VEO-XTI1C / VEO-XRI1C
VEO-XTI2L / VEO-XRI2L

How to configure D-Link DGS-1210 Ethernet Switch for Dante™ Networks and VEO over IP products

QUICK START GUIDE

INDEX

1. Introduction 3
2. Establishing communication with D-Link Ethernet Switch 3
3. Enabling IGMP Protocol 3
4. Enabling Jumbo Frame 4
5. Disabling Power Saving and EEE (Energy Efficient Ethernet) 5
6. Creating VLANs for Dante™, Video over IP and Control coexistence 6

1. Introduction

Due to the network requirements established by Audinate® for Dante™ Networks and taking in consideration the network requirements for our VEO over IP devices, this quick guide aims to explain how to configure the D-Link DGS-1210 family of switches in order to make them compliant to these requirements. All the requirements are mandatory for every switch used in a Dante or VEO over IP system, independently by the brands.

2. Establishing communication with D-Link Ethernet Switch

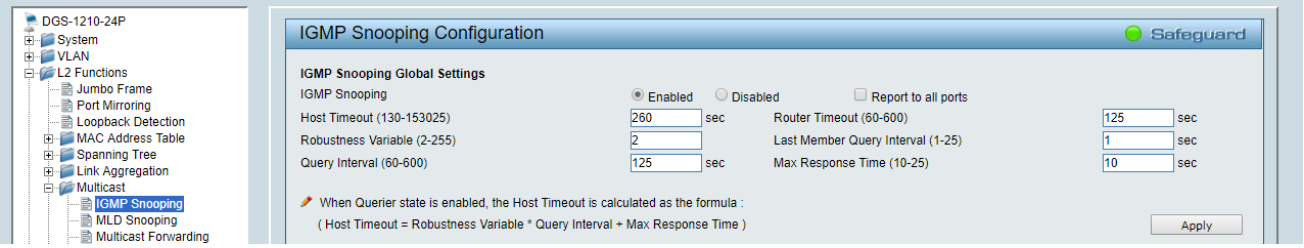
1. Connect your computer to the D-Link Ethernet Switch using an Ethernet cable. D-Link DSG-1210 Ethernet Switches come with a default Static IP address of **10.90.90.90**;
2. Configure your PC with a Static IP address in the same subnet such as 10.90.90.66, with subnet mask 255.0.0.0.
3. Open your Internet browser and type the default IP address of the switch: **http://10.90.90.90**. The default **Password** is "**admin**".

3. Enabling IGMP Protocol

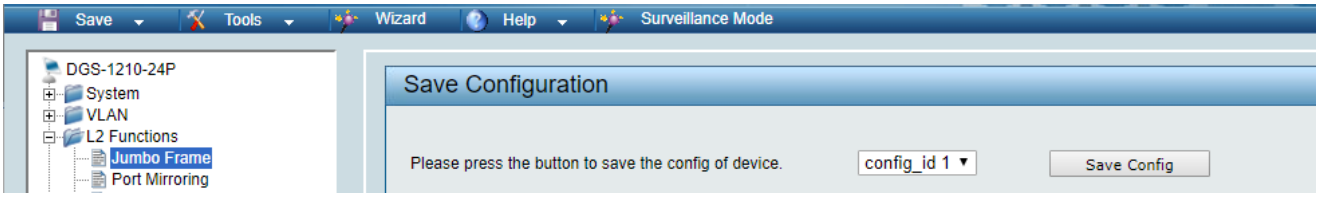
Internet Group Management Protocol (IGMP) is mandatory for the correct operation of VEO over IP products when they are configured as multicast devices. Without IGMP enabled, audio/video signal can't be transmitted properly or it may freeze.
With IGMP snooping, the Smart Managed Switch can make intelligent multicast forwarding decisions by examining the content of each frame's Layer 2 MAC header. IGMP snooping can help reduce cluttered traffic on the LAN. With IGMP snooping enabled, the Smart Managed Switch will forward multicast traffic only to connections that have group members attached.

