

QSC Q-Sys

Switch Configuration Guide



Login to switch

Login to switch via web browser.

If your network is not currently on a 192.168.0.x subnet, you may need to temporarily set your computer to a static IP subnet of 192.168.0.x It is also recommended to change the IP address of the switch to match the subnet of your network.

Default IP address of the switches are: AMS-2600 = 192.168.0.2AMS/XMS-1208P = 192.168.0.3All other AMS/XMS models = 192.168.0.4SW-510/610 Series = DHCP by default

Default username = admin

Default password = admin*

*Firmware will require a password change upon initial setup





Set Port Frame Size

Navigate to Configuration > Ports > Ports

Set Maximum Frame Size to 1518.

Changing the setting on the top row with the * globally selects all ports

Click Save at bottom of screen.

LUXUL imply Connected

comgaration		-			
Quick Setup	•	Po	rt C	ontig	ju
Green Ethernet	•				
Ports	•				Spe
Ports					
Port Description		Port	Link	Current	C
DHCP	•	*			<>
Security	•			1044	<u>_</u>
Aggregation	•	1	Y	TGIOX	Au
Loop Protection		2	X	Down	Au
IPMC Profile	•			1	
MVR		3	×	Down	Au
IPMC	•	4	X	Down	Au
LLDP	•	-			_
MAC Table		5	X	Down	Au
Voice VLAN	•	6	×	Down	Au
QoS	•	Ŭ	~	Down	Au
Mirroring		7	X	Down	Au
UPnP			V	Down	
GVRP	•	•	~	Down	Au
Stack		9	X	Down	Au
sFlow				-	-
UDLD		10	X	Down	Au
Monitor	•	11	X	Down	Au
Tools	•				
Administration	•	12	X	Down	Au
		13	X	Down	Au
		14	×	Down	Au
Copyright @2018 Luxul		15	×	Down	Au

ration for Switch 1

_	•		Speed		Adv Duplex Adv speed		Flow Control							
scription	Port	Link	Current	Configured	Fdx	Hdx	10M	100M	1G	Enable	Curr Rx	Curr Tx	Frame Size	Collision Mode
	•			<> \$									1518	•
n	 1 	V	1Gfdx	Auto 🛊							X	×	1518	Discard
ection	2	X	Down	Auto \$							X	X	1518	Discard
ile	• 3	X	Down	Auto 🛊							x	×	1518	Discard
	► 4	x	Down	Auto 🛟							x	x	1518	Discard
	► 5	x	Down	Auto 🛊							x	x	1518	Discard
I	► 6	X	Down	Auto 🛊							x	x	1518	Discard
	7	X	Down	Auto \$							×	×	1518	Discard
	8	X	Down	Auto \$							X	×	1518	Discard
	9	X	Down	Auto 🛟							X	X	1518	Discard
	10	X	Down	Auto 🛟							X	×	1518	Discard
	▶ 11	X	Down	Auto 🛊							X	X	1518	Discard
1	► 12	×	Down	Auto 🛊							×	X	1518	Discard
	13	×	Down	Auto 🛊							X	X	1518	Discard
	14	X	Down	Auto 🛊							X	×	1518	Discard
92018 Luxul	15	X	Down	Auto 🛟							X	X	1518	Discard

