

NetGear Ethernet Switch Quick Setup Guide

For MuxLab AV over IP Devices



Contents

1.	Introd	uction	3			
2.	MuxLab Ethernet Switch Setup Requirements					
3.	. Ethernet Switch Setup					
	3.1.	Enabling IGMP	4			
	3.2.	Enabling Jumbo Frames	8			
4.	. Preparing for System Installation					

1. Introduction

This document covers the basic setup requirements for a NetGear Ethernet Switch. The setup examples and screen shots shown are for the NetGear model S3300-52x-PoE+, but these instructions are similar and applicable to other NetGear Ethernet Switch models.

2. MuxLab Ethernet Switch Setup Requirements

All MuxLab AV over IP Transmitters and Receivers require IGMP support to be enabled on the Ethernet Switch, and a select number of MuxLab units also require Jumbo Frames to be enabled.

Also note that all models below work on a 1G Ethernet Switch, except for the 500760, which requires a 10G Ethernet Switch.

The below table specifies the IGMP and Jumbo Frames requirement per MuxLab AV over IP Transmitter / Receiver model.

AV over IP	Ethernet Switch	IGMP	Jumbo Frame
Model	BW Required	Required	Required
500752	1G	Х	
500753	1G	Х	
500754	1G	Х	
500755	1G	Х	
500755-AMP	1G	Х	
500756	1G	Х	
500757	1G	X	
500758	1G	Х	X
500759	1G	Х	X
500760	10G	X	
500762	1G	X	
500770	1G	Х	Х
500771	1G	X	X

3. Ethernet Switch Setup

3.1. Enabling IGMP

Follow the steps below to enable the IGMP feature on the Ethernet Switch. For further details on navigating through the Ethernet Switch web server menus, please refer to the Ethernet Switch manual.

Step 1: Access the Ethernet Switch web server

- Locate the Ethernet Switch default IP address
- Make sure your computer is on the same subnet as the Ethernet Switch (your network administration can assist you with this, if required)
- Enter the Ethernet Switch IP address into a browser

Step 2: IGMP Snooping Configuration

- Navigate to the menu:

 $[Switching \rightarrow \textit{Multicast} \rightarrow \textit{IGMP Snooping} \rightarrow \textit{IGMP Snooping Configuration}]$

- Set the configuration as shown below, and then click [Apply]

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NETGEAR		
	48-Port Gigabit Stackable Smart Switch with PoE+ and 4 10G uplinks Routing DoS Security Monitoring Maintenance Help Index	Welcome admin
System Switching Ports LAG VLAN Au	Routing QoS Security Monitoring Maintenance Help Index to-VoIP STP Multicad MVR Address Table	
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Multicast	IGMP Snooping Configuration	¢
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=Auto-Video v	Validate IGMP IP header 💿 Disable 🐵 Enable	
-IGMP Snooping 🔷		
IGMP Snooping Configuration		
IGMP Snooping Interface	IGMP Statistics	0
Configuration • IGMP Snooping	Multicast Control Frame Count 4887	
Table	Interfaces Enabled for IGMP Snooping	
 IGMP Snooping VLAN Configuration 		
Multicast Router Configuration		
Multicast Router VLAN Configuration	VLAN IDs Enabled for IGMP Snooping	đ
-IGMP Snooping Querier~	7	
-MLD Snooping -		
	VLAN IDs Enabled for IGMP Snooping Querier	g
	1	
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- Navigate to the menu:

 $[Switching \rightarrow \textit{Multicast} \rightarrow \textit{IGMP Snooping} \rightarrow \textit{IGMP Snooping Interface}$

Configuration]

Enter the settings shown below as indicated by the orange arrows,

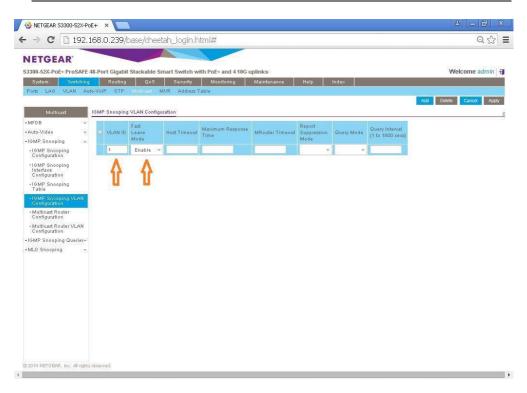
and then click [Apply]