1. Select **L2 Function→Multicast→IGMP Snooping**

2. Enable **IGMP Snooping** by activating the related selection box and clicking on **Apply**.



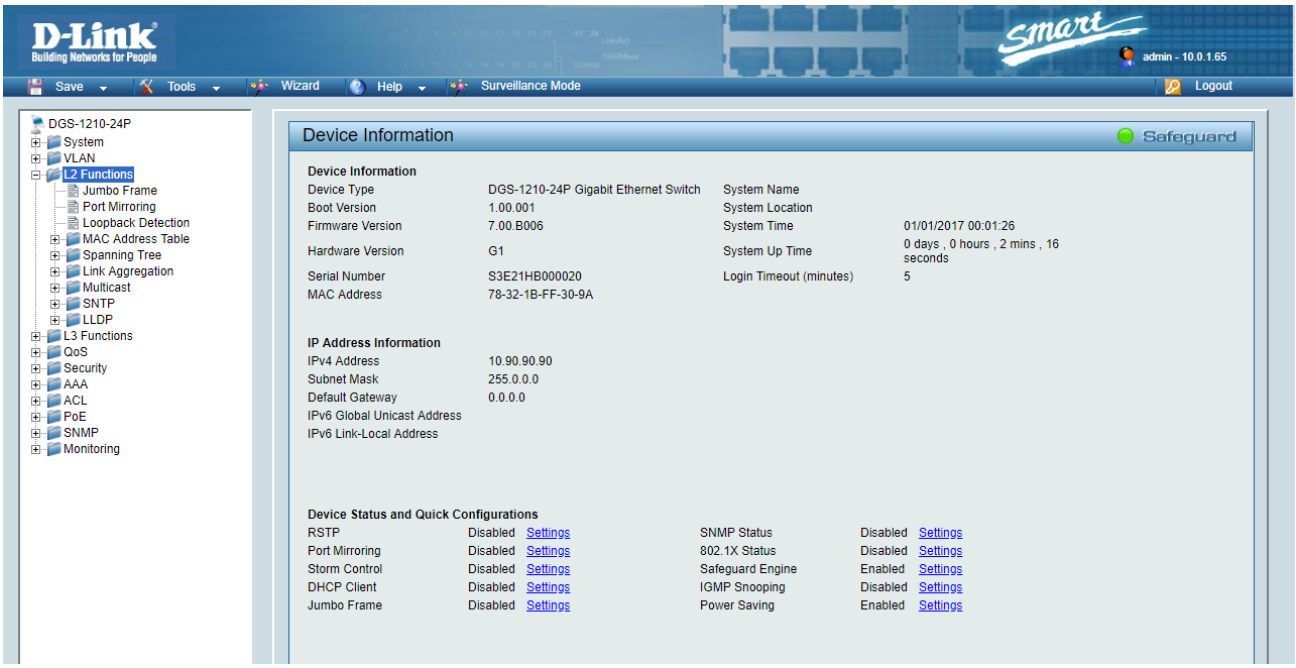
3. Select **Save** in the upper left corner and press **Save Config** button in order to ensure that all changes are saved as current configuration in use.



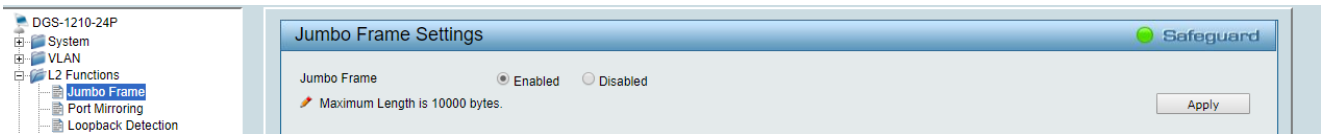
4. Enabling Jumbo Frame

D-Link Gigabit Smart Managed Switches support jumbo frames (frames larger than the Ethernet frame size of 1536 bytes) of up to 9216 bytes (tagged). It is disabled by default.

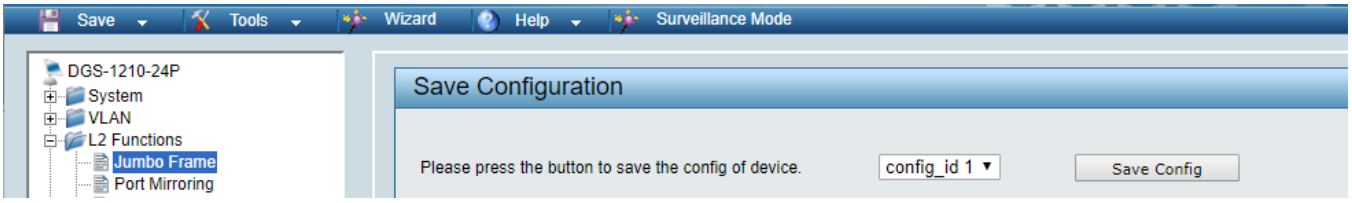
1. Select **L2 Function→ Jumbo Frame**



2. Enable **Jumbo Frame** by activating the related selection box and click on **Apply**.



3. Select **Save** in the upper left corner and press **Save Config** button in order to ensure that all changes are saved as current configuration in use.