Model: AMS-4424P Firmware Version: v4.1.3



Refresh



DSCP Based Port Classification

Navigate to Configuration > QoS > Port Classification

Select DSCP Based for every port

Changing the setting on the top row with the * globally selects all ports

Click Save at bottom of screen

Configuration	
Quick Setup	
Green Ethernet	•
Ports	•
DHCP	•
Security	•
Aggregation	•
Loop Protection	
IPMC Profile	۲
MVR	
IPMC	•
LLDP	•
MAC Table	
Voice VLAN	•
QoS	•
Port Classification	
Port Classification Port Policing	
Port Classification Port Policing Queue Policing	
Port Classification Port Policing Queue Policing Port Scheduler	
Port Classification Port Policing Queue Policing Port Scheduler Port Shaping	
Port Classification Port Policing Queue Policing Port Scheduler Port Shaping Port Tag Remarking	
Port Classification Port Policing Queue Policing Port Scheduler Port Shaping Port Tag Remarking Port DSCP	
Port Classification Port Policing Queue Policing Port Scheduler Port Shaping Port Tag Remarking Port DSCP DSCP-Based QoS	
Port Classification Port Policing Queue Policing Port Scheduler Port Shaping Port Tag Remarking Port DSCP DSCP-Based QoS DSCP Translation	
Port Classification Port Policing Queue Policing Port Scheduler Port Shaping Port Tag Remarking Port DSCP DSCP-Based QoS DSCP Translation DSCP Classification	
Port Classification Port Policing Queue Policing Port Scheduler Port Shaping Port Tag Remarking Port DSCP DSCP-Based QoS DSCP Translation DSCP Classification Storm Policing	
Port Classification Port Policing Queue Policing Port Scheduler Port Shaping Port Tag Remarking Port DSCP DSCP-Based QoS DSCP Translation DSCP Classification Storm Policing WRED	
Port Classification Port Policing Queue Policing Port Scheduler Port Shaping Port Tag Remarking Port DSCP DSCP-Based QoS DSCP Translation DSCP Classification Storm Policing WRED Mirroring	
Port Classification Port Policing Queue Policing Port Scheduler Port Shaping Port Tag Remarking Port DSCP DSCP-Based QoS DSCP Translation DSCP Classification Storm Policing WRED Mirroring UPnP	
Port Classification Port Policing Queue Policing Port Scheduler Port Shaping Port Tag Remarking Port DSCP DSCP-Based QoS DSCP Translation DSCP Classification Storm Policing WRED Mirroring UPnP GVRP	

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QoS Ingress Port Classification for Switch 1

Port	Co	S	DPL	DSCP Based
•	<>	\$	 	\$
1	0	\$	0	\$
2	0	\$	0	\$
3	0	\$	0	\$
4	0	\$	0	\$
5	0	\$	0	\$
6	0	\$	0	\$
7	0	\$	0	\$
8	0	\$	0	\$
9	0	\$	0	\$
10	0	\$	0	\$
11	0	\$	0	\$
12	0	\$	0	\$
13	0	\$	0	\$
14	0	\$	0	\$
15	0	\$	0	\$
16	0	\$	0	\$
17	0	\$	0	\$



Trust DSCP

Navigate to Configuration > QoS > DSCP Based QoS

Select Trust for all ports

Changing the setting on the top row with the * globally selects all ports

Click Save at bottom of screen

Conf	iguration	
Qui	ck Setup	•
Gre	en Ethernet	•
Por	ts	•
DH	CP	•
Sec	curity	•
Agg	gregation	•
Loo	p Protection	
IPN	IC Profile	•
MV	R	
IPN	IC	•
LLD	P	•
MA	C Table	
Voi	ce VLAN	•
Qo	S	
P	ort Classification	
P	ort Policing	
Q	ueue Policing	
P	ort Scheduler	
Р	ort Shaping	
P	ort Tag Remarking	
P	ort DSCP	
D	SCP-Based QoS	
D	SCP Translation	
D	SCP Classification	
S	torm Policing	
W	/RED	
Min	roring	
UP	nP	
GV	RP	
Sta	ck	

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DSCP-Based QoS Ingress Classification

DSCP	Trust	QoS Class		DPL	
*			¢	<>	\$
0 (BE)		0	\$	0	\$
1		0	\$	0	\$
2		0	¢	0	\$
3		0	\$	0	\$
4		0	\$	0	\$
5		0	\$	0	\$
6		0	\$	0	\$
7		0	\$	0	\$
8 (CS1)		0	\$	0	\$
9		0	\$	0	\$
10 (AF11)		0	\$	0	\$
11		0	\$	0	\$
12 (AF12)		0	\$	0	\$
13		0	\$	0	\$
14 (AF13)		0	\$	0	ŧ
15		0	\$	0	\$
16 (CS2)		0	\$	0	\$



DSCP Class for Q-Sys only configuration

*Use this config when configuring only for Q-Sys. If using the same switch for both Q-Sys and Dante, skip to the next page.

On same screen as above

Set Class 46 to Priority 7

Set Class 34 to Priority 6

Click Save at bottom of screen

Simply Connected						
guration		28 (AF32)		0	\$	
k Setup	+	29		0	\$	
en Ethernet	•	20 (4522)		0	•	
rts	•	30 (AF33)		0	•	
ICP	•	31		0	\$	
curity	•	32 (CS4)		0	•	
gregation	•	32 (004)			•	
op Protection		33		0	\$	
MC Profile	+	34 (AE41)	0	6	<u>.</u>	
/R		01 (/11 11)			•)	
MC	•	35		0	+	
)P	•	36 (AF42)		0	\$	
C Table			-			╞
e VLAN	•	37		0	+	
l .	•	38 (AF43)		0	\$	ſ
rt Classification			_			┝
rt Policing		39		0	ŧ	
ueue Policing		40 (CS5)		0	\$	
ort Scheduler			-	0.0		
rt Shaping		41		0	÷,	U
ort Tag Remarking		42		0	\$	0
ort DSCP		40	-	0	•	6
SCP-Based QoS		43	Z	0	Ŧ	0
SCP Translation		44		0	\$	0
SCP Classification		45		0	•	0
orm Policing		40			•	0
RED		46 (EF)		7	\$	• 0
oring		47		0	•	0
P			-		· ·	
RP	•	48 (CS6)		0	\$	0
ck		40	-	0	•	0



DSCP Class for combo Dante & Q-sys

*Use this config only when using the same switch to run both Dante Q-Sys. Skip this step if only configuring for Q-Sys.

