Suppression Time (1-300) 10 Querier State Enabled Disabled Query Version 2 Query Interval (1-31744) 125 Max Response Time (1-25) 10 Robustness Value (1-7) 2 Last Member Query Interval (1-25) 1 Proxy Reporting Enabled Disabled Rate Limit (1-1000) Image: Compatibility of the compatibility	Status	Enabled Disabled
Fast Leave	Minimum Version	2 🔹
Report Suppression Enabled Disabled Suppression Time (1-300) 10 Querier State Enabled Disabled Query Version 2 Query Interval (1-31744) 125 Query Interval (1-31744) 125 Max Response Time (1-25) 10 Robustness Value (1-7) 2 Last Member Query Interval (1-25) 1 Proxy Reporting Enabled Disabled Source Address Rate Limit (1-1000) Image: No Limit Ignore Topology Change Enabled Disabled	Fast Leave	Enabled Disabled
Suppression Time (1-300) 10 Querier State Enabled Disabled Query Version 2 Query Interval (1-31744) 125 sec Max Response Time (1-25) 10 sec Robustness Value (1-7) 2 Last Member Query Interval (1-25) 1 sec Proxy Reporting Enabled Source Address . Rate Limit (1-1000) Enabled Disabled Disabled Disabled Source Address . 	Report Suppression	Enabled Disabled
Querier State Disabled Disabled Query Version 2 Query Interval (1-31744) 125 sec Max Response Time (1-25) 10 sec Robustness Value (1-7) 2 Last Member Query Interval (1-25) 1 sec Proxy Reporting Enabled	Suppression Time (1-300)	10
Query Version 2 Query Interval (1-31744) 125 Max Response Time (1-25) 10 Robustness Value (1-7) 2 Last Member Query Interval (1-25) 1 Proxy Reporting Enabled • Disabled Source Address · Rate Limit (1-1000) I Ignore Topology Change • Enabled • Disabled	Querier State	Enabled Disabled
Query Interval (1-31744) 125 Max Response Time (1-25) 10 Robustness Value (1-7) 2 Last Member Query Interval (1-25) 1 Proxy Reporting Enabled © Disabled Source Address · · · · Rate Limit (1-1000) I Ignore Topology Change © Enabled © Disabled	Query Version	2
Max Response Time (1-25) 10 sec Robustness Value (1-7) 2 Last Member Query Interval (1-25) 1 sec Proxy Reporting Enabled Disabled Source Address Source Address Rate Limit (1-1000) I No Limit Ignore Topology Change Enabled Disabled Image: Compatible C	Query Interval (1-31744)	125 sec
Robustness Value (1-7) 2 Last Member Query Interval (1-25) 1 Proxy Reporting Enabled	Max Response Time (1-25)	10 sec
Last Member Query Interval (1-25) 1 sec Proxy Reporting Enabled Source Address Source Address Rate Limit (1-1000) Image: Constant of the sec Image: Constant of the sec Ignore Topology Change Image: Constant of the sec Image: Constant of the sec	Robustness Value (1-7)	2
Proxy Reporting Enabled Disabled Source Address No Limit Ignore Topology Change Enabled Disabled Disabled 	Last Member Query Interval (1-25)	1 sec
Rate Limit (1-1000) Image: Comparison of the second seco	Proxy Reporting	Enabled OEnabled Source Address
Ignore Topology Change	Rate Limit (1-1000)	✓ No Limit
	Ignore Topology Change	Enabled Disabled

Network IP Settings:

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14. Find L3 Features -> Interface -> IPv4 Interface. Select "Edit" button.

This D-Link switch series can be set to IP address range 10.x.x.x. ONLY.

If you use a single network switch, you may not need to change network IP settings. But if you are stacking network switches (connecting multiple network switches through D-Link 10G fiber cables), it is recommended to set first on to 10.90.90.91, second to 10.90.90.92, and so on.

Set Get IP From "Static", set Subnet Mask to 255.0.0.0 and click Apply.

If you change an IP address, the page will be refreshed and you will need to log in again using new IP address, same user name and password. If you did not change IP address just continue to the next step. Make sure your screen looks exactly like pictured below.

Fuzzy Search	IPv4 Interface			
	/ IPv4 Interface			
System				
Management	Interface VLAN (1-4094)			Apply Find
L2 Features	Total Entries: 1			
	Interface State	ID Addross	Secondary	Link Statue
Gratuitous ARP	interface State		Secondary	
IPv6 Neighbor	Vianti Enabled	10.90.90/205.0.0.0 Manual	NU	
IPv4 Interface				1/1 < < 1 > > Go
IPv6 Interface				
E Loopback Interface				
IPv4 Interface Configure				
IPv4 Interface Settings	DHCP Client			
'				
Interface	vlan1			Back
Settings				
State	Enabled •			
IP MTU (512-16383)	1500 bytes			
IP Directed Broadcast				
Description	64 chars			Apply
IP Settings				
Get IP From	Static			
Gern Hom	Static			
IP Address	10 - 90 - 90 - 91			
Mask	255 · 0 · 0 · 0			
Secondary				Apply Delete
Secondary IP Entry				
Total Entrica: 0				
Total Entries: 0				
IP Address	Mask	Boot Mode	Secondary	

15. To save all Running Configurations to Startup-Configuration, Find **Save** → **Save Configuration** in the menu on top of the window. Then click "**Apply**" button in Save Running Configuration to startup-config window.

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Building Networks fo	r People	DGS-3630-52PC	
💾 Save 👻 🌱 🏹 Tool	3 v		🤵 Logged in as: Administrator, 🙋 Logout
Save Configuration			
DGS-3630-52PC DGS-36		Save Configuration File Path C:/config.cfg	Apply

16. To reboot the switch, Find **Tool** \rightarrow **Reboot System** in the menu on top of the window. Then click "**Reboot**" button in Reboot System window. The switch will be rebooted automatically.

D-L Building Netv	works for People	
Save -	🌠 Tools 👻 🧕 🖉	ogged in as: Adn
Fuzzy Search	Firmware Upgrade & Backup	•
📄 DGS-3630-	Configuration Restore & Backup	•
🕀 🃁 System	Certificate & Key Restore & Backup	•
	Log Backup	•
🕀 🃁 FDB	Ping	
🕀 🃁 VLAN T	Trace Route	
🕀 🃁 STP 🕀 🃁 ERPS (I	Reset	
🔤 📄 Loopbar	Reboot System	
Flex Lin	DLMS Settings	
📄 L2 Proto ि 🎾 L2 Multic	ast Control	



Edgecore AS4610-54T / Cumulus Linux version 3.7.15

For advanced users only – support is limited for this model!

Cumulus Linux was verified using version v3.7.15. The below commands creates VLAN 2 and configures a network bridge for IGMP snooping.

net del all net add dns nameserver ipv4 10.105.104.1 net add time zone Etc/UTC net add time ntp server 0.cumulusnetworks.pool.ntp.org iburst net add time ntp server 1.cumulusnetworks.pool.ntp.org iburst net add time ntp server 2.cumulusnetworks.pool.ntp.org iburst net add time ntp server 3.cumulusnetworks.pool.ntp.org iburst net add time ntp source eth0 net add snmp-server listening-address localhost net add interface swp1-49 igmp net add interface swp49 igmp query-max-response-time 10 net add routing defaults datacenter net add routing service integrated-vtysh-config net add routing log syslog informational net add username cumulus nopassword net add ptp global slave-only no net add ptp global priority1 255 net add ptp global priority2 255 net add ptp global domain-number 0 net add ptp global logging-level 5 net add ptp global path-trace-enabled no net add ptp global use-syslog yes net add ptp global verbose no net add ptp global summary-interval 0 net add ptp global time-stamping net add bridge bridge mld-version 2 net add bridge bridge ports swp1,swp2,swp3,swp4,swp5,swp6,swp7,swp8,swp9,swp10,swp11,swp12,swp13,swp14,swp15,swp16,swp17,swp18,swp19,swp20,swp21,s wp22,swp23,swp24,swp25,swp26,swp27,swp28,swp29,swp30,swp31,swp32,swp33,swp34,swp35,swp36,swp37,swp38,swp39,swp40,swp41 ,swp42,swp43,swp44,swp45,swp46,swp47,swp48,swp49 net add bridge bridge pvid 1 net add bridge bridge vids 2 net add bridge bridge vlan-aware net add interface eth0 ip address 10.105.104.253/24 net add interface eth0 ip gateway 10.105.104.1 net add interface swp1-49 bridge pvid 2 net add interface swp1-49 bridge vids 2 net add interface swp1-49 mtu 9216 net add interface swp49 link speed 10000 net add dot1x radius accounting-port 1813 net add dot1x max-number-stations 4 net add dot1x radius authentication-port 1812 net add dot1x eap-reauth-period 0 net add dot1x mab-activation-delay 30

```
net commit
```

In addition, manually add the following line to the bridge configuration in "/etc/network/interfaces"

bridge-mclmi 30

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Modify the commands as needed to best fit the network environment. This configuration enables port 49 for uplink to another switch to expand the system.

IGMP Setup Guide: Engenius 1080p Systems (KD-IP1080, KD-IP120)

- It is recommended to reset the switch to factory defaults before configuring for multicast operation. Power up the device, wait for about 2 minutes, using a paper clip press and hold a reset button for more than 10 seconds and then release. After device is rebooted power down and then power up the device. Wait while the device is restarted and ready to use.
- 2. Connect your PC to the switch directly using a network cable.

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- 3. Configure your PC's IP address to the same range as the switch (default **192.168.0.xxx**).
- 4. Enter the switch's IP address (default is **192.168.0.239**) in your browser and press ENTER.
- 5. Enter user name and password (default is "admin" and "password"). Then click Log In.

🕞 Login - Google		<u>_ </u>	L
G G S The http://192.168.0.239	/log 🔎 🔸	🖌 🗖 Login 🛛 🗙	÷
<u> </u>	łp		
🛛 🏠 🔹 🖾 🔹 🖶 🔹 Page 🔹 Safety	• T <u>o</u> ols • 🕜)-	
EnGenius®			
	_		
		admin	
EWS7952FP		••••••	
		Login	
		Copyright © 2013 EnGenius. All rights reserved.	
		C 100%	• //.

 On the left select Switch. Navigate to System -> IP Settings -> IPv4. Under Auto Configuration select Static. Change an IP address to 192.168.1.250, Subnet Mask to 255.255.255.0, Default Gateway to 192.168.1.1 (in this case), and at the bottom click Apply.

Key digital',

- COO - http://192.16	8.1.250 (index, O V + Engenius EWS7952FP X	
ne Edit view Pavontes Los	isCep	
		N B
EnGenius®	Backup Upgrade Reset Ret	boot Logou
EWS7952FP	48-Port Gigabit PoE+ L2 Wireless Management Switch with 4 Dual-Speed SFP Q Search	
Controller Switch	IPv4	
System	IPv4 Address Settings	
Summary	Auto Configuration: Static DHCP 	
IP Settings	IPv4 Address: 192.168.1.250	
IPv4	Subnet Mask: 255.255.0	
IPv6		
System Time	Gateway: 192.166.1.1	
Port Settings	DNS Server 1: 0.0.0.0	
⊳ PoE	DNS Server 2: 0.0.0.0	
EEE		
L2 Feature		
😫 VLAN		Apply
🐣 Management		
X ACL		
🕹 QoS		
🔑 Security		
B Monitoring		
* Diagnostics		

 Page will refresh. Configure your PC's IP address to the same range as the switch (default 192.168.1.xxx). Enter the switch's IP address (default is 192.168.1.250) in your browser and press ENTER. Log in again with the same user name /password. 8. On the left select Switch. Navigate to L2 Feature -> IGMP Snooping -> Global Settings. Under Status select Enabled, under Version: V2 and under Report Suppression: Enabled. Click Apply.

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EWS7952FP	48-Port Gigabit PoE+ L2 Wireless Management Switch with 4 Dual-Speed SFP Q Search	
Controller Switch	Global Settings	
🛱 System	Settings	
<12 Feature	Status: Enabled	
 Link Aggregation 	Version: V2 OV3	
Mirror Settings	Report Suppression: Enabled Disabled 	
⊳ STP		
MAC Address Table		
▷ LLDP		Apply
▲ IGMP Snooping		
Global Settings		
VLAN Settings		
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Group List		
Router Settings		
MLD Snooping		
Jumbo Frame		
Stan VLAN		
🐣 Management		
X ACL		
🕹 QoS		
🔑 Security		
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 Navigate to L2 Feature -> IGMP Snooping -> VLAN Settings. Click on Edit button on the right in the VLAN ID 1 line. Under IGMP Snooping Status select Enabled, under Fast Leave select Enabled. Click check mark button to apply settings.

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- 10. Now the switch should work properly with IP audio/video equipment.
- 11. Connect your encoders, decoders, allow approx 3 mins for bootup, and perform a network scan using KD Management Software.

Linksys LGSxxxMPC setup guide for KD-IP922, KD-IP822, and KD-IP1080 systems Must use firmware version: 1.00.01.03 | newer firmware will not work

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Steps related to stacking multiple switches are in red

- 1. Ensure that your PC is set to a static IP address that is within the subnet of the network switch (192.168.1.xyz)
- Connect to the network switch via its default IP address 192.168.1.251. The default login credentials are:

Username: "admin"		•	usemame
Dessured "edmin"	LINKSYS		
Password: admin	LGS352MPC	Ð	password
			Sign in
After connecting, change the password to gain access to the switch.			Copyright © 2020 Belkin All rights reserved

3. Set the IP address of the switch to the desired address. This setting is accessed via System -> IP settings -> IPv4 Management.

3a. If stacking multiple network switches, each will require a unique IP address.

	IPv4 Management			
System	VLAN ID	Address	Subnet Mask	Configuration
Summary	1	192.168.1.251	255.255.0.0	Static 🗸
^o Settings				
IPv4 Management				
10 A M	1			

- Key digital'
 - Enable IGMP snooping. This setting is accessed via L2 feature -> IGMP Snooping -> Global settings. Ensure all settings are in line with the image.

	IGMP Snooping
System	Global Settings
< L2 Feature	
LINK Aggregation Mirror Settings	Report Suppression: 5 (1-25)
D STP	
▷ LBD	
MAC Address Table	
▷ LLDP	
 IGMP Snooping 	
Global Settings	

5. Enable IGMP snooping for your VLAN. This setting is accessed via L2 feature -> IGMP Snooping -> VLAN settings. Use IGMP version 2. VLAN 1 is used by default. Other VLANs are compatible as well.