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IETGEAR	-	-							
3300-52X-PoE+ ProSAFE	E 48-Pc	rt Gigabit	Stackable Sn	nart Switch w	ith PoE+ and	d 4 10G uplii	nks		Welcome admin
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 IGMP Snooping Configuration 					Time	1.0000000000	Mode		
IGMP Snooping			Enable ×				Enable Y		
Interface Configuration		1/g1	Disable	260	10	0	Disable		
 IGMP Snooping 	8	1/g2	Disable	260	10	0	Disable		
Table	8 8	1/g3 1/g4	Disable Disable	260 260	10 10	0	Disable		
 IGMP Snooping VLAN 		1/g4 1/g5	Disable	260	10	0	Disable		
Configuration		1/g6	Disable	260	10	0	Disable		
Multicast Router		1/97	Disable	260	10	0	Disable		
Configuration		1/g8	Disable	260	10	0	Disable		
 Multicast Router VLAN Configuration 		1/g9	Disable	260	10	0	Disable		
10 01000 1100 Protocol 000 000	100	1/g10	Disable	260	10	0	Disable		
-IGMP Snooping Querier~		1/g11	Disable	260	10	0	Disable		
MLD Snooping 🗸 👻		1/g12	Disable	260	10	0	Disable		
		1/g13	Disable	260	10	0	Disable		
	T	1/g14	Disable	260	10	0	Disable		
		1/g15	Disable	260	10	0	Disable		
		1/g16	Disable	260	10	0	Disable		
	C	1/g17	Disable	260	10	0	Disable		
		1/g18	Disable	260	10	0	Disable		
		1/g19	Disable	260	10	0	Disable		
	8	1/g20	Disable	260	10	0	Disable		
	8 8	1/g21 1/g22	Disable Disable	260 260	10 10	0	Disable Disable		
		1/g22 1/g23	Disable	260	10	0	Disable		
		1/g23	Disable	260	10	0	Disable		
		1/g25	Disable	260	10	0	Disable		
		1/g26	Disable	260	10	0	Disable		
	-			200	10	1			

- Navigate to the menu:

 $[Switching \rightarrow Multicast \rightarrow IGMP \ Snooping \rightarrow IGMP \ Snooping \ VLAN$ Configuration]

- Enter the settings shown below as indicated by the orange arrows, and then click [Add]



- Navigate to the menu:

[Switching \rightarrow Multicast \rightarrow IGMP Snooping Querier \rightarrow Querier Configuration]

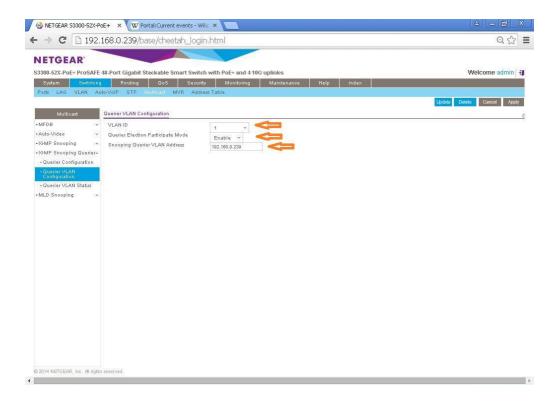
- Click the "Enable" radio button next to the "Querier Admin Mode"
- Enter the IP Address of the Ethernet Switch (this is usually done for the first Ethernet Switch, with Stack ID 1, in the case of a stack of Switches) in the "Snooping Querier Address", and then click [Apply]

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Multicast	Querier Configuration				
FDB v	Querier Admin Mode	🔘 Disable 🖲 Enable			
uto-Video v	Snooping Querier Address	192.168.0.239			
MP Snooping	IGMP Version	2	(1 to 2)		
MP Snooping Querier>	Query Interval(secs)	60	(1 to 1800)		
Querier Configuration	Querier Expiny Interval(secs)	125	(60 to 300)		
Querier VLAN Configuration					
Querier VLAN Status					
LD Snooping 🚽 👻					

- Navigate to the menu:

[Switching \rightarrow Multicast \rightarrow IGMP Snooping Querier \rightarrow Querier VLAN Configuration]

- Ensure that the "VLAN ID" is set to "1", as indicated by the orange arrow below.
- "Enable" the "Querier Election Participate Mode", as indicated by the orange arrow below.
- Ensure that the "Snooping Querier VLAN Address" is set to the same value as the IP address set earlier, as indicated by the orange arrow below.
- Then click [Apply]



3.2. Enabling Jumbo Frames

Follow the steps below to enable the Jumbo Frames feature on the Ethernet Switch. For further details on navigating through the Ethernet Switch web server menus, please refer to the Ethernet Switch manual.

Step 1: Enable Jumbo Frames

- Navigate to the menu:

[Switching \rightarrow Ports \rightarrow Port Configuration]

- For each port, set the "Maximum Frame Size" allowed, which in this case is the value "9216", and then click *[Save]*

4. Preparing for System Installation

The Ethernet Switch is now properly configured to support MuxLab AV over IP devices with respect to IGMP and Jumbo Frames.

Note that MuxLab AV over IP Transmitters and Receivers are set by default with DHCP enabled, and the MuxLab 500811 ProDigital Network Controller has DHCP disabled by default and is set to a Static IP address of 192.168.168.50. It is recommended that you operate your system with the Transmitters and Receivers with DHCP enable and the 500811 Network Controller with DHCP disabled.

If however you intend to disable the DHCP on the Transmitters and Receivers, then please take note that the default Static IP address for the Transmitters is 192.168.168.55, and for the Receivers is 192.168.168.56.

Note that in order for the entire system to operate correctly, the Ethernet Switch, MuxLab Transmitters and Receivers, and the MuxLab ProDigital Network Controller must all be on the same subnet. Devices with DHCP enabled will adjust automatically to the correct subnet, while devices with DHCP disabled, may need to be set by the user to the correct subnet, if not already set correctly. Your network administrator can assist with this configuration if you are not familiar with how to accomplish this task.

If you are having issues which require further assistance, please contact the respective device manufacturer for the device in question. For MuxLab device related questions, please contact MuxLab Customer Technical Support at 877-689-5228 (toll-free in North America) or (+1) 514-905-0588 (International).



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