On same screen as above Set Class 56 to Priority 7 Set Class 46 to Priority 6 Click Save at bottom of screen

36 (AF42) 0 \$ 0 \$ 37 0 \$ 0 ŧ Quick Setup Green Etherne \$ 0 38 (AF43) 0 Ports 39 0 \$ 0 ŧ DHCP Security 0 \$ 0 40 (CS5) ŧ Aggregation 0 \$ 0 41 \$ Loop Protection IPMC Profi 42 0 \$ 0 \$ MVR 43 0 \$ 0 \$ IPMC LLDP \$ 0 0 44 MAC Table 45 \$ 0 0 Voice VLAN QoS 46 (EF) \checkmark 6 ÷ ┥ \$ Port Classification 47 \$ 0 0 Port Policing 48 (CS6) 0 \$ 0 Queue Policing Port Scheduler 49 0 \$ 0 \$ Port Shaping 50 0 \$ 0 Port Tag Remarking Port DSCP 51 0 \$ 0 DSCP-Based Qo 52 0 \$ 0 4 **DSCP** Translation **DSCP** Classification 53 0 \$ 0 Storm Policin 54 0 \$ 0 WRED Mirroring 55 0 \$ 0 UPnP 56 (CS7) 7 ÷ ┥ GVRP Stack 57 \$ 0 0



DSCP Class for combo Dante & Q-sys

*Use this config only when using the same switch to run both Dante Q-Sys. Skip this step if only configuring for Q-Sys.

On same screen as above Set Class 26 to Priority 5 Set Class 8 to Priority 5 All other Classes set to 0

Click Save at bottom of screen.

LUXUL Simply Connected

Configuration	Ŧ	7	
Quick Setup	•	8 (CS1)	
Green Ethernet	•	_	
Ports	•	9	
DHCP	•	10 (AF11)	
Security	•	11	1
Aggregation	•		_
Loop Protection		12 (AF12)	
IPMC Profile	•	13	
MVR			_
IPMC	•	14 (AF13)	
LLDP	•	15	
MAC Table			
Voice VLAN	•	16 (CS2)	
QoS	•	17	
Port Classification		10 (1504)	
Port Policing		18 (AF21)	
Queue Policing		19	
Port Scheduler		00 (4500)	
Port Shaping		20 (AF22)	
Port Tag Remarking		21	
Port DSCP		00 (4500)	
DSCP-Based QoS		22 (AF23)	_
DSCP Translation		23	
DSCP Classification		24 (CS3)	
Storm Policing		24 (000)	_
WRED		25	
Mirroring		26 (AE31)	
UPnP		20 (71 01)	
GVRP	•	27	

7	0	\$	0	\$
8 (CS1)	5	¢	·	ŧ
9	0	ŧ	0	ŧ
10 (AF11)	0	\$	0	ŧ
11	0	\$	0	ŧ
12 (AF12)	0	¢	0	ŧ
13	0	\$	0	ŧ
14 (AF13)	0	ŧ	0	ŧ
15	0	÷	0	ŧ
16 (CS2)	0	ŧ	0	ŧ
17	0	\$	0	ŧ
18 (AF21)	0	¢	0	ŧ
19	0	\$	0	ŧ
20 (AF22)	0	\$	0	ŧ
21	0	¢	0	\$
22 (AF23)	0	¢	0	ŧ
23	0	\$	0	ŧ
24 (CS3)	0	\$	0	\$
25	0	¢	0	ŧ
26 (AF31)	5	\$	•	\$
27	0	¢	0	ŧ





Save Startup Configuration

Navigate to Administration > Configuration > Save startup-config

Click Save Configuration







IGMP Multicast Configuration

Navigate to Configuration > IPMC > IGMP Snooping > **Basic Configuration**

Check Snooping Enabled

Check Unregistered IPMCv4 Flooding Enabled (it should be enabled already)