5a. Ensure Fast Leave is disabled when stacking.

	VLAN Settings				
💿 System	VLAN ID	IGMP Snooping Status	Version	Fast Leave	
< L2 Feature	1	Enabled	v2	Disabled	۶
Link Aggregation					
Mirror Settings					
⊳ STP					
▷ LBD					
MAC Address Table					
▷ LLDP					
 IGMP Snooping 					
Global Settings					
VLAN Settings					

6. Enable the IGMP querier This setting is accessed via L2 feature -> IGMP Snooping -> Querier settings.

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6a. Select one switch to be the IGMP querier. Enable the querier on this switch only and disable the IGMP querier on all other switches.

	Querier	Settings							
🗢 System	VLAN ID	Querier State	Querier Version	Querier Status	Interval	Max Response Interval	Startup Query Counter	Startup Query Interval	
< L2 Feature	1	Enabled	v2	Querier	125	12	2	15	
Link Aggregation									
Mirror Settings									
⊳ STP									
⊳ LBD									
MAC Address Table									
LLDP									
IGMP Snooping									
Global Settings									
VLAN Settings									
Querier Settings									
Group List									
Router Settings									
MLD Snooping									
Multicast Filtering									
Jumbo Frame									

7. Set the frame size to its maximum value of 10240. L2 feature -> Jumbo Frame

	Jumbo Frame
💿 System	Setting
< L2 Feature	Jumbo Frame: 10240 Bytes (1522-10240)
b Link Aggregation	
Mirror Settings	
⊳ STP	
⊳ LBD	
MAC Address Table	
▷ LLDP	
▷ IGMP Snooping	
▷ MLD Snooping	
Multicast Filtering	
Jumbo Frame	



8. Enable Multicast Filtering. L2 feature -> Multicast Filtering

	Multicast Filtering
💿 System	
L2 Feature	State : Enabled Disabled
b Link Aggregation	
Mirror Settings	
⊳ STP	
▷ LBD	
MAC Address Table	
▷ LLDP	
▷ IGMP Snooping	
▷ MLD Snooping	
Multicast Filtering	
Jumbo Frame	

- 9. Verify all settings are applied after power cycling. The switch should now be ready to use.
- 10. Connect your encoders, decoders, allow approx 3 mins for bootup, and perform a network scan using KD Management Software.

IGMP Setup Guide: Linksys 1080p Systems (KD-IP1080, KD-IP120)

- 1. **IMPORTANT**: Disconnect all the DHCP devices like routers, servers from the Linksys network switch.
- 2. Locate a pinhole "RESET" button at the front panel left bottom corner of your Linksys network switch. Using a paper clip press and hold a reset button for more than 10 seconds and then release. Wait while the device is restarted and ready to use (about 5min).
- 3. IMPORTANT: Make sure the blue "SYSTEM"LED next to the pinhole "RESET" button is flashing.
- 4. **IMPORTANT**: At this point all the displays should be displaying distorted randomly flashing video images.
- 5. Connect your PC to the Linksys network switch directly using a network cable.

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- If you have not done yet, configure your PC's IP address to the same range as the switch (default 192.168.1.xxx).
- Enter the switch's IP address in your browser and press ENTER (check the user manual for a default IP address - it is usually 192.168.1.251).
- 8. Enter user name and password (check the user manual for a default user name and password; it is usually "admin" for both). Then click Log In.

http://192	2.168.1.251/ is not 🗙		- 0 X
(← ⇒ C	192.168.1.	251/csb0244444/config/log_off_page.htm	☆ =
For quick access	, place your bookmarks	s here on the bookmarks bar. <u>Import bookmarks now</u>	
	LINKS) LGS552P 52-	/S Port Gigabit PoE+ Managed Switch	Î
	AUTHENTI	ICATION REQUIRED	
	Usemame:	admin	
	Password:		
		Log In	.

9. Navigate to Configuration -> IP Interface -> IPv4-> IPv4 Interface. Select Static IP Address. IP address can be changed by the administrator depending on the network configuration. If you are using multiple network switches it is recommended to set first one to 192.168.1.251, second to 192.168.1.252, and so on (we will leave the IP address unchanged). Set Subnet Mask to 255.255.255.0, set User Defined Default Gateway to 192.168.1.1 (in this case), make sure that Management VLAN is set to "1" and click Apply. If you changed an

IP address page will refresh and you will need to log in again using new IP address, same user name and password. If you did not change IP address just continue to the next step.

10. Make sure your screen looks exactly like pictured below.

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11. Navigate to Multicast -> Future Configuration. Select Enable under Bridge Multicasting Filtering and click Apply.

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🕒 LG5552 52-Port Gigabit Mana 🗙				
← → C 🗋 192.168.1.251	./cs525da1b9/home.ht	m		¶☆ =
🗰 Apps Ġ Google 🗋 192.168.1.250	/cs525da			
				🚯 Logout 🛛 🥹 Help
	S552 52-Port Gigabi	Managed Switch		Firmware Version: 1.0.1.17
System Status	Quick Start	Configuration	Maintenance	Support
 System Management 	Feature Configur	ation		
System Information	V Your changes we	re successfully saved.		
► Time	•			
► SINMF	Global			
Port Management	Bridge Multicast Filter	ing: 🛃 Enable		
▶ VLAN Management	VLAN Settings			
Spanning Tree Management	VLAN ID:	1 \$		
MAC Address Management	IPv4 Multicast Forward	ding: 💿 By MAC Address		
▼ Multicast		By IPv4 Group Address	3	
Feature Configuration		 By Source Specific IPv 	4 Group Address	
Multicast Router Ports		_		
- ····	Apply C	ancel		
		3 2014 Belkin International	l, Inc. and/or its subsidiaries and affiliates, inc	oluding Linksys, LLC. All rights reserved.

12. Navigate to **Multicast** -> **IGMP Snooping**. Select **Enable** under **IGMP Snooping**, click **Apply**.

LG5552 52-Port Gigabit Man: X									
← → C 🗋 192.168.1.25	1/cs525	ida1b9	/home.htr	n					¶☆ =
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System Status	Q	uick Sta	rt	C	Configuration		Maintenance		Support
▼ System Management	IGM	P Sno	ooping						
System Information	V	Your c	hanges wer	e succes:	sfully saved.				
▶ Time			Ū						
▶ SNMP	IG	MP Sno	oping: 🗹	Enabled					
Eugs Dot Monoromont			_						
		Apply	C	ancel					
 VLAN Wanagement 	IGN	P Snoo	ping Table						
Spanning Tree Management		VLAN	IGMP	Router	Auto Learn	IGMP Querier	IGMP Querier	IGMP Querier	Immediate
MAC Address Management		ID	Snooping	IGMP	MRouter Ports	Status	Version	IP Address	Leave
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Feature Configuration			Disabled	15	Linabled	Disabled	٧Z	192.100.1.201	Disabled
IGMP Snooping Multisect Router Ports		Edit							
municasi Router Ports	-								
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LIN			Edit IGMP Snooping	/ersion: 1.0.1.17
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System In	VLAN Settings			
 Time ENME 	IGMP Snooping Status:	🛃 Enable		
 Logs 	Auto Learn MRouter Ports:	🛃 Enable	Immediate Leave: 📝 Enable	
▶ Port Mana	IGMP Querier:	🛃 Enable		
► VLAN Mar	IGMP Querier Version:	O IGMPv2	● IGMPv3	
▶ Spanning	Querier Source IP Address:	🔘 Auto	• User Defined 192.168.1.251 +	nediate
MAC Add	Apply C	Close		ve
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IGMP Sno				
Multicast F				
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14. Refresh your browser, go to **IGMP Snooping** tab and make sure you have an image as below:

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Hpps G Google 🛅 192.168.1.250/cs525da	
O Logo	ut 😧 Help
LINCSYS LGS552 52-Port Gigabit Managed Switch	
System Status Quick Start Configuration Maintenance Sup	port
 System Management IGMP Snooping 	
System Information	
Time Todi changes were successibility saved.	
► SNMP	
Logs	
Port Management Apply Cancel	
► VLAN Management	
Spanning Tree Management IGMP Snooping Table	_
VLAN IGMP Router Auto Learn IGMP Querier IGMP Querier IGMP Querier IGMP Querier Imme MAC Address Management ID Spooning IGMP MRouter Parts Status Version IP Address Leave	ediate
Multicast Status Version	- -
Feature Configuration 0 1 Enabled v3 Enabled Enabled v3 192.168.1.251 Enab	led
IGMP Snooping Edit	
Multicast Router Ports	
@ 2014 Belkin International, Inc. and/or its subsidiaries and affiliates, including Linksys, LLC. Al	rights reserved.

15. **IMPORTANT**: At this point all the displays should be displaying stable running video from the selected sources. If you do not have them displaying properly, than network switch is configured incorrectly.

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16. Navigate to **Maintenance** -> **File Management** -> **Configuration File Copy**. Select radio buttons as shown below, click **Apply**. This will save current configuration and will apply this configuration every time switch is powered up.



- 17. **IMPORTANT**: Now you can connect back you DHCP equipment (routers, servers and so on).
- 18. Power down Linksys network switch and power it up back again. Wait for the whole system to start and until you can see video on your displays.

19. Log in to your Linksys network switch again and make sure that IGMP settings are intact:

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System Status	Quick Start	Configuration		Maintenance		Support	
▼ System Management 🔶	Feature Configurat	ion					
System Information	Vour changes were	successfully saved.					
▶ SNMP	Global						
 Port Management 	Bridge Multicast Filtering	: 🗹 Enable					
▶ VLAN Management	VLAN Settings						
Spanning Tree Management	VLAN ID:	1					
 MAC Address Management 	IPv4 Multicast Forwardin	q: 💿 By MAC Addres	s				
▼ Multicast		By IPv4 Group A	\ddress				
Feature Configuration		By Source Spec	cific IPv4 Group	Address			
Nulticast Router Ports							
	Apply Can	cel					
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- 20. Rescan your components with Key Digital Management Software and make sure HDMI video switch is functional.
- 21. At this point your Linksys network switch is set and ready to use.
- 22. Connect your encoders, decoders, allow approx 3 mins for bootup, and perform a network scan using KD Management Software.

IGMP Setup Guide: Linksys 4K Systems (KD-IP822, KD-IP922, KD-IP1022)

- 1. **IMPORTANT**: Disconnect all the DHCP devices like routers, servers from the Linksys network switch.
- 2. Locate a pinhole "RESET" button at the front panel left bottom corner of your Linksys network switch. Using a paper clip press and hold a reset button for more than 10 seconds and then release. Wait while the device is restarted and ready to use (about 5min).
- 3. **IMPORTANT**: Make sure the blue "SYSTEM"LED next to the pinhole "RESET" button is flashing.
- 4. **IMPORTANT**: At this point all the displays should be displaying or flashing Key Digital logo with information stamp.
- 5. Connect your PC to the Linksys network switch directly using a network cable.

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- If you have not done yet, configure your PC's IP address to the same range as the switch (default 192.168.1.xxx).
- Enter the switch's IP address in your browser and press ENTER (check the user manual for a default IP address - it is usually 192.168.1.251).
- 8. Enter user name and password (check the user manual for a default user name and password; it is usually "admin" for both). Then click Log In.

File Edit View History Bookmarks Tools	Help								_	
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9. Navigate to Configuration -> IP Interface -> IPv4-> IPv4 Interface. Select Static IP Address. IP address can be changed by the administrator depending on the network configuration. If you are using multiple network switches it is recommended to set first one to 192.168.1.251, second to 192.168.1.252, and so on (we will leave the IP address unchanged). Set Subnet Mask to 255.255.0.0, set User Defined Default Gateway to 192.168.1.1 (in this case), make sure that Management VLAN is set to "1" and click Apply. If you changed an

IP address page will refresh and you will need to log in again using new IP address, same user name and password.

10. Make sure your screen looks exactly like pictured below.

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11. Navigate to Port Management -> Ports. Select Enable under Jumbo Frames and click Apply.

File Edit View History Book LGS552P 52-Port Gigabit PoE+Ma	marks	Tools +	Help									-	.ox
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PoE Discovery - LLDP			Apply	Cance	el								
 VLAN Management 		Por	t Table										
Spanning Tree Management			Port	Port Type	Operational Status	Auto Negotiation	Port Speed	Duplex Mode	Protected Port	LAG			
MAC Address Management		\odot	GE1	1000M-copper	Up	Enable	1000M	Full	Unprotected				
Multicast			GE2	1000M-copper	Down				Unprotected				
▼ IP Interface		\bigcirc	GE3	1000M-copper	Up	Enable	1000M	Full	Unprotected				
▼ IPv4			GE4	1000M-copper	Down				Unprotected				
IPv4 Interface	-	0	GE5	1000M-copper	Down				Unprotected				-
T					© 2014 Be	elkin International, I	nc. and/or its subsi	diaries and aff	filiates, including Lin	ksys, LL(C. All right	is reserv	ed.

12. Navigate to Multicast -> Future Configuration. Select Enable under Bridge Multicasting Filtering and click Apply.

Key digibal'



13. Navigate to Multicast -> IGMP Snooping. Select Enable under IGMP Snooping, click Apply.

Key digilal'



 Click on radio button and click Edit. Edit IGMP Snooping window will appear. Make sure VLAN ID <1> is selected. Enable all the settings as shown below. Select IGMP v2 as IGMP Querier Version, Click Apply and then Close.

Key digital',

<u>File E</u> dit <u>V</u> ie	w History <u>B</u> ookmarks <u>T</u> ools	Help					-	.o×
LGS552P 52-F	Port Gigabit PoE+Ma 🗙 🕂							
(192	. 168. 1.251/csfed7b6d6/home.htm		C Search	☆自	÷	⋒		Ξ
					O L	ogout	Юн	elp
LIN		Ed	it IGMP Snooping			fersio		.27
Syster	Your changes were	e successfully saved.				рро	t	
▼ System Ma	Select Your VLAN							
System Inf Managem	VLAN ID:	1 \$						
▶ Time	VLAN Settings							
▶ SNMP	IGMP Snooping Status:	Enable						
Logs Dort Manage	Auto Learn MRouter Ports:	Enable	Immediate Leave: 📝 Enable			a dia		
 For Manay M AN Man 	IGMP Querier:	Enable				iedia /e		
 VLAN INIAI Spanning T 	IGMP Querier Version:	 IGMPv2 	◯ IGMPv3					
MAC Addre	Querier Source IP Address	a 🔿 Auto	● User Defined 192.168.1.251 \$			bled		
 Multicast 	Apply	Close						
Feature Co								
MLD Snoo								
			© 2014 Belkin International, Inc. and/or its subsidiaries and affilia	tes, including Links	iys, LLC	. All right	s reserv	ed.
•								■ 1.11

15. Refresh your browser, go to **IGMP Snooping** tab and make sure you have an image as below:

Key digilal'



16. Navigate to **Maintenance** -> **File Management** -> **Configuration File Copy**. Select radio buttons as shown below, click **Apply**. This will save current configuration and will apply this configuration every time switch is powered up.

File Edit <u>V</u> iew Hi <u>s</u> tory Bookmarks	s <u>T</u> ools <u>H</u> elp						-	
LGS552P 52-Port Gigabit PoE+ Ma >	<u>د +</u>							
(192.168.1.251/csfed7b6d6/h	ome.htm	୯ ସ	Search	☆ 自	+	⋒		≡
					ΘL	ogout	• н	elp
	S552P 52-Port G	igabit PoE+ Managed Switch	1		Firmwar	e Versio	n: 1.1.0.	27
System Status	Quick Start	Configuration	Maintenance		5	Suppor	t	
System Mode & Reboot	Configuration	File Copy						
 File Management Firmware & Boot Code Active Firmware Image Configuration & Log Configuration File Copy DHCP Auto Configuration Diagnostics 	Source File: Destination File: Apphy	 Running Configuration File Startup Configuration File Backup Configuration File Running Configuration File Startup Configuration File Backup Configuration File 						
		© 2014 Belkin International, I	nc. and/or its subsidiaries and affiliate	es, including Lir	ıksys, LLC	. All right	s reserv	ed.

17. Power down Linksys network switch and power it up back again.

Key digital'

18. Log in to your Linksys network switch again and make sure that IGMP settings are intact:

<u>File Edit View History B</u> ookmarks	<u>T</u> ools <u>H</u> elp					ļ	<u>- 0 ×</u>
LGS552P 52-Port Gigabit PoE + Ma 🗙	+						
(192.168.1.251/csfed7b6d6/hor	ne.htm	୯ <u>୧</u>	Search	☆ 自	↓ 1	î 🛡	≡
					() L	ogout 🤅	Help
LINKSYS LG	S552P 52-Port Gigal	bit PoE+ Managed Switc	h		Firmware	: Version: 1	.1.0.27
System Status	Quick Start	Configuration	Maintenance		ç	Support	
Feature Configuration	Feature Configur	ation					-
IGMP Snooping	Global						
MLD Snooping	Bridge Multicast Filter	ing: 📝 Enable					
Multicast Router Ports	Dinge Multicast Filter						
Forward All	VLAN Settings						
Unregistered Multicast	VLAN ID:	1 🗘					
MAC Group Address FDB	IPv6 Multicast Forward	ding: 💿 By MAC Address					
IP Group Address FDB		By IPv6 Group Address	\$				
▼ IP Interface		 By Source Specific IPv 	6 Group Address				
▼ IPv4							
IPv4 Interface	IPv4 Multicast Forward	ding: 💿 By MAC Address					
▶ IPv6		 By IPv4 Group Address 	5				
▶ IP Network Operations		 By Source Specific IPv 	4 Group Address				
		© 2014 Belkin International	, Inc. and/or its subsidiaries and affi	liates, including Li	nksys, LLC	. All rights re	served.
•							



File Edit View History Bookmarks	Tools Help +								
(i 192.168.1.251/csfed7b6d6/home	e.htm			C	Q. Search		☆自	F 🕆 🗸	? ≡
	6552P 52-	Port Gigal	oit PoE+	· Managed S	witch		ſ	C Logout	() Help 1.1.0.27
System Status	Quick S	art	C	onfiguration		Maintenance		Suppor	1
Multicast Feature Configuration	IGMP SI	ooping							
IGMP Snooping	IGMP S	iooping: 📝	Enable						
MLD Snooping Multicast Router Ports Forward All	Apply	C ooping Table	ancel						
IGMP/MLD IP Group Addresses MAC Group Address FDB	VLAI ID	I IGMP Snooping Status	Router IGMP Version	Auto Learn MRouter Ports	IGMP Querier Status	IGMP Querier Version	IGMP Querier IP Address	Immedia Leave	le
IP Group Address FDB	0 1	Enabled	v2	Enabled	Enabled	v2	192.168.1.25	1 Enabled	
P Interface IPv4 IPv4 Interface ARP	Edit								
▶ IPv6									
▶ P Network Operations									
I				© 2014 Belkin Interr	national, inc. and/or its	subsidiaries and atti	iates, including Links	ys, LLC: All nght	reserved.

- 19. At this point your Linksys network switch is set and ready to use.
- 20. Connect your encoders, decoders, allow approx 3 mins for bootup, and perform a network scan using KD Management Software.

Luxul AMS-4424P, SW-610-24P-R, SW-510-48P-F Network Setup Guide for KD-IP822, KD-IP922, KD-IP1022, KD-IP1080

Important Notes:

- When stacking verify that both switches have POE enabled. In some cases, the secondary switch may disable POE upon stacking.
- 1. Login to the switch:

Key digibal'

- a. Plug an Ethernet cable into any of the ports of the switch
- b. Plug the other end into the Ethernet port of your computer
- c. Power on the Switch
- check to see that the IP address of the computer is within this network Subnet : 192.168.0.xxx ("xxx" ranges 1~254). For example, 192.168.0.100

Internet Protocol Version 4 (TCP/IPv4)	Properties ? X
General	
You can get IP settings assigned autor this capability. Otherwise, you need to for the appropriate IP settings.	natically if your network supports ask your network administrator
Obtain an IP address automatical	ly
Our Search Stress Use the following IP address:	
IP address:	192.168.0.100
Subnet mask:	255.255.0.0
Default gateway:	· · ·
Obtain DNS server address auton	natically
• Use the following DNS server add	resses:
Preferred DNS server:	
Alternate DNS server:	· · ·
🔲 Validate settings upon exit	Advanced
	OK Cancel

2. Open the Web browser, and enter **192.168.0.4 (default IP address** of Luxul AMS-4424P). The login window appears as below:

Key digital'

← → C ☆ ③ 192	168.0.4	☆	6	٢	ょ	
	Authentication required http://192.168.0.4 Your connection to this site is not private Username admin Password ***** Log in Cancel					

- 3. Enter the user name and password. (default user name and password are both set as **"admin"**), then click "OK" to login to the switch configuration window.
- Ensure all ports have Maximum Frame Size of 10056 entered as below. To check it, find Configuration → Ports → Ports in the menu on left side of the window. (KD-IP922 requires Jumbo Frame(8K) for video/audio transmission via 1G-BaseT).

reen Ethernet	•			Speed	A	dv Duple	x	Adv sp	eed	F	low Contr	ol	Maximum	Execcive
orts	Port	Link	Current	Configured	F	dx Hd	x 10	M 100	M 1G	Enable	Curr Rx	Curr T	Frame Size	Collision Mode
orts ort Description	*			\$	•								10056	<u>ہ</u>
CP	• 1	7	1Gfdx	Auto	•						×	X	10056	Discard
irity				0										
egation	2	\checkmark	1Gfdx	Auto	•	•			1		X	X	10056	Discard
Protection	2		400	Auto							~	~	40050	Discoul
C Profile	5	Y	TGtax	Auto	• '	 					~	~	10056	Discard
	4	1	1Gfdx	Auto	•						X	X	10056	Discard
)	•	•			_									
)	5	\checkmark	1Gfdx	Auto	•	•			1		X	X	10056	Discard
Table	C		1000	Auto	-					_	~	~	10050	Discoul
VLAN	•	Y	IGIOX	Auto	<u> </u>	<u>a</u> <u>a</u>					~	~	10050	Discard
	• 7	V	1Gfdx	Auto	•	•					X	X	10056	Discard
ring		· ·			_		_							
			1011		- 1 (40050	DI I

5. To enable IGMP Snooping of the switch, Find Configuration → IPMC → IGMP Snooping → Basic Configuration in the menu on left side of the window. (KD-IP922 requires IGMP Snooping for multicasting video/audio transmission via 1G-BaseT), then check the box of Snooping Enabled of Global Configuration in

IGMP Snooping Configuration window. And **check the Fast Leave box for all Ports** related Configuration in the same window as below.

Key digital'

Configuration	, 10	SMP Sno	ooping	Configur	atic	on	
Quick Setup	•	ak Clahal Sa	441 m m m				
Green Ethernet	• 50	ack Global Se	ttings				
Ports	•			Global Configurati	on		
DHCP	•			Clobal Colliguia	U.I.		Enabled
Security	► Sr	ooping Enabled				1	
Aggregation	► Ur	registered IPMCv4	4 Flooding Enab	oled			
Loop Protection						_	Make sure
IPMC Profile	► IG	MP SSM Range		232.0.0.0		/ 8	unchecked
MVR	Le	ave Proxy Enabled	4				
IPMC	•		-			_	
IGMP Snooping	• Pr	oxy Enabled					
Basic Configuration				'			
VLAN Configuration	P	ort Rela	ted Co	nfiguratio	n f	or C	witch 2
Port Filtering Profile							
				iniguratio		01 3	witch 5
MLD Snooping	•					01 3	witch 5
MLD Snooping	► Po	ort Router Port	Fast Leave	Throttling		01 3	witch 5
MLD Snooping LLDP MAC Table	► ► P(*	ort Router Port	Fast Leave			01 31	witch 5
MLD Snooping LLDP MAC Table Voice VLAN QoS	► P(ort Router Port	Fast Leave	Throttling		01 3	
MLD Snooping LLDP MAC Table Voice VLAN QoS Mirroring	► P(*	ort Router Port	Fast Leave	Throttling	•	01 31	
MLD Snooping LLDP MAC Table Voice VLAN QoS Mirroring UPnP	• P(• 1 2	Prt Router Port	Fast Leave	Throttling <> (unlimited unlimited		01 31	WIICH 5
MLD Snooping LLDP MAC Table Voice VLAN QoS Mirroring UPnP GVRP	• P(• 1 • 1 2	Prt Router Port	Fast Leave	Throttling <> unlimited unlimited		01 31	witch 5
MLD Snooping LLDP MAC Table Voice VLAN QoS Mirroring UPnP GVRP Stack	• P(• 1 • 1 • 3	rt Router Port	Fast Leave	Throttling			WIICH 5
MLD Snooping LLDP MAC Table Voice VLAN QoS Mirroring UPnP GVRP Stack sFlow	 P(* 1 2 3 4 	rt Router Port	Fast Leave	Throttling			WIICH 5
MLD Snooping LLDP MAC Table Voice VLAN QoS Mirroring UPnP GVRP Stack sFlow UDLD	 P(* 1 2 3 4 5 	rt Router Port	Fast Leave	Throttling <> Unlimited Unlimited Unlimited Unlimited Unlimited Unlimited		01 31	WIICH 5
MLD Snooping LLDP MAC Table Voice VLAN QoS Mirroring UPnP GVRP Stack sFlow UDLD Monitor	 P(* 1 2 3 4 5 	rt Router Port	Fast Leave	Throttling <> (unlimited (unlimited (unlimited (unlimited (unlimited) (unlim			WIICH 5
MLD Snooping LLDP MAC Table Voice VLAN QoS Mirroring UPnP GVRP Stack	 P(1 2 3 4 	Prt Router Port	Fast Leave	Throttling <> unlimited unlimited unlimited			witch 5

6. Click "Save" button on the bottom of IGMP Snooping Configuration window

MVR		22		4	unlimited	•
IPMC	•				C	=
IGMP Snooping	•	23		4	unlimited	<u> </u>
Basic Configuration	- 11	24		4	unlimited	•
VLAN Configuration						
Port Filtering Profile		Save	Reset			
MLD Snooping	•					

7. To add VLAN of the IGMP Snooping at the switch, Find Configuration → IPMC → IGMP Snooping → VLAN Configuration in the menu on left side of the window. (VLAN must be added in IGMP Snooping), then click "Add New IGMP VLAN" if there is not any specified VLAN in IGMP Snooping VLAN Configuration window.



Switch 3 Refresh Configuration Ouice Seture	Ţ	IGM	P Sno	ooping VL	AN Confi	guration	
Green Ethernet		Start fron	n VLAN 1		with 20	entries	per page.
Ports	•	Delete		Cooping Enchlad		Quarier Address	Competibility
DHCP	•	Delete	VLANID	Shooping Enabled	Querier Election	Querier Address	Compatibility
Security	•	Add Nov		N			
Aggregation	•	Add New					
Loop Protection		Save R	leset				
IPMC Profile	•						
MVR							
IPMC							
IGMP Snooping	•						
Basic Configuration							
VLAN Configuration							
Port Filtering Profile							
MUD Occupies							

8. Then enter "1" in VLAN ID, check the box of Snooping Enabled and Querier Election in new VLAN. And select "Forced IGMPv2 in the list box of Compatibility in IGMP Snooping VLAN Configuration window. Then click "Save" button on the bottom of IGMP Snooping VLAN Configuration window.

Switch 3 Refresh Configuration	Ţ	IGMP	Snoo	oping VLA	N Config	uration		
Quick Setup Groop Ethernot		Start from V	/LAN 1	wi	th 20	entries per pag	e.	
Ports DHCP	•	Delete	VLAN ID	Snooping Enabled	Querier Election	Querier Address	Compatibility	
Security	•	Cancel	1			0.0.0.0	Forced IGMPv2	0
Aggregation	•		,					
Loop Protection		Add New IC	GMP VLAN					
IPMC Profile	•							
MVR		Save Res	et					
IPMC	•							
IGMP Snooping	•							
Basic Configuration								
VLAN Configuration								
Port Filtering Profile								
MLD Snooping	Þ							

9. (optional). If using stacked Switches, verify that POE+ is enabled. This setting can be accessed from Configuration → Quick Setup → POE→ Configuration

	•	Ρο	wer Over E	thernet Col	nfiguratio	n		
	Ŧ							
	•	Reser	ved Power determined by	Class	Allocation	LLDP-MED		
	Ŧ	Power	Management Mode	Actual Consumption	Reserved Power			
			-					
		Capac	itor Detection	Oisabled	Enabled			
		Maxir	num Available PoE	Power is 250W				
s	• =	PoE F	Port Configuration	for Switch 1				
	•		-	-				
е	•	Port	PoE Mode	Priority	Maximum Pov	ver [W]		
	•	*			- 15 A			
	•			j <u>~</u>	13.4			
	•	1	PoE+	Low	▼ 15.4			
	•				_			
	•	2	PoE+	Low	15.4			
			6					

Key digital'

10. (optional) if aggregating 10G connections, navigate to **Configuration→Aggregation → Groups** Use static mode for aggregated 10G connections.