Check Fast Leave on all ports

Changing the setting on the top row with the * globally selects all ports

Click Save at bottom of screen



comguration	100 C
Quick Setup	•
Green Ethernet	•
Ports	•
DHCP	•
Security	•
Aggregation	•
Loop Protection	
IPMC Profile	•
MVR	
IPMC	•
IGMP Snooping	

VLAN Configuration MLD LLDP MAC Ta Voice V QoS Mirrorin UPnP GVRP Stack

sFlow UDLD

IGMP Snooping Configuration

Glo	bal Configuratio	n	
Snooping Enabled			
Unregistered IPMCv4 Flooding Enabled			
GMP SSM Range	232.0.0.0	/ 8	
Leave Proxy Enabled			
Proxy Enabled			

Port Related Configuration for Switch 1

r intering r rome						
nooping	•	Port	Router Port	Fast Leave	Throttling	
le	•	*				\$
AN	•	1			unlimited	\$
	•	2			unlimited	\$
		3			unlimited	\$
	٠	4			unlimited	\$
		5			unlimited	\$
		6			unlimited	\$
	•	7			unlimited	\$
tion	۲	8			unlimited	\$
		9			unlimited	ŧ





IGMP Multicast VLAN Configuration

Navigate to Configuration > IPMC > IGMP Snooping > VLAN Configuration

Click Add New IGMP VLAN

Check Snooping Enabled

Check Querier Election

IP Address can be left at 0.0.0.0 if only using one switch

*Set IP as IP address of the switch if using more than one switch in network

Change Compatibility to Forced IGMPv2





patibility	PRI	RV	QI (sec)	QRI (0.1 sec)	LLQI (0.1 sec)	URI (sec)
MPv2 \$	0	2	125	100	10	1
×			1		1	1

5



Save Startup Configuration

Navigate to Administration > Configuration > Save startup-config

Click Save Configuration

Simply Connected	
Configuration	
Monitor	Save Running Configuration to startup-co
Tools	•
Administration	Please note: The generation of the configuration file may be time consuming, depending on the configuration file may be time consuming.
Reboot	Cours Configuration
Factory Defaults	Save conliguration
Firmware Update	
Configuration	Y
Save startup-config	
Download	
Upload	
Activate	
Delete	



fig

amount of non-default configuration.



Navigate to Monitor > Ports > Traffic Overview

Errors, Drops, Filtered should be 0 or near 0

mply Connecte

	Configuration						
	OUI			De	4 04-4	inting C	
	QoS	•		POI	n Stat	istics c	ve
	Mirroring						
	UPnP				Pa	ckets	
	GVRP	•		Port	Received	Transmitted	Rece
	sFlow			4	0	0	-
	UDLD			1	U	U	
h	lonitor	•		2	0	0	C
	Quick Setup	٠		3	1	1841	6
	Green Ethernet	٠		4	1	1842	6
	Thermal Protection			<u> </u>		1042	0
	Ports	•		5	1	1842	6
	State			6	O	189	C
	Traffic Overview			7	Ω	Π	ſ
	QoS Statistics						
	QCL Status			8	0	0	
	Detailed Statistics			9	0	0	C
	DHCP	٠		10	Π	Π	C C
	Security	•					
	LACP	•		<u>11</u>	U	U	L
	Loop Protection			<u>12</u>	0	0	0
	MVR	٠		13	1464	1528	108
	IPMC	•		14	0	0	-
	LLDP	-	*	14	U	U	<u>ــــــــــــــــــــــــــــــــــــ</u>
100							

.

erview

	Pa	ckets	В	ytes	E	rrors	D	rops	Filtered
Port	Received	Transmitted	Received	Transmitted	Received	Transmitted	Received	Transmitted	Received
1	0	0	0	0	0	0	0	0	O
2	0	0	0	0	0	0	0	0	O
3	1	1841	64	166899	0	0	0	0	O
<u>4</u>	1	1842	64	166986	0	0	0	0	O
<u>5</u>	1	1842	64	166986	0	0	0	0	O
<u>6</u>	0	189	0	15314	0	0	0	0	0
Ζ	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	O
<u>9</u>	0	0	0	0	0	0	0	0	O
<u>10</u>	0	0	0	0	0	0	0	0	O
<u>11</u>	0	0	0	0	0	0	0	0	O
<u>12</u>	0	0	0	0	0	0	0	0	O
<u>13</u>	1464	1528	108017	438308	0	0	0	0	O
14	0	0	0	0	0	0	0	0	0
10	_		-	-	-		-	-	-



Auto-refresh 🗆 Refresh Clear



Navigate to Monitor > Ports > QoS Statistics

Numbers should be seen in Q6 and Q7 for any port that a Q-Sys device is connected as that is where the Q-Sys system runs on the network LUXUL Simply Connected