Configuration	Aggro	ega	atio	on	Gr	ou	р	Co	nfi	igu	ira	tio	n																			
PoE F														P	ort Me	embe	rs													Group C	onfiguration	
VLANs •			-	-		-		-	-	-																						
Spanning Tree	Group ID	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	Mode	Revertive	Max Bundle
Group Manager	Normal		0				0	0			0		0	0	0	0		0	\odot	0		0	0	\bigcirc	0	0	0	0	0			
Green Ethernet	4	~	_	_	~	_	~	_	_	_	~	_	_	_	~	~	_	_	~	~	~	_	_	~	~			~	~	Ctatia to		20
Thermal Protection	<u>'</u>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0	0			20
Ports	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Disabled ~		28
DHCPv4		-	-	-	-	-	-	-	-	-		-	-	-	-		-	-	-		-	-	-		-	-	-				~	
DHCPv6	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Disabled V		28
Security •	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Disabled V		28
Aggregation •	-	0	<u> </u>	~	~	<u> </u>	0		<u> </u>	~	0	~	~	~	~	0	~	<u> </u>	0	0	0	<u> </u>	<u> </u>	0	0	0	<u> </u>	<u> </u>	<u> </u>	(
Common	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Disabled 🗸		28
Groups LACP	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Disabled 🗸)	28

11. To save all Running Configurations to Startup-Configuration, Find Administration → Configuration → Save startup-config in the menu on left side of the window. Then click "Save Configuration" button in Save Running Configuration to startup-config window.



12. To reboot the switch, Find Administration \rightarrow Reboot in the menu on left side of the window. Then click "Yes" button in Reboot Device window. The switch will be rebooted automatically.

Key digital',

sFlow UDLD		Reboot Device
Tools	۲	
Administration	•	
Reboot		Are you sure you want to perform a Reboot?
Factory Defaults		
Firmware Update		
Configuration	•	Yes No
Save startup-config		

Netgear AV line: MS250-10G2XF-POE+, M4250-26G4XF-PoE+, M4250-40G8XF-PoE+

Key digital'

It is recommended to change the default profile to the **"video"** profile (default is **"data"**) type for enhanced system performance.

If not connected to a DHCP server, the switch can be accessed via its IP address: 169.254.100.100 Alternatively, the OOB port can be accessed via 192.168.0.239

	Internet Protocol V	/ersion 4 (TCP/IPv4)	Properties	8 ×	
	General				
	You can get IP s this capability. C for the appropria	ettings assigned autor otherwise, you need to ate IP settings.	matically if your network ask your network adm	k supports inistrator	
	🔘 Obtain an I	P address automatical	ly		
	Ose the following the follo	owing IP address:			
	IP address:		192.168.0.10	00	
	Subnet mask:		255.255.0.0		
	Default gatew	ay:	• • •		
O Configure	onligure Network Promes				
Overview	M4250-40G8XF-PoE+	F			Show Leg
Network Profiles					
Link Aggregation	1	3 5 7	9 11 13	15 17 19	21 23
Multicast	2	4 6 8	10 12 14	16 18 20	22 24
Neighbor	25	27 29 31	33 35 37	39 41 _S 43	45 S 47 S
Power over Ethernet	26	28 30 32	34 36 38	40 42 _S 44	3 46 SP 48 SP
Port configuration				Auto-Trunk	
Security				PTP residency time star	nping
Maintenance					
AVB License					
🖏 Diagnostics 🗸 🗸	Configured Profiles				
	Profile Name	Profile type	VLAN ID	IP Address	# of Assigned Ports
	Detault	VIDEO	1	192.108.1.251	48

Key digital

Configured Profiles

Profile Name	Profile type	VLAN ID	IP Address	# of Assigned Ports	
Default	Video	1	192.168.1.251	48	(:)

Profile Settings

Configure your profile settings and preferences.

Profile Name Default	Profile Ten Video	nplate
VLAN ID	Color #00000	00
Edit VLAN Routing / DHCP Server		
VLAN IP Settings	VLAN IP A	ddress
Static	✓ 192.168.1.2	251
Subnet Mask		
255.255.0.0		
DHCP Server		
Off	~	
Can	el Apply	
	r the second sec	
For ease of maintenance, it is recommended to adjust the management IP address of the switch to a static IP address that shares the same subnet as the system.

Device Details

Product Name M4250

Key digital',

Country/Region N/A

AV UI Version 1.0.8.17

Management IP Address

Serial Number 6VK2295AA036A

Base MAC Address 94:18:65:6F:86:1C

Boot Version 1.0.0.7

STP Network Redundancy Neutral mode (default) 2

Once the video profile is applied, check the following settings in the Main UI

Key digital',

1) Verify that QOS is enabled and the Global Trust Mode is "trust dot1p" (this is the factory default setting)

NETGE	AR							
M4250-40G8F	-PoE+ 40x1G F	PoE+ 480W and	8xSFP Mana	ged Switch				
System	Switching	Routing	QoS	Security	Monitoring	Maintenan	ce	Hel
CoS DiffSer	v							
C	oS	CoS Configurati	on					
• Basic	~	• Global	All 🗸	Global T	rust Mode	trust dot1p	\sim	
CoS Configu	uration	 Interface 	0/1	 Interface 	Trust Mode	trust dot1p	~	
 Advanced 	~							

2) Verify that the Querier VLAN address is set to be the same as the IP address of the network switch (or, if in a stacked configuration, the primary network switch)

NETGEAR								
M4250-40G8F-PoE+ 40x10	G PoE+ 480W a	and 8xSFP Mana	ged Switch					
System Switching	Routing	QoS	Security	Monitoring	Mainte	enance	Help I	Index
VLAN Auto-VoIP STP	Multicast M	VR Address Tabl	e Ports LA	G 802.1AS	MRP L2	Loop Protecti	on	
Multicast	IGMP Snoopin	g Querier VLAN Co	nfiguration					
MFDB V IGMP Snooping		Querier Election Participate Mode	Querier VLAN Address	Operational State	Operational Version	Last Querier Address	Last Querier Version	Operational Max Response Time
Configuration		✓ Enable	192 168 0 1	Querier	2			120
Interface Configuration IGMP Snooping VLAN Configuration Multicast Router Configuration Multicast Router VLAN Configuration Querier Configuration Querier VLAN Configuration IGMP Snooping Group Table				•				
• MLD Snooping ~								



Login to the switch with the following steps:

Key digital

- 1. Plug an Ethernet cable into any of the ports of the switch
- 2. Plug the other end into the Ethernet port of your computer
- 3. Power on the Switch
- 4. Check to see that the IP address of the computer is within this network, 192.168.0.xxx ("xxx" ranges 1~254). For example, 192.168.0.100

Internet Protocol Version 4 (TCP/IPv4)	Properties ? X
General	
You can get IP settings assigned auton this capability. Otherwise, you need to for the appropriate IP settings.	natically if your network supports ask your network administrator
Obtain an IP address automatical	у
O Use the following IP address:	[]
IP address:	192.168.0.100
Subnet mask:	255.255.0.0
Default gateway:	· · ·
Obtain DNS server address autom	natically
Ouse the following DNS server add	resses:
Preferred DNS server:	
Alternate DNS server:	• • •
Validate settings upon exit	Advanced
	OK Cancel

5. Open the Web browser, and enter 192.168.0.239 (default IP address of Netgear GS). The login window appears as below:



- 6. Enter the password (default password is "password"). And then click 'OK" to login to the switch configuration window
- 7. To enable Jumbo Frame of the switch, go to Switching -> Ports -> Port Configuration. (IP922 requires Jumbo Frame(8K) for video/audio transmission via 1G-BaseT). Select the empty checkbox that is above the checkbox beside g1 Port in the table to select all the ports. All selected ports highlight to yellow color. Then enter "9216" in Maximum Frame Size field as shown below and press Apply button

LAG A	л											Go To Interfa	ice	Go
D Port	Description	Port Type	Admin Mode	Autonegotiation	Speed	Duplex Mode	Physical Status	Link Status	Link Trap	Frame Size (1522 to 10000)	Flow Control	MAC Address	PortList Bit Offset	ifindex
			~	~					· · ·		~			
] g1			Enable	Enable	Auto	Auto	1000 Mbps Full Duplex	Link Up	Enable	9999	Disable	94:18:65:39:14:52	1	1
] g2			Enable	Enable	Auto	Auto		Link Down	Enable	9999	Disable	94:18:65:39:14:52	2	2
] g3			Enable	Enable	Auto	Auto		Link Down	Enable	9999	Disable	94:18:65:39:14:52	3	3
] g4			Enable	Enable	Auto	Auto	1000 Mbps Full Duplex	Link Up	Enable	9999	Disable	94:18:65:39:14:52	4	4
] g5			Enable	Enable	Auto	Auto		Link Down	Enable	9999	Disable	94:18:65:39:14:52	5	5
] g6			Enable	Enable	Auto	Auto		Link Down	Enable	9999	Disable	94:18:65:39:14:52	6	6
] g7			Enable	Enable	Auto	Auto		Link Down	Enable	9999	Disable	94:18:65:39:14:52	7	7
] g8			Enable	Enable	Auto	Auto		Link Down	Enable	9999	Disable	94:18:65:39:14:52	8	8
_ g9			Enable	Enable	Auto	Auto	100 Mbps Full Duplex	Link Up	Enable	9999	Disable	94:18:65:39:14:52	9	9
_ g10			Enable	Enable	Auto	Auto	100 Mbps Full Duplex	Link Up	Enable	9999	Disable	94:18:65:39:14:52	10	10
_ g11			Enable	Enable	Auto	Auto		Link Down	Enable	9999	Disable	94:18:65:39:14:52	11	11
g12			Enable	Enable	Auto	Auto		Link Down	Enable	9999	Disable	94:18:65:39:14:52	12	12
g13			Enable	Enable	Auto	Auto	1000 Mbps Full Duplex	Link Up	Enable	9999	Disable	94:18:65:39:14:52	13	13
g14			Enable	Enable	Auto	Auto	1000 Mbps Full Duplex	Link Up	Enable	9999	Disable	94:18:65:39:14:52	14	14
g15			Enable	Enable	Auto	Auto	1000 Mbps Full Duplex	Link Up	Enable	9999	Disable	94:18:65:39:14:52	15	15
g16			Enable	Enable	Auto	Auto	1000 Mbps Full Duplex	Link Up	Enable	9999	Disable	94:18:65:39:14:52	16	16
g17			Enable	Enable	Auto	Auto	1000 Mbps Full Duplex	Link Up	Enable	9999	Disable	94:18:65:39:14:52	17	17
_ g18			Enable	Enable	Auto	Auto	1000 Mbps Full Duplex	Link Up	Enable	9999	Disable	94:18:65:39:14:52	18	18
g19			Enable	Enable	Auto	Auto		Link Down	Enable	9999	Disable	94:18:65:39:14:52	19	19
] g20			Enable	Enable	Auto	Auto		Link Down	Enable	9999	Disable	94:18:65:39:14:52	20	20
g21			Enable	Enable	Auto	Auto		Link Down	Enable	9999	Disable	94:18:65:39:14:52	21	21
] g22			Enable	Enable	Auto	Auto		Link Down	Enable	9999	Disable	94:18:65:39:14:52	22	22
] g23			Enable	Enable	Auto	Auto		Link Down	Enable	9999	Disable	94:18:65:39:14:52	23	23
g24			Enable	Enable	Auto	Auto		Link Down	Enable	9999	Disable	94:18:65:39:14:52	24	24
7 a25			Enable	Enable	Auto	Auto		Link Down	Enable	9999	Disable	94:18:65:39:14:52	25	25

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 To enable IGMP Snooping of the switch, go to Switching -> Multicast -> IGMP Snooping -> IGMP Snooping Configuration. (IP922 requires IGMP Snooping for multicasting video/audio transmission via 1G-BaseT), Enable IGMP settings as shown below and press Apply button

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Oyatem Onitem	ng Routing	QoS	Security	Monitoring	Maintenance	Help	Index
orts LAG VLAN	Auto-VolP STP N	lulticast MVR	Address Table	L2 Loop Prot	ection		
Multicast	IGMP Snooping C	onfiguration					
/FDB \uto-Video GMP Snooping	 IGMP Snooping Validate IGMP IP 	Status ' header	 ○ Disable ● E ○ Disable ● E 	nable nable			
 IGMP Snooping Configuration 	IGMP Statistics						
IGMP Snooping Interface Configuration IGMP Snooping Table IGMP Snooping VLAN Configuration Multicast Router	Multicast Control	Frame Count ed for IGMP Snoo	29 ping g1	9610 I - g52			
Configuration Multicast Router VLAN Configuration	1	i tor iGMP Shoopi	ng				
GMP Snooping Querier	~						
ALD Snooping	VI AN IDs Enabled	for IGMP Snooni	ng Querier				

 Go to Switching -> Multicast -> IGMP Snooping -> IGMP Snooping Interface Configuration. Select the empty checkbox that is above the checkbox beside g1 Port in the table to select all the ports. All selected ports highlight to yellow color. Enable Admin Mode and Fast Leave Admin Mode as shown below and press Apply button

System Switch	ing	ng Routing		QoS Security		Monitoring Ma		intenance	
Ports LAG VLAN	Aut	o-Voll	P STP	Multicast N	IVR Address	Table L2 Loop	Protection		
Multicast		IGM	^o Snooping	Interface Cont	iguration				
MFDB	*	1 L	AG All			Go To Interfac	ce	Go	
Auto-Video IGMP Snooping	* ~		Interface	Admin Mode	Host Timeout	Max Response Time	MRouter Timeout	Fast Leave Mode	
 IGMP Snooping Configuration 				~	· · · · · ·	1	· · · · ·	-	
+IGMP Snooping			g1	Enable	260	10	0	Enable	
Interface Configuration			g2	Enable	260	10	0	Enable	
 IGMP Snooping Table 			g3	Enable	260	10	0	Enable	
ICND Consider MLAN			g4	Enable	260	10	0	Enable	
Configuration			g5	Enable	260	10	0	Enable	
- Multicast Bouter			g6	Enable	260	10	0	Enable	
Configuration			g7	Enable	260	10	0	Enable	
Multicast Pouter VI AN			g8	Enable	260	10	0	Enable	
Configuration			g9	Enable	260	10	0	Enable	
IGMP Spooning Querier			g10	Enable	260	10	0	Enable	
romin onooping addition			g11	Enable	260	10	0	Enable	
MLD Snooping	×		g12	Enable	260	10	0	Enable	
			g13	Enable	260	10	0	Enable	
			g14	Enable	260	10	0	Enable	
			-15	Enable	200	10	0	Enchia	

 Go to Switching -> Multicast -> IGMP Snooping -> IGMP Snooping VLAN Configuration. Add VLAN ID=1, Fast Leave Admin Mode=Enable and Query Mode=Enable as shown below and press Add button. (Note: the empty fields are populated automatically to default values)

NETGEA	R'										
NETGEAR 48-Por	rt Gigabi	t PoE+	Smart M	anaged Pro Swi	tch with 4 S	FP Ports (GS	752TPv2)				
System	Switching		Routing	QoS	Security	Monitoring	g Maintenance	Help	Index		
Ports LAG VI	LAN Au	to-VolF	P STP	Multicast MVR	Address Ta	able L2 Loop	Protection				
Multicast		IGMP	Snooping	VLAN Configuration	in						
MFDB Auto-Video	ž		VLAN ID	Admin Mode	Fast Leave Mode	Host Timeout	Maximum Response Time	MRouter Timeout	Report Suppression Mode	Query Mode	Query Interval (1 to 1800) secs
IGMP Snooping	~			~	~				~	~	
IGMP Snooping			1	Disable	Disable	260	10	0	Disable	Disable	60
Configuration			4088	Disable	Disable	260	10	0	Disable	Disable	60
IGMP Snooping Interface Config	uration		4005	Disable	Disable	200	10	0	Disable	Disable	00
IGMP Snooping Configuration	VLAN										
 Multicast Router Configuration 											
 Multicast Router Configuration 	VLAN										
IGMP Snooping Q	uerier 🗸										
MLD Snooping	*										

11. Go to Switching -> Multicast > IGMP Snooping Querier -> Querier Configuration. Enable Querier Admin Mode as shown below and press Apply button

NETGEAR'

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NETGEAR 48-Port Gigabit PoE+ Smart Managed Pro Switch with 4 SFP Ports (GS752TPv2)

System	Swite	hing	Routing	QoS	() ()	Security	Monitoring	Maintenance	Help	Index	
Ports LAG	VLAN	Auto-V	oIP STP	Multicast	MVR	Address Tab	le L2 Loop Pi	rotection			
Multi • MFDB • Auto-Video • IGMP Snoopi • IGMP Snoopi • Querier VLJ • Querier VLJ • MLD Snoopin	icast ing Querier nfiguration AN on AN Status	× () × () × () × () () ()	erier Configu Querier Admir Snooping Que GMP Version Query Interva	n Mode erier Address I (secs) y Interval (se	cs)	O Disab 192.215. 2 60 125	le Enable] (1 to 2)] (1 to 1800)] (60 to 300)			
12 Eina	lly an t		intonona			boot En	bla chackh	ov for dovico r	hoot as a	hown hol	ow and proce

12. Finally, go to Maintenance -> Device Reboot. Enable checkbox for device reboot as shown below and press Apply button. It takes approximately 2 minutes to power cycle the switch and an additional 2 min for IP922 to start showing video.

NETGEAR[.]

NETGE	TGEAR 48-Port Gigabit PoE+ Smart Managed Pro Switch with 4 SFP Ports (GS752TPv2)									
Syste	em	Switching	Routing	QoS	Security	Monitoring	Maintenance	Help	Index	
Reset	Export	Update	File Management	Troublesho	oting					
	Reset		Device Reboot							
Device	Reboot		Select this check	box and click	the Apply buttor	n to reboot.				
• Default	Settings									



Niveo NGSME24TH-AV Network Setup Guide for KD-IP822, KD-IP922, KD-IP1022, KD-IP1080

 Set up the computer to connect to the switch. The best method is to set a static IP address for the computer's ethernet adapter and directly wire into the switch. The Default IP address of this switch is 192.168.2.1

nternet Protocol Version 4 (TCP/IPv4) Properties X
General	
You can get IP settings assigned autor this capability. Otherwise, you need to for the appropriate IP settings.	matically if your network supports o ask your network administrator
Obtain an IP address automatica	lly
Use the following IP address:	
IP address:	192 . 168 . 2 . 254
Subnet mask:	255.255.255.0
Default gateway:	192.168.0.172
Obtain DNS server address autor	matically
• Use the following DNS server add	dresses:
Preferred DNS server:	192.168.0.24
Alternate DNS server:	
Ualidate settings upon exit	Advanced
	OK Cancel

- 2. Once wired in, connect to the network switch via web browser. When prompted, log in with the default credentials.
 - a. The username and password are both "admin".

Sign in	
http://192.16	58.2.1
Your connect	tion to this site is not private
Username	admin
Password	
	Sign in Cancel

- 3. After connecting to the switch, it is recommended to reset it to factory defaults.
 - a. The path for this is **Maintenance** -> **Factory Defaults**.

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b. Note that resetting the switch to Factory Defaults does not change the IP settings of the switch.

 Port Group Filtering MLD Snooping 	Î	Factory Defaults	
► LLDP ■ PoE			
 MAC Table 			Are you sure you want to reset the configuration to
► VLANs			Factory Defaults?
Private VLANs			
VCL			
VOICE VLAN		Yes No	
 Mirroring 			
• UPnP			
 sFlow 			
 Monitor 			
► System			
Ports			
> Security			
LACP			
 Snanning Tree 			
► MVR			
▶ IPMC			
► LLDP			
PoE			
 MAC Table MAC Table 			
VLANS			
■ sFlow			
Diagnostics			
 Maintenance 			
Restart Device			
 Factory Defaults 			
Software			
Conliguration	*		

- 4. After setting factory defaults, adjust the switch to use the desired subnet. In our case we use the IP address **192.168.1.251** as this fits the default subnet of the KD-IP922 system. Ensure the DHCP client is disabled as well. Set the Router IR address to that of the router in the network.
 - a. The path is: Configuration -> System -> IP

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b. After making the adjustment, the switch will automatically move to the new IP address. The computer may lose connection to the switch at this time. Adjusting the static IP to be in the new subnet will allow for connection to be reestablished on the new IP address.

✓ Configuration ✓ System	IP Configura	tion	
 Information IP 		Configured	Current
 IPv6 	DHCP Client		Renew
• NTP • Time	IP Address	192.168.1.251	192.168.2.1
■ Log	IP Mask	255.255.255.0	255.255.255.0
 Power Reduction Ports 	IP Router	192.168.1.1	0.0.0.0
► Security	VLAN ID	1	1
Aggregation	DNS Server	0.0.0.0	0.0.0.0
 Loop Protection Spanning Tree MVR IPMC LLDP PoE MAC Table 	IP DNS Prox DNS Proxy Save Reset	y Configuration	

- 5. By default, Jumbo frames are enabled on this network switch. Verify that the maximum frame size is 9600 (the maximum value)
 - a. The path is: **Configuration** -> **Ports**

Configuration System	•	Port C	onfig	uration							
Power Reduction		Deut	Link		Speed		Flow Control		Maximum	Excessive	Power
POILS		Pon	LINK	Current	Configured	Current Rx	Current Tx	Configured	Frame Size	Collision Mode	Control
 Aggregation 		*			< ▼				9600	<> ▼	<> ▼
 Loop Protection 		1		1Gfdx	Auto 🔻	×	×		9600	Discard 🔻	Disabled •
 Spanning Tree MVP 		2		1Gfdx	Auto 🔻	×	X		9600	Discard ▼	Disabled •
▶ IPMC		3		1Gfdx	Auto 🔻	×	×		9600	Discard ▼	Disabled •
► LLDP		4		1Gfdx	Auto 🔻	×	×		9600	Discard 🔻	Disabled •
POE MAC Table		5	۲	1Gfdx	Auto 🔻	×	×		9600	Discard ▼	Disabled •

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6. Enable IGMP Snooping. Check "Snooping Enabled" and verify that "Fast Leave" is also enabled. Uncheck "Unregister IPMCv4 Flooding enabled"

a. The path is: Configuration -> IPMC -> IGMP -> Basic Configuration

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Configuration System	*	IGMP	Snooping Co	onfiguration	_	
Power Reduction				Global Cor f	iguration	
 Forts Security 		Snoopir	ng Enabled			
 Aggregation 		Unregis	tered IPMCv4 F	looding Enabled		
 Loop Protection 		IGMP S	SM Range		232.0 0.0	/ 8
Spanning Tree		Leave F	Proxy Enabled			
• MVR		Proxy E	nabled			
		Port R	elated Confi	guration		
Conliguration ■ VLAN		Port	Router Port	Fast Leave	Throttling	
Configuration		*		 Image: A set of the set of the	<> ▼	
 Port Group Filtering 		1		s	unlimited <	
MLD Snooping		2			unlimited T	
► LLDP		3		1	unlimited <	
POE MAC Table		4			unlimited v	
► VLANs		5			unlimited T	
Private VLANs		6			unlimited v	
 VCL Voice VLAN 		7			unlimited v]

- 7. Create an IGMP VLAN. The ID should be set to 1. Force IGMPV2 compatibility for this VLAN. Ensure the configuration is as below:
 - a. The path is: Configuration -> IPMC -> IGMP -> VLAN Configuration

 ✓ Configuration ▲ System 	IGMP Sr	looping VI	LAN Configuration							
 Power Reduction Ports 	Start from	VLAN 1	with 20 entries	s per page.						
 Security Aggregation 	Delete	VLAN ID	Snooping Enabled	IGMP Querier	Compatibility	RV	QI (sec)	QRI (0.1 sec)	LLQI (0.1 sec)	URI (sec)
Loop Protection Spanning Tree		1		 Image: A set of the set of the	Forced IGMPv2 V	2	125	100	10	1
 MVR 	Add New	IGMP VLAN				•				
✓ IPMC										
Basic Configuration	Save	Reset								
■ VLAN										
Configuration Port Group										
Filtering										

- 8. Reboot the network switch and verify that the settings are correct. The switch is now ready for the KD-IP922 system.
 - a. There is no need to save the running configuration of this network switch. The settings will persist on system reboot.



Login to the switch with the following steps:

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- 1. Plug an Ethernet cable into any of the ports of the switch
- 2. Plug the other end into the Ethernet port of your computer
- 3. Power on the Switch
- 4. Check to see that the IP address of the computer is within this network, 192.168.1.xxx ("xxx" ranges 1~254). For example, 192.168.1.154

Internet Protocol Version 4 (TCP/IPv4	4) Properties X
General	
You can get IP settings assigned autory this capability. Otherwise, you need to for the appropriate IP settings.	omatically if your network supports to ask your network administrator
Obtain an IP address automatica	ally
• Use the following IP address:	
IP address:	192.168.1.154
Subnet mask:	255.255.255.0
Default gateway:	
Obtain DNS server address auto	omatically
• Use the following DNS server ad	dresses:
Preferred DNS server:	
Alternate DNS server:	
Validate settings upon exit	Advanced
	OK Cancel

5. Open the Web browser, and enter 192.168.1.205 (default IP address of Pakedge S3L). Then the login window appears as below.

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	Welcome		×	+						-		×
¢	→ Cª	۵	i 192.168.1.	205/www/login.html					… ◙ ☆	111	o	≡
÷	→ C	ŵ	① 192.168.1.	205/www/login.html	D d User Passw	akeds	ge ≽		··· ♥ ☆			Ξ
					Copyright	(c) 2017 Pakedge De All rights reser	evice & Software, Inc. rved.					

6. Enter the User ID (default user id is "pakedge") and password (default password is "pakedges"). And then click 'OK" to login to the switch configuration window. Make sure to set appropriate IP address and netmask to make the switch to be in same network as the Key Digital Devices you are going to be using.

S3L-24P	×	+							-		\times
(←) → ⊂ @	i 192.168.1.2	205/www/main.html						♥ ☆	III\	o	≡
▶ S3L-24P			DASHBOARD	MAINTENANCE	ADMINISTRATION	CONFIGURE	MONITOR	DIAGNOSTICS	USER INFO	LOGOUT	^
Welcome to Smart Wiza	rd										
The wizard will guide yo	ou to do basic conf	figurations on 3 steps for the IP In	nformation, Use	er Name setting, and	SNMP. If you are n	ot changing the	settings, click	on "Exit" to go b	ack to the m	ain page.	
		1	(2		-3					
		The wizard will help to co IP address, Netmask, and	mplete setting Gateway.	gs for							
		Static	(О рнср							
		IP Addres	s 1	92.168.1.205							
		Netmask	-	16 (255.255.0.0)	~						
		Gateway	1	92.168.1.99							
□ Ignore the wizard r	next time	Exit	Back Nex								
		Copyrigh	it (c) 2017 Pake	dge Device & Softw	are, Inc. All rights res	erved.					

7. To enable Jumbo Frame of the switch, go to Administration -> Management -> Port. (IP922 requires Jumbo Frame(8K) for video/audio transmission via 1G-BaseT). Make sure under Port Settings, Port field is set to All. Then enter "9216" in Maximum Receive Frame Size field as shown below and press Apply button. After applying check that the settings are updated in the table below.

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53L-24P	× +																· ^
€ → פ ŵ	③ 192.168.1.205/www/main.html													… ◙ ☆	1	۰ 🗢	▣ ≡
	S3L-24P																
					DASHBOA	RD MAINTE	ENANCE AD	OMINISTRATION	CONFIGURE	MONITOR	R DIAGNOSTI	CS USER INFO	LOGOUT				
	ADMINISTRATION	Management Port POI	T SETTINGS														
		Post Sattings															
	Port Settings	Port	All		~												
	Port Status				_												
	Green-Ethernet	State	En		abled												
	DDM Settings	Auto-negotiation	 Ena 	abled O Disi	abled				Speed	☑ 10M	I 🗹 100M 🗹 10	00M					
		Flow Control	Dirah	lad	~				Dupley				Apply				
		now control	Disab	ieu					Duplex	Ca Hair			Арру				
					_												
		Maximum Receive Fram (1536~9216 bytes)	e Size 9216		۵								Apply				
		Description											Apply				
						· · · [1	1									
		PORT	STATE	SPEED	DUPLEX	FLOW	MAXIMUM RECEIVE	DESCRIPTION					i i				
						CONTROL	FRAME SIZE										
		eth1/1	Enabled	AUTO	AUTO	None	9216										
		eth1/2	Enabled	AUTO	AUTO	None	9216										
		eth1/3	Enabled	AUTO	AUTO	None	9216										
		eth1/5	Enabled	AUTO	AUTO	None	9216										
		eth1/6	Enabled	AUTO	AUTO	None	9216										
		eth1/7	Enabled	AUTO	AUTO	None	9216										
		eth1/8	Enabled	AUTO	AUTO	None	9216						~				

8. To enable IGMP Snooping of the switch, go to Configure -> Application -> IGMP Snooping. (IP922 requires IGMP Snooping for multicasting video/audio transmission via 1G-BaseT), Enable IGMP settings as shown below and press Apply button. You should see a new entry in the table below.