Configuration			
OUI			
QoS	•		
Mirroring			-
UPnP			
GVRP	•		
sFlow			
UDLD			
Monitor			
Quick Setup	•		
Green Ethernet	•		-
Thermal Protection			-
Ports	•		-
State			
Traffic Overview			Ī
QoS Statistics			
QCL Status			
Detailed Statistics			
DHCP	•		1
Security	•		
LACP	•		
Loop Protection			
MVR	٠		
IPMC	•		-
LLDP		*	

Queuing Counters

				G	0	Q	1	Q	2	Q	3	Q	4	Q	5	Q	6	
	٠		Port	Rx	Тх	Rx	тх	Rx	тх	Rx	Тх	Rx	Тх	Rx	тх	Rx	Тх	
			1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Γ
	Ŧ		2	0	O	0	O	0	0	0	0	0	0	0	0	0	0	1
	٠		3	2	3006	0	0	0	0	0	0	0	O	0	0	0	0	T
	٠		4	2	3006	0	0	0	0	0	0	0	0	0	0	0	0	T
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	•		5	2	3006	0	0	0	0	O	0	0	0	O	0	0	0	t
			6	0	491	0	0	0	0	Ο	0	0	0	Ο	0	0	0	T
			Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	t
			8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	T
ics			9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Г
	*		10	0	O	0	0	0	0	0	0	0	0	0	0	0	0	T
	-		11	0	0	0	0	0	0	O	0	0	0	O	0	0	σ	T
			12	O	O	0	0	0	0	Ο	0	0	0	0	0	0	0	t
	٠		<u>13</u>	4422	4390	0	0	0	0	0	0	0	0	0	0	0	0	T
		-	14	0	0	0	0	0	0	Ο	0	0	0	0	0	0	0	t
				-		-				-								+





Navigate to Monitor > IPMC > IGMP Snooping > Status

Q-Sys uses IGMP v2. Querier and Host Version should indicate v2. Querier Status should indicate Active.

LUXUL			
Simply Connected			
LACP	•		
Loop Protection			
MVR	•		IC
IPMC	•		
IGMP Snooping	•		St
Status			
Groups Information			VI
IPv4 SFM Information			1
MLD Snooping	•		1
LLDP	•		-
MAC Table			RO
sFlow			P
UDLD			
Tools	•		1
Administration	•		2
Reboot			3
Factory Defaults			Ē
Firmware Update			4
Firmware Image Select			5
Configuration	•		6
Save startup-config			7
Download			6
Upload			8
Activate			9
Delete		*	10
4	10 A		110

GMP Snooping Status

atistics

VLAN	Querier	Host	Querier	Queries	Queries	V1 Reports	V2
ID	Version	Version	Status	Transmitted	Received	Received	Re
1	v2	v2	ACTIVE	23	0	0	

outer Port

sFlow		Port	Status
UDLD		1 vite	otatas
Tools	•	1	1020
Administration	•	2	
Reboot		3	
Factory Defaults		J	0.00
Firmware Update		4	99 <u>2</u> -9
Firmware Image Select		5	0.00
Configuration	•	6	
Save startup-config		0	1070
Download		7	
Upload		8	10.00
Activate		q	100
Delete	Ŧ		
	•	10	640





Navigate to Monitor > IPMC > IGMP Snooping > Groups Information

Q-SYS uses the following multicast groups:

224.0.1.129 used for PTPv2

224.0.23.175 used for QDP (Q-SYS Discovery Protocol)

This screen shows the groups and which ports/devices are part of the IGMP group

LUXUL		
Simply Connected		
LACP	•	
Loop Protection		
MVR	•	
IPMC	•	
IGMP Snooping	•	
Status		
Groups Information		
IPv4 SFM Information		
MLD Snooping	•	
LLDP	•	
MAC Table		
sFlow		
UDLD		
Tools	•	
Administration	•	
Reboot		
Factory Defaults		
Firmware Update		
Firmware Image Select		
Configuration	•	
Save startup-config		
Download		
Upload		
Activate		
Delete		¥
	•	

IGMP Snooping Group Information

Start from	VLAN 1				an	d gro	iup	ado	fres	s 1	224.0	.0.0				with	20					entr	ies pe	er pa	ige.		
								4						Por	t M	embe	ers	v.			- 2.1		u,)	4			
VLAN ID	Groups	1	2	З	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
1	224.0.1.129			~	V	V														1	~	~	V				
1	224.0.23.175													V						V	V	~	V				
1	239.255.255.250													V			V										