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S3L-24P	× +	- 🗆 ×
← → ♂ ☆	① / 192.168.1.205/www/main.html	… ♥ ☆
S3L-24P	DASHBOARD MAINTENANCE ADMINISTRATIC	on configure monitor diagnostics user info logout
CONFIGURE Application	IGMP Snooping GLOBAL SETTING	
Global Setting Static Group Settings	Global Setting IGMP Snooping Proxy	Apply
Group Information	VLAN ID (1-4094) 1 Status	Enabled Disabled
Mrouter	IGMP Snooping Querier Enabled	sion
Mrouter Information	Suppress time (0-300 sec) 10 Immediate Leave	e 🖲 Enabled 🔿 Disabled Apply
	Total Entries: 0 IGMP SNOOPING VLAN ID STATUS ULERIER	SUPPRESS TIME IMMEDIATE LEAVE

9. Go to Configure -> Application -> IGMP. Enter the settings as shown in the picture below and press Apply button. You should see the updated settings in the entries table below.

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	S3L-24P		×	+							-		\times
¢	\rightarrow C ⁱ	۵	i 🎤 192.16	8.1.205/www/main.ht	ml				•••	☑ ☆	lii\	۵	≡
	S3L-2	24P			DASHBOA	RD MAINTENANCE	ADMINISTRATION	CONFIGURE N		NOSTICS	USER INFO	LOGOUT	^
CON	IFIGURE	Applicati	on IGMP	IGMP SETTINGS									
IGN			IGMP Settin	igs									
IGN	/IP SSM Set	tings	VLAN ID (1-	4094)	1								
IGN	4P Group In	formation	Status		•	Enabled O Disabled		1					
IGN	ne oroup n	Inormation	Access Gro	h	0	Enabled Disabled							
			Last Memb	er Query Interval (1000-	-25000 msec) 100)							
			Query Inter	val (1-31744 sec)	125								
			Query Max	Response Time (1-25	sec) 10								
			Robustness	Variable (1-7)	2								
			Version		0	V1 • V2 · V3						Apply	
			version		0	0 12 0 13						Арріу	
			Total Entrie	5: 1									
			INTERFACE	ACCESS GROUP	VERSION	QUERY INTERVAL(SEC)	QUERY MAX RESPONSE TIME	LAST MEMBER QUERY INTERV	ROBUSTNE AL VARIABLE	SS			
			VLAN1		V2	125	10	1000	2		Detail		

	S3L-24P	b	×	- +	-									-	C	כ	×
$\langle \boldsymbol{\epsilon} \rangle$	→ G	₿ @	(i) 🎤 192.	168.1.	.205/w	ww/main	.html						🛡 :	☆ III\	٩	Ē	≡
	S3L	-24P						DASHBOARD	MAINTENANCE	ADMINISTRATION	CONFIGURE	MONITOR	DIAGNOSTIC	S USER INFO	D LOG	GOUT	^
MA	NTENAN	ICE SAVE															
Sa	ve																
P	ess the i	button to sav	e the system se	ettings	s to NV	-KAM.									Sav	ve	



- 10. Go to Maintenance -> Save. Click on Save button.
- 11. Go to Maintenance -> Reboot. Click on Reboot button. It takes approximately 30 seconds for the switch to reboot and an additional 30 sec for IP922 to start showing video.

S3L-24P ×	+							-		×
← → ♂ ☆ ① / 192.168	3.1.205/www/main.html						… 🛡 🕁	111\	b	≡
▶ S3L-24P		DASHBOARD	MAINTENANCE	ADMINISTRATION	CONFIGURE	MONITOR	DIAGNOSTICS	USER INFO	LOGOU	T ^
Patrat										
Save log message before reboot.	Yes 🖲 No									
Press the button to reboot the system.									Reboot	



1. Connect to the network switch

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- a. Plug an Ethernet cable into any of the ports of the switch
- b. Plug the other end into the Ethernet port of your computer
- c. Power on the Switch
- d. Configure the PC with static IP address of 192.168.1.10 and the subnet mask of 255.255.255.0 to be within range of Pakedge's default settings (IP address 192.168.1.205 subnet mask 255.255.255.0). Default Getaway and DNS can be left blank

General	
You can get IP settings assigned aut this capability. Otherwise, you need for the appropriate IP settings.	omatically if your network suppor to ask your network administrato
Obtain an IP address automatic	ally
Ouse the following IP address: —	
IP address:	192.168.1.10
Subnet mask:	255.255.255.0
Default gateway:	
Obtain DNS server address auto	omatically
Ouse the following DNS server ad	ddresses:
Preferred DNS server:	
Alternate DNS server:	
Validate settings upon exit	Advanced.

2. Open a web browser, and enter 192.168.1.205 (default IP address of Pakedge) to enter the login window

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SX-8P pakedgedevice&software inc pakedge
Login

4. Go to **System Settings** and change the Subnet Mask to 255.255.0.0. Press the **apply** button.

Name	SX-8P	DHCP	Disable	•
Management VLAN	1	IP Address	192.168.1.205	
MAC Age	300	Subnet Mask	255.255.0.0	
Login Timeout(min)	10	Gateway	192.168.1.99	

5. Go to **Port** \rightarrow **Port Settings** \rightarrow **MTU** and change MTY to 10,000 (max)

System	Ports	VLAN	Traffic	Management
Port Settings				
Common Configuration	Port Statistics Flow Control E	roadcast Storm Link Aggreg	ation Mirror MTU EEE	
		Port MTU Setup		
	MTU	10000 Byte (1518 - 10000	default 9000)	
		Apply Clear		
	_	нрру ска		

- 6. Go to **TRAFIC** → **IGMP** → **IGMP** Snooping and Enable **IGMP** Status, and **Report** Suppression. Press the Apply button.
- 7. Press the button with red pencil icon

Key digital",

		2		_	IGMP	Global Setup 3				
		ICMP	Status En	able V			nort Supproceion	Enable V		
		IGMP	Status - En	able • V	ersion	IGIVIPV2 • Re	port suppression -	chable *		
					Apply	Clear				
ID VLA	N Ope	erational Status	Router Port Auto Learn	4 Query Robustness	Query Interval	Query Max Response Interval	Last Member Query Counter	Last Member Query Interval	Immediate Leave	4
ID VLA ID	N Ope	erational Status	Router Port Auto Learn	4 Query Robustness	Query Interval	Query Max Response Interval	Last Member Query Counter	Last Member Query Interval	Immediate Leave	4

8. Enable State and Immediate Leave

Key digital'

	Apply	Clear	
	IGMP \	/LAN Setup	_
VLAN ID	1	State -	Enable 🔻
Router Port Auto Learn	Enable 🔻	Immediate leave	Enable 🔻
Query Robustness	2	Query Interval	125
Query Max Response Interval	10		

9. Go to **TRAFIC** \rightarrow **IPMC** \rightarrow **IGMP Querier** and press the button with red pencil icon

nooping IGMP Querier	GMP Stati	stics Multica	st Property Multi	cast Group	Multicast Router Port	
	ID VLAN I	D Status	Operational Status	s Versio	n Querier Address	
	1 1	Enable	Enable	IGMPv	2 192.168.1.205	~
						les a

10. Enable State and choose IGMPv2 version. Click Apply button

) IGMP					
MP Snooping	IGMP Querier	IGMP Statistics	Multicast Proper	y Multicast Group	Multicast Router Port
			Ec	it Querier Setup	
		VLAN ID	1 Sta	e Enable 🔻	Version IGMPv2 🔻

10. Go to **TRAFIC IPMC MULTICAST PORPERTY** and set Unknown Multicast Action to **Drop**. Press **Apply**

Key digibal

Shooping toni Quale Toni		incust croup maneuse	Nouter r on
	Unknown Multicast Action	Drop]
	Multicast For	rward Method	
	IPv4	DMAC-VID •	
	Apply	Clear	



Signamax SC30020 Network Setup Guide for KD-IP822, KD-IP922, KD-IP1022, KD-IP1080

 Connect your PC directly to the network switch. Your PC will need to be set to a static IP address that is within the subnet of the default IP address of the switch. This series of switches typically use 192.168.2.1 as their default IP address

Internet Protocol Version 4 (TCP/IPv4)	Properties ? X
General	
You can get IP settings assigned autor this capability. Otherwise, you need to for the appropriate IP settings.	matically if your network supports ask your network administrator
Obtain an IP address automatical	ly
Ouse the following IP address:	
IP address:	192.168.2.2
Subnet mask:	255.255.0.0
Default gateway:	
Obtain DNS server address autor	natically
Ose the following DNS server add	resses:
Preferred DNS server:	
Alternate DNS server:	• • •
Validate settings upon exit	Advanced
	OK Cancel

2. Log into the switch via web browser using the IP address. There will be a prompt to enter credentials. By default, both username and password are set to "admin"

SIGNAMAX
Sername admin
Password
Login

3. Navigate to System -> Capability, and enable Jumbo Frames as depicted in the below image

Key digital',

	System > Capability		820
 Dashboard System General Switch Capability File 	General Capability Jumbo Frame Bridge Extension	Carabled	
• Time	Extended Multicast Filtering Services	No	
Console	Traffic Classes	Enabled	
 ■ CPU Utilization 	Static Entry Individual Port	Yes	
CPU Guard	VLAN Version Number	2	
 Memory Status Reset 	VLAN Learning	NL N-	
 Interface VLAN 	Local VLAN Capable Configurable PVID Tagging Max Supported VLAN Numbers	No Yes 4094	
 MAC Address Spanning Tree Taggia 	Max Supported VLAN ID	4094	
Administration Tools		Apply Revert	

4. Navigate to Multicast -> IGMP Snooping -> General to access basic IGMP settings. On this page, enable IGMP snooping and Querier, as depicted in the below image.

 intenace 	manager rom encoping conorai		
> VLAN > MAC Address	IGMP Snooping Status	 ⊘ Enabled	
 MAC Address Spanning Tree Traffic Security Administration Tools IP IP Service Multicast 	Proxy Reporting Status Proxy Reporting Status TCN Flood TCN Query Solicit Router Alert Option Unregistered Data Flooding Version Exclusive	Trabled Tr	
GGMP Snooping General Multicast Roul IGMP Member IdMP Member Interface Forwarding Er Filter Statistics MLD Snooping Routing Protocol TTT Filter Go C Go	IGMP Unsolicited Report Interval (1-65535) Router Port Expire Time (1-65535) IGMP Snooping Version (1-3) Querier Status	400 seconds 300 seconds 2 V Enabled Apply Revert	

5. Navigate to Multicast -> IGMP Snooping -> Interface. From this page, use the dropdown to select "Configure VLAN". Set VLAN 1 up as depicted below.

Key digital

Intenace	พนแนะ		- ənooping	< men	ace								ا ت ت
> VLAN	Action	: Show V	LAN Informatio	on 👻									
> Spanning Tree	IGMP Snooping VLAN List Total: 1												
 Traffic Security Administration Tools 	VLAN	IGMP Snooping Status	Immediate Leave Status	Query Interval	Query Response Interval	Last Member Query Interval	Last Member Query Count	Proxy (Query) Address	Proxy Reporting	Multicast Router Discovery	General Query Suppression	Version Exclusive	Interface Version
 IP IP Service ✓ Multicast ✓ IGMP Snooping = 	1	Enabled	Disabled	125	100	10	2	0.0.0.0	Using global status (Disabled)	Disabled	Disabled	Using global status (Disabled)	Using global version (2)
 Multicast Roul IGMP Member Interface Forwarding Er Filter Statistics MLD Snooping Routing Protocol - 													
Action: Configure	VLAN	•											
VLAN				1 •	-								
IGMP Snooping Sta	atus			V Ei	nabled								
Version Exclusive				Usir	ng Global St	atus 👻							
Immediate Leave	Status			E	nabled By-	Group 🚽	r						
Multicast Router D	iscover	у		E	nabled								
General Query Sup	opressi	on		E	nabled								
Proxy Reporting				Usir	ng Global St	atus 👻							
Interface Version				Usir	ng Global Ve	ersion 👻							
Query Interval (2-3	1744)			125		S	econds						
Query Response li	nterval	(10-31740))	100		(1	1/10 secor	ids, multip	le of 10)				
Last Member Query Interval (1-31744)		10		(1	1/10 secor	ids, multipl	le of 10)						
Last Member Que	ry Coun	nt (1-255)		2									
Proxy (Query) Add	ress			0.0.0	0.0								
					A	pply	Revert]					

6. Navigate to IP -> General -> Routing Interface. From this page, use the dropdown to select "Add address". Add a new static, primary IP address for VLAN 1 from this screen. For best performance, use an IP in the same subnet as your system.

Key digital'

	IP > General >	Routing Interface		E ? 0
Dashboard Svotom	Action			
System	Action	Audress V		
> VLAN	VLAN	1 🗸		
MAC Address	IP Address Mo	de User Specified		
Spanning Tree				
Traffic	Routing Interfa	ce IP List Total: 1		
Security		IP Address Type	IP Address	Subnet Mask
Administration		Primary	192.168.1.251	255.255.0.0
> Tools				
▼ IP ▼ Conoral			Delete Revert	
Routing Interface				
Routing				
IPv6 Configuration				
IP Service				
> Multicast				
Routing Protocol				
	1			
Action: Add Add	ress 👻			
VLAN		1 🗸		
IP Address Mode		User Specified 👻		
IP Address Type		Primary 🗸		
IP Address		192.168.1.251		
Subnet Mask		255.255.0.0		
	Click this button t	o resend DHCP client request		
Restart Drice	J oliok thio ballon			
		Apply	Revert	

7. To save all settings, click on the floppy disk button on the top right corner of the control panel, then reboot. After rebooting, the switch will be ready to manage an IP system

Key digibal',



IGMP Setup Guide: Titan Networx 1080p Systems (KD-IP1080, KD-IP120)

- 1. **IMPORTANT**: Disconnect all the DHCP devices like routers, servers from the Linksys network switch.
- 2. Locate a pinhole "RESET" button at the front panel left bottom corner of your Titan Networx network switch. Using a paper clip press and hold a reset button for more than 10 seconds and then release. Wait while the device is restarted and ready to use (about 5min).
- 3. **IMPORTANT**: At this point all the displays should be displaying distorted randomly flashing video images.
- 4. Connect your PC to the Titan Networx network switch directly using a network cable.

Key digibal'

- If you have not done yet, configure your PC's IP address to the same range as the switch (default 192.168.1.xxx).
- Enter the switch's IP address in your browser and press ENTER (check the user manual for a default IP address – usually, it is: 192.168.1.30).
- 7. Enter user name and password (check the user manual for a default user name and password; it is usually "admin" for both). Then click Log In.

	8
TNS5-2400P × TNS5-2400P ×	_
← → C 192.168.1.251	≡
III Apps G Google 🗋 192.168.1.250/cs525da 🗋 TNS5-2400P	»
	_
TITANNE/WORX TNSS-2400P	
User Name: admin	
Password:	
Login	
	_

8. Navigate to Administration -> System Configuration. Select IP Address box. IP address can be changed by the administrator depending on the network configuration. If you are using multiple network switches it is recommended to set first one to 192.168.1.251, second to 192.168.1.252, and so on (we will change an IP address to 192.168.1.251). Set Subnet Mask to 255.255.255.0, set Gateway to 192.168.1.1 (in this case), make sure that Management VLAN is set to "1", DHCP is set to "Disable" and click OK. Page will refresh with the new IP address. If it is timed out than log in again using the new IP address.

9. Make sure your screen looks exactly like pictured below.

Key digibal'



10. Click Save Configurations on the left bottom corner. New screen will appear. Click Save under Save Current Settings, then OK and OK again.



11. Navigate to Device Management-> IGSP, Select IGMP Snooping tab. Set IGSP Status to Enable, set Unknown Multicast Drop to Enable, set Multicast VLAN Status to Enable, set Multicast VLAN ID to "1", and leave all other settings as indicated below. Click OK, and OK again.

Key djojbaľ,

TN55-2400P	<			
← → C 🗋 192.168.1	251			= 😒 ۳
🗰 Apps 🔓 Google 🗋 192.168	.1.250/cs525da 🗋 TNSS-2400P 🗎	TNSS-2400P		
	ETWORX	http://w	ww.TitanNetworx.com	
Administration	IGMP Snooping Fast Leav	re	Login As: admin	Access Mode: admin
Auminisu duon	ICSP			
Port Management	IGSF			
	IGSP Status	Enable 🔹]	Help
VLAN Management	Routing Port Age	105	(1~1000s)	ок
PoE Management	Group-general Query Max Response Time	10	(1~25s)	
Time Range Management	Group-specific Query Max Response Time	2	(1~5s)	
	Host Port Age	260	(200~1000s)	
Device Management	Unknown Multicast Drop	Enable 🔹]	
MAC	Multicast VLAN Status	Enable 🔹		
STP	Multine et Multine	1	(1~4094, the corresponding VLAN will	
LLDP	MUNICAST VLAN ID	only take effect when it alread	ly exists)	
IGSP	*			



12. Select Fast Leave tab. Click Config button.

TN55-2400P	<				
← → C 192.168.1	251				۵ 😒 ۳
🕂 Apps Ġ Google 🗋 192.168	.1.250/cs525da 🗋 TN55-2400P	TN55-2400P			
TITAN	ETWORX	h	ttp://www.TitanNetworx	com	
Administration	IGMP Snooping Fast L	eave		Login As: admi r	n Access Mode: admir
	Port	Fast Leave	Port	Fast Leave	
Port Management	1	Enable	13	Enable	Help
VLAN Management	2	Enable	14	Enable	
	3	Enable	15	Enable	Config
PoE Management	4	Enable	16	Enable	
Timo Pango Managomont	5	Enable	17	Enable	
Time Kange Management	6	Enable	18	Enable	
Device Management	7	Enable	19	Enable	
MAC	8	Enable	20	Enable	
STP	9	Enable	21	Enable	
LLDP	10	Enable	22	Enable	
▶ IGSP	11	Enable	23	Enable	
SNMP	• 12	Enable	24	Enable	-

13. Set Fast Leave to Enable, click Select All. Click OK, and OK again.

TN55-2400P						
← → C 🗋 192.168.1	.251					۳ 👷 🗉
🗰 Apps Ġ Google 🗋 192.168	1.250/cs525da 🗋 TN55-2400F	D TN55-2400P				
TITAN Extremely	ETWORX					
	IGMP Snooping Fast	Leave			Login As: admin	Access Mode: admin
Administration						
Port Management	Port Setup					
	Fast Leave	Enable	•			Help
VLAN Management	Part Select					ОК
PoE Management						
Time Range Management	2468 1357	10 12 14 16 9 11 13 15	18 20 22 24 17 19 21 23	21 22 23 24		Back
МАС				Select A	I Unselect	
STP						
LLDP						
SNMP	•					
SHIMP						



14. Make sure all the ports are set to **Enable**.

TN55-2400P	× 💶				
← → C 🗋 192.168.1	.251				۲ 🚖 ۲
🗰 Apps G Google 🗋 192.168	.1.250/cs525da 🗋 TN55-2400P	TN55-2400P			
	ETWORX	h	ttp://www.TitanNetworx.	com	
Administration	IGMP Snooping Fast L	eave		Login As: adm	in Access Mode: admi
	Port	Fast Leave	Port	Fast Leave	
Port Management	1	Enable	13	Enable	Help
VLAN Management	2	Enable	14	Enable	
	3	Enable	15	Enable	Config
PoE Management	4	Enable	16	Enable	
Time Range Management	5	Enable	17	Enable	
Time range management	6	Enable	18	Enable	
Device Management	7	Enable	19	Enable	
MAC	8	Enable	20	Enable	
STP	9	Enable	21	Enable	
LLDP	10	Enable	22	Enable	
IGSP	11	Enable	23	Enable	
SNMP	- 12	Enable	24	Enable	

15. Click Save Configurations on the left bottom corner. New screen will appear. Click Save under Save Current Settings, than OK and OK again.

			le le	A 🗕 🗆 🗙
TN55-2400P	× TN55-2400P	×		
← → C 🗋 192.168.	1.251			۲ 🚖 ۳
🗰 Apps Ġ Google 🗋 192.16	8.1.250/cs525da 🗋 TN55-2400F	P 🕒 TN55-2400P		
	VETWORX	http://www.TitanNetworx.com		
	Save Configurations		Login As: admin	Access Mode: admin
Administration				
	Save Current Setting	gs		
Port Management	Click the "Save " but	on to save your current settings so that they will not be lost upon device		Help
VLAN Management	restart.		Save	
	Backup Settings			
PoE Management				
Time Donge Monogement	Click the "Backup" b	utton to save all current settings to your PC.	Backup	
Time Kange Managemeni	Postoro Provious Sa	ttin an		
Device Management	Restore Previous Se	iuniya		
	Click "Browse" to loca	te and select the file saved previously on your local hard drive and then cli	ck "Restore".	
QoS	Choose File No fi	le chosen	Restore	
Security				
Security	Note: You should select	"All files" from the "Files of type" drop-down list, otherwise you may not find	d the file.	
Smart Configuration	•			

- 16. Power down Titan Networx network switch and power it up back again. Wait for the switch to reboot.
- 17. Log in to your Titan Networx network switch again and make sure that IGMP settings are intact:

Key digital'





TNSS-2400P	×						3
← → C 🗋 192.168.	1.251					무 👷 :	=
🗰 Apps 🕒 Google 🗋 192.16	8.1.250/cs525da	TNSS-2400P	TN55-2400P				
	VETW y Conned	ORX cted	ht	tp://www.TitanNetworx.	com		
	IGMP Sno	oping Fast L	eave		Login As: a di	min Access Mode: adr	min
Administration							
Port Management		Port	Fast Leave	Port	Fast Leave		
		1	Enable	13	Enable	Help	I
VLAN Management		2	Enable	14	Enable		
		3	Enable	15	Enable	Config	
PoE Management		4	Enable	16	Enable		
Time Pange Management		5	Enable	17	Enable		
		6	Enable	18	Enable		
Device Management		7	Enable	19	Enable		
HIC		8	Enable	20	Enable		
STD		9	Enable	21	Enable		
		10	Enable	22	Enable		I
IGSD		11	Enable	23	Enable		
SNMP	-	12	Enable	24	Enable		-

- 18. At this point your Titan Networx network switch is set and ready to use.
- 19. Connect your encoders, decoders, allow approx 3 mins for bootup, and perform a network scan using KD Management Software.

IGMP Setup Guide: TP-Link TL-SG2428P (Single use only available, not stackable) TP-Link TL-SG3210XHP-M2 (stackable) TP-Link TL-SG3428XMP (stackable) 4K Systems (KD-IP822, KD-IP922, KD-IP1022)

Steps related to stacking multiple switches are in red

1. Power-up the TP-Link network switch.

Key digital'

- 2. **IMPORTANT**: Disconnect all the DHCP devices like routers or servers from the TP-Link network switch.
- 3. (If you want **factory reset** of the switch) Locate a pinhole "RESET" button at the front center panel of your TP-Link network switch. Using a paper clip press and hold a reset button for more than 5 seconds and then release. The factory reset process generally takes 5 minutes to complete
- 4. Connect your PC to the TP-Link network switch directly using a network cable.
- 5. If you have not done yet, configure your PC's IP address to the same range as the switch. (default subnet of the switch **192.168.0.xxx**).
- 6. Enter the switch's IP address in your browser and press ENTER (default IP address 192.168.0.1).
- Enter username and password (default "admin" for both). Then click Log In. If this is the first time logging in, there will be a prompt to create a new password.

Use	rname					
$\stackrel{\circ}{\otimes}$	admin					
_						
Pas	sword					
8	•••••					
	Remember Me					
	Log In					

Key digibal'

	SYSTEM L2 FEATURES L3 FEATURES QoS	SECURITY MAINTENANCE	Save 🗲 Log Out
System Info 🛛 🗸	Port Status		0
System Summary			
Device Description			
System Time		17 19 21 23	
Daylight Saving Time			
LED On/Off			
User Management	System Info		
System Tools	UNIT1		
EEE	System Description: JetStream 28-Port Gigabit Smart	Switch with 24-Port PoE+	
PoE	Device Name: TL-SG2428P		
SDM Template	Device Location: Hong Kong		
Time Range	Contact Information: www.tp-link.com		
Ocertelles Octions	Hardware Version: TL-SG2428P 1.0		
Controller Settings	Firmware Version: 1.1.1 Build 20210514 Rel.62941		
	Boot Loader Version: TP-LINK BOOTUTIL(v1.0.0)		

8. Set the static IP address of the network switch.

Go to L3 FEATURES -> Interface. Ensure IPv4 Routing is enabled. If not, apply the IPv4 routing. Click "Edit IPv4" to set the desired IP address of the network switch.

Ptp-link		URES L3 FEATUR	ES QoS	SECUR	ity maintenai	NCE	Save 🗲 Log Out
Routing Table > ARP >	Routing Config	5.11					0
Interface Static Routing DHCP Service	IPv6 Routing:	Enable					Apply
,	Interface Config						
	Interface ID	IP Address Mode	IP Address	Subnet Mask	Interface Name	Status	Operation
	VLAN1	Static	192.168.1.251	255.255.255.0		Up	Edit IPv4 Edit IPv6 Detail
	Total: 1						

9. Select "Static" and enter the desired IP address and subnet mask. Click Apply.

IP address can be changed by the administrator depending on the network configuration. We recommend using an address that is within the subnet of the AVoIP system for ease of maintenance

After applying, you will need to log in again using new IP address. (Ensure the PC and switch are the same
network before login).

✓ Back			
Modify IPv4 Interf	ace		
Interface ID:	VLAN1		
Admin Status:	Enable		
Interface Name:		(Optional. 1-16 characters)	
IP Address Mode:	🔿 None 💿 Statio	DHCP O BOOTP	
IP Address:	192.168.1.251	(Format: 192.168.0.1)	
Subnet Mask:	255.255.255.0	(Format: 255.255.255.0)	
Subnet Mask:	255.255.255.0	(Format: 255.255.255.0)	

Confirm the updated IP address table. Go to L3 FEATURES -> IPv4 Routing Table.

Key digital

Routing Table	\sim	IPv4 Routing Table					
IPv4 Routing Table							
IPv6 Routing Table							🗿 Refresh
ARP	>	Protocol	Destination Network	Next Hop	Distance	Metric	Interface Name
Interface		Connected	192.168.1.0/24	192.168.1.251	0	1	VLAN1
Static Routing	>	Total: 1					
DHCP Service	>						

11. Enable Jumbo Frames.

Key digital',

Go to L2 Features -> Port and set frame size to 9216

Port Config Jumbo:	g Port Isolatio 9216	I Loopback Dete	bytes (1518-9216)				Apply
Port Config Jumbo:	9216 LAGS		bytes (1518-9216)				Apply
Jumbo:	9216 LAGS		bytes (1518-9216)				Apply
> > > UNIT1	LAGS						Apply
> UNIT1	LAGS						
> UNIT1	LAGS						
>	Port Ty	ype Description	Status	Speed	Duplex	Flow Control	LAG
	1/0/1 Co	pper	Enabled	Auto	Auto	Disabled	- ^
	1/0/2 Co	pper	Enabled	Auto	Auto	Disabled	
	1/0/3 Co	pper	Enabled	Auto	Auto	Disabled	
	1/0/4 Co	pper	Enabled	Auto	Auto	Disabled	
	1/0/5 Co	pper	Enabled	Auto	Auto	Disabled	-
	1/0/6 Co	pper	Enabled	Auto	Auto	Disabled	-
	1/0/7 Co	pper	Enabled	Auto	Auto	Disabled	-
	1/0/8 Co	pper	Enabled	Auto	Auto	Disabled	-
	1/0/9 Co	pper	Enabled	Auto	Auto	Disabled	-
	1/0/10 Co	pper	Enabled	Auto	Auto	Disabled	
	Cota: 28	Port 1 1/0/1 Co 1/0/2 Co 1/0/3 Co 1/0/3 Co 1/0/4 Co 1/0/5 Co 1/0/6 Co 1/0/6 Co 1/0/7 Co 1/0/9 Co 1/0/9 Co 1/0/10 Co 1/0/10 Co	Port Type Description 1/0/1 Copper 1/0/2 Copper 1/0/3 Copper 1/0/4 Copper 1/0/5 Copper 1/0/6 Copper 1/0/7 Copper 1/0/8 Copper 1/0/9 Copper 1/0/10 Copper	Port Type Description Status 1/0/1 Copper Enabled 1/0/2 Copper Enabled 1/0/3 Copper Enabled 1/0/4 Copper Enabled 1/0/5 Copper Enabled 1/0/6 Copper Enabled 1/0/6 Copper Enabled 1/0/7 Copper Enabled 1/0/8 Copper Enabled 1/0/9 Copper Enabled 1/0/10 Copper Enabled	Port Type Description Status Speed 1/0/1 Copper Enabled Auto 1/0/2 Copper Enabled Auto 1/0/3 Copper Enabled Auto 1/0/3 Copper Enabled Auto 1/0/4 Copper Enabled Auto 1/0/5 Copper Enabled Auto 1/0/6 Copper Enabled Auto 1/0/6 Copper Enabled Auto 1/0/7 Copper Enabled Auto 1/0/7 Copper Enabled Auto 1/0/9 Copper Enabled Auto 1/0/10 Copper Enabled Auto 1/0/10 Copper Enabled Auto	Port Type Description Status Speed Duplex 1/0/1 Copper Enabled Auto Auto 1/0/2 Copper Enabled Auto Auto 1/0/3 Copper Enabled Auto Auto 1/0/3 Copper Enabled Auto Auto 1/0/3 Copper Enabled Auto Auto 1/0/4 Copper Enabled Auto Auto 1/0/5 Copper Enabled Auto Auto 1/0/6 Copper Enabled Auto Auto 1/0/7 Copper Enabled Auto Auto 1/0/10 Copper Enabled Auto Auto 1/0/10 Copper Enabled Auto Auto	Port Type Description Status Speed Duplex Flow Control 1/0/1 Copper Enabled Auto Auto Disabled 1/0/2 Copper Enabled Auto Auto Disabled 1/0/3 Copper Enabled Auto Auto Disabled 1/0/3 Copper Enabled Auto Auto Disabled 1/0/3 Copper Enabled Auto Auto Disabled 1/0/4 Copper Enabled Auto Auto Disabled 1/0/5 Copper Enabled Auto Auto Disabled 1/0/6 Copper Enabled Auto Auto Disabled 1/0/6 Copper Enabled Auto Auto Disabled 1/0/7 Copper Enabled Auto Auto Disabled 1/0/9 Copper Enabled Auto Auto Disabled 1/0/10 Copper Enabled Auto Auto Disabled 1/0/10 Copper Ena

If the port is a member port of an LAG, it will follow the port configuration of the LAG and not its own.



12. IGMP setup.

Go to L2 FEATURES -> Multicast -> MLD Snooping.

Select "Enable" under MLD Snooping. Click Apply.

Ptp-link		SYSTEM	L2 FEATURES	L3 FEATURE	ES QoS		ECURITY I	MAINTENANCE	¢	Save 🗧	Log O
Switching VLAN	>	Global Config	Port Conf	ig Static G	Group Config						2
Multicast	~	Global Config			٦						
IGMP Snooping MLD Snooping MVR]	MLD Snooping: Unknown Multica	ist Groups:	Enable Forward	Discard				Γ	Apply	
Multicast Filtering Multicast Info		MLD VLAN C	onfig	0		•					
Spanning Tree	>	VLAN ID	MLD Snooping Status	Fast Leave	Report Suppression	MLD Snooping Querier	Dynamic Router Ports	Static Router Ports	Forbidden Router Ports	Operation	n
		1	Disabled	Disabled	Disabled	Disabled				6)
		Total: 1 Showing 1-1 of 1 r	ecords Items p	er page: 100	•						

13. Go to L2 FEATURES -> Multicast -> IGMP Snooping -> Global Config.

Select **Enable** under IGMP Snooping. Select **v2** version and **Discard** for Unknown Multicast Groups. And click Apply.

Ptp-link	SYSTEM L2 FEATURES	.3 FEATURES QoS	SECURITY	MAINTENANCE	Save 🕁 Log Out
Switching	Global Config Port Config	Static Group Config			0
Multicast V	Global Config				
IGMP Snooping	IGMP Snooping:	Enable			
MLD Snooping	IGMP Version:	○ v1	v3		
• MVR	Unknown Multicast Groups:	 Forward Disca 	ard		
Multicast Filtering	Header Validation:	Enable			
Multicast Info					Apply
Spanning Tree	IGMP VLAN Config				

14. After applying the settings from the step 13, click the icon under IGMP VLAN Config table.

Key digibal

Global Config	Port Confi	g Static G	Group Config					
lobal Config								
MP Snooping:		Γ	 Enable 					
MP Version:			⊖ v1 💿 v.	2 🔿 v3				
known Multicast	Groups:		O Forward	Oiscard				
ader Validation:			Enable				_	
MP VLAN Co	onfig	٩		•				
VLAN ID	IGMP Snooping Status	Fast Leave	Report Suppression	IGMP Snooping Querier	Dynamic Router Ports	Static Router Ports	Forbidden Router Ports	Operation
1	Enabled	Enabled	Enabled	Enabled				0 Q
otal: 1							After applyir	ng above
owing 1-1 of 1 rec	ords Items ne	er page: 100	•				settings, clic	k this!

15. IGMP Snooping window will appear. Make sure below settings (red boxes) enabled.

Change "General Query Source IP" to the current network switch's IP address. (192.168.1.251 in this case).

a. Have all switches share the same general query source IP

Key djojbaľ,

Configure IGMP Snoo	ping for VLAN	
VLAN ID:	1	
IGMP Snooping Status:	Enable	
Fast Leave:	Enable	
Report Suppression:	Enable	
Member Port Aging Time:	260	seconds (60-600)
Router Port Aging Time:	300	seconds (60-600)
Leave Time:	1	seconds (1-30)
IGMP Snooping Querier:	Enable	
Query Interval:	60	seconds (10-300)
Maximum Response Time:	10	seconds (1-25)
Last Member Query Interval:	1	seconds (1-5)
Last Member Query Count:	2	(1-5)
General Query Source IP:	192.168.1.251	(Optional. Format: 192.168.0.1)
Static Router Ports		—
	UNIT1	LAGS
		Cancel Sav

- 16. Scroll down the window and leave all the ports unchecked. Click Save.
 - a. In some cases, the specific port connected to any Wi-Fi routers or a core network may need to be forbidden at this page. If applicable, check those ports **ONLY** and leave others unchecked

Configure IGM	IP Snooping for VLAN
General Query Sour	UPIUTIdi. 192.100.1.201 (UPIUTIdi. 197.100.0.1)
Static Router Po	rts
	UNIT1 LAGS
Select All	2 4 6 8 10 12 14 16 18 20 22 24 26 28 1 1 1 1 1 1 1 1 1 1 1
	Selected Unselected Not Available
Forbidden Route	ar Ports
	UNIT1 LAGS
Select All	1 3 5 7 9 11 13 15 17 19 21 23 25 27
	2 4 6 8 10 12 14 16 18 20 22 24 26 28 1 1 1 1 1 1 1 1 1 1 1
	Selected Unselected Not Available
	Cancel

17. Enable Fast Leave on all ports.

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Go to L2 FEATURES -> Multicast -> IGMP Snooping -> Port Config.

Switching VLAN	>	Global Config	Port Config Static	Group Config		
Multicast	\sim	Port Config				
IGMP Snooping]	UNIT1	LAGS			
MLD Snooping			Port	IGMP Snooping	Fast Leave	LAG
• MVR			1/0/1	Enabled	Enabled	*
Multicast Filtering			1/0/2	Enabled	Enabled	
Multicast Info			1/0/3	Enabled	Enabled	
Spanning Tree	>		1/0/4	Enabled	Enabled	
LLDP	>		1/0/5	Enabled	Enabled	
			1/0/6	Enabled	Enabled	
			1/0/7	Enabled	Enabled	
			1/0/8	Enabled	Enabled	
			1/0/9	Enabled	Enabled	
			1/0/10	Enabled	Enabled	
		Total: 28				-

18. View IGMP VLAN Configurations.

Key digital'

Go to L2 FEATURES -> Multicast -> IGMP Snooping -> Global Config. Click icon (yellow box in image).

View IGMP VLAN Cor	nfigurations
LAN ID:	1
GMP Snooping Status:	Enabled
ast Leave:	Enabled
Report Suppression:	Enabled
Vember Port Aging Time:	260
Router Port Aging Time:	300
Leave Time:	1
IGMP Snooping Querier:	Enabled
Query Interval:	60
Maximum Response Time:	10
Last Member Query Interval:	1
Last Member Query Count:	2
General Query Source IP:	192.168.1.251
Dynamic Router Ports:	
Static Router Ports:	

19. Cloud-Based Controller Management must be **disabled** to prevent harmful mis-management of the AVoIP switch by external managers. Go to SYSTEM > CONTROLLER SETTINGS and ensure the settings are as pictured below. Press APPLY

System Info	Cloud-Based Controller Management	0
System Tools	Connection Status: Disabled Cloud-Based Controller Management: Enable	
PoE SDM Template Time Range	Notes: To enjoy centralized management on Omada Cloud-Based Controller, enable Cloud-Based Controller Management and add the device lits serial number. You can disable this feature if you do not need to manage the device with the Omada Cloud-Based Controller.	to the controller via
Controller Settings	Controller Inform URL Inform URL/IP Address: Notes: Enter the inform URL or IP address of your controller to tell the device where to discover the controller. This feature is commonly used for the device to be managed by the controller in Layer 3 deployments.	



20. Save the current configuration.

Click "Save" button on top right corner. Click Yes.

This will save current configuration and will apply this configuration every time switch is powered up.

	SYSTEM L2 FEATURES L3 FEATURES QoS SECURITY MAINTENANCE	Log Out
System Info 🛛 🗸	Port Status	
Device Description		
System Time	1 3 5 7 9 11 13 15 17 19 21 23	
Daylight Saving Time	2 4 6 8 10 12 14 16 18 20 22 24 25 26 27 28	
LED On/Off		
User Management	System into	
System Tools	UNIT1	
EEE	System Description: IntStraam 28 Part Glashit Smart Switch with 24-Port PoE+	
PoE >	Device Name:	
SDM Template	Device Location: Save the configuration file?	
Time Range	Contact Information	
Controller Settings	Hardware Version: No Yes	
	Firmware Version:	

21. If aggregating 10G fiber connections, navigate to L2 Features -> LAG -> Static LAG. Assign all relevant ports to the LAG and confirm. Use the LAG table to confirm the proper settings have been applied.

Key digital'

Switching • Port • DDM • LAG • LAG • LAG • LAG • MAC Address VLAN • MAC Address VLAN • MAC Address VLAN • MAC Address • Doti • LAG1 • Doti • LAG2 • MAC Address • VLAN • Multicast • LDP • L2PT PPPDE • SYSTEM • Static LAG • Systeming • LAG1 • LAG1 • Dota • Dota <tr< th=""><th>P</th><th>tp-link</th><th>SYSTEM L2 FE</th><th>ATURES L3 FEATURES</th><th>QoS S</th><th>SECURITY</th><th>MAINTENANCE</th><th>Save Save</th><th>→ Log Out</th></tr<>	P	tp-link	SYSTEM L2 FE	ATURES L3 FEATURES	QoS S	SECURITY	MAINTENANCE	Save Save	→ Log Out
PPPoE Selected L2 FEATURES L3 FEATURES Qos SECURITY MAINTENANCE Save DDM LAG Table Static LAG LACP Config Global Config	Sw • • • • • • • • • • • • • • • • • • •	vitching Port Port DDM LAG MAC Address AN Julticast DP PT	LAG Table S LAG Config Group ID: Description: Port:	tatic LAG LACP Config LAG1 ▼ Static LAG 1/0/25-26 1 3 5 7 9 2 4 6 8 10	(Format: 1/0/1, input or cho UNIT1 11 13 15 12 14 6	00058 below) 17 19 2: 18 20 22	23 25 27 23 26 28 2 24 28		•
	PF Pr Switt Pr O	t <mark>ching 〜</mark> ort	SYSTEM L2 FE LAG Table St Global Config	ATURES L3 FEATURES	QoS S	SECURITY	ot Available MAINTENANCE	App Save	ly → Log Out ?

• LAG		Hash Algorithm:	SRC MAC+DST	MAC 🔻		
MAC Address						Apply
VLAN	>	LAG Table				
Multicast	>					
Spanning Tree	>					
LLDP	>		Group ID	Description	Members	Operation
L2PT			1	Static LAG	1/0/25-26	0 Q
PPPoF		Total: 1				

- 22. To double-check the updated configuration, reboot the network switch and confirm the configuration. After rebooting the switch, log in to your TP-Link network switch again and make sure that IGMP settings are intact.
- 23. Connect your encoders, decoders, allow approx 3 mins for bootup, and perform a network scan using KD Management Software.



WiFi Router Setup

It is required to set your WiFi router to **filter multicast (aka filter broadcast)** to ensure that your router is not overwhelmed by the data broadcast from AV over IPunits on the network.

Example of applying multicast filtering in a Linksys router:

😴 LG5552 52-Port Gigabit Man 🛛 🗙 🖸 Linksys S	imart Wi-Fi 🛛 🗙 🔼						
← → C □ 192.168.1.1/ui/1.0.99	9.153731/dynamic/home.	html#					☆ =
LINK	SYS Smart Wi-Fi		App Center	Help Linksys	-KDS-TEST 👻	Sign Out 👻	Î
<	Security View and change router settin	igs					
	Firewall DMZ	Apps and Gaming				- 1	
ty ©				Internet filters Filter anonymous Internet requests Filter multicast Filter Internet NAT redirection Filter Ident (Port 113)			
*0	L2TP Passthrough	Enabled					
(Description	Protocol	IPv6 Address	Allow	Enabled		
<u>ି</u> ଅ			_	Ok Ca	Add IPv6 Firewa	all Setting	
				End Uter License Agreeme	nt Privacy Statement 71	hird Party Licenses	÷

*The following requirements must be met in order to support the live streaming feature of the Key Digital app (1080p systems, KD-IP1080/KD-IP120 only):

- Verified model = Cisco/Linksys EA6700 router
- Network switch must support IGMP v3 and configured to enable IGMP v3.
- Wifi Router
 - Must be configured so that multicast filtering is enabled. See above example
 - Must support 50Mbps bandwidth per iOS that will be streaming video
 - It is recommended that only 1 iOS be in the Live Stream page at a time
- iOS Device
 - Best performance is with iPad4, iPad Air, iPad Mini. More powerful processing will always benefit.
 - Should have Static IP with Router IP corresponding to master network switch