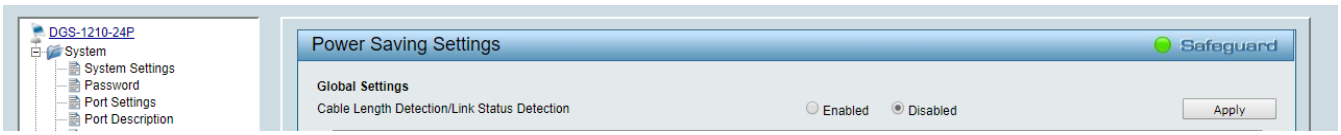


5. Disabling Power Saving and EEE (Energy Efficient Ethernet)

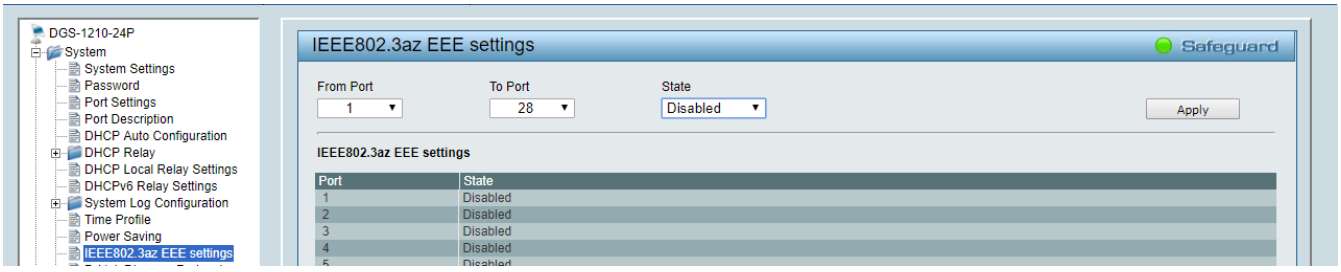
In order to prevent audio or video drops out, all the power saving features need to be disabled. This is a mandatory requirement for Dante™ Networks.

1. Select **System →Power Saving**

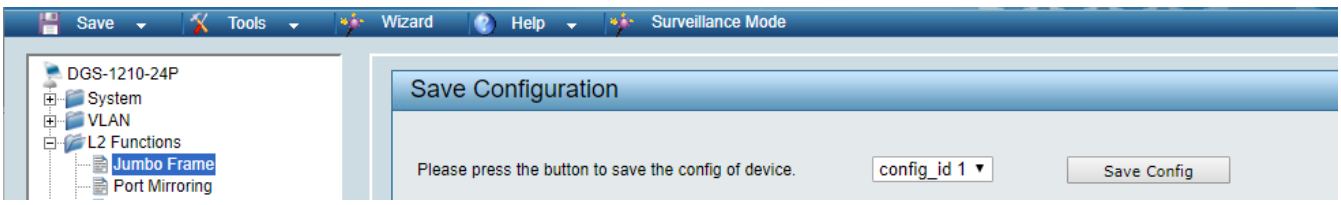
2. On **Global Settings** disable Cable Length Detection/Link Status Detection and press **Apply**



3. Select **IEEE802.3az EEE settings** and ensure that the feature is disabled on the ports where Dante or VEO devices are connected



4. Select **Save** in the upper left corner and press **Save Config** button in order to ensure that all changes are saved as current configuration in use.



6. Creating VLANs for Dante™, Video over IP and Control coexistence

In AV system where Dante™ and Video over IP traffic are sharing the same network switch, VLANs are highly recommended because Video over IP could interfere with Dante™ in the same network.

A VLAN allows isolating the network traffic of a predefined group of ports; in case of Audio and Video systems we need to create two VLANs: one for Audio and one for Video. In this case, a device connected to the Audio VLAN can't communicate with a device connected to the Video VLAN.

When a control device (like a touch panel) is required, it needs to communicate both with Audio and Video devices; in this case we need to use a particular feature called Asymmetric VLAN that allows sharing traffic between different VLANs only on predefined ports.

In the following example (Fig. 1) we have:

- **MIMO4040DN** matrix with Dante™ (Control on **port 1**; Dante on **port 2**)
- **WPNETTOUCH** (Control on **port 3**)
- **DN404BOB** (Dante/Control on **port 5**)
- **VEO-XTI2L** (Video/Control on **port 15**)
- **VEO-XRI2L** (Video/Control on **port 16**)
- **VEO-XRI2L** (Video/Control on **port 17**)

We need to create 2 VLANs like follows:

1 Audio/Control VLAN (default):	Ports 1-14
2 Video/Control VLAN:	Ports 15-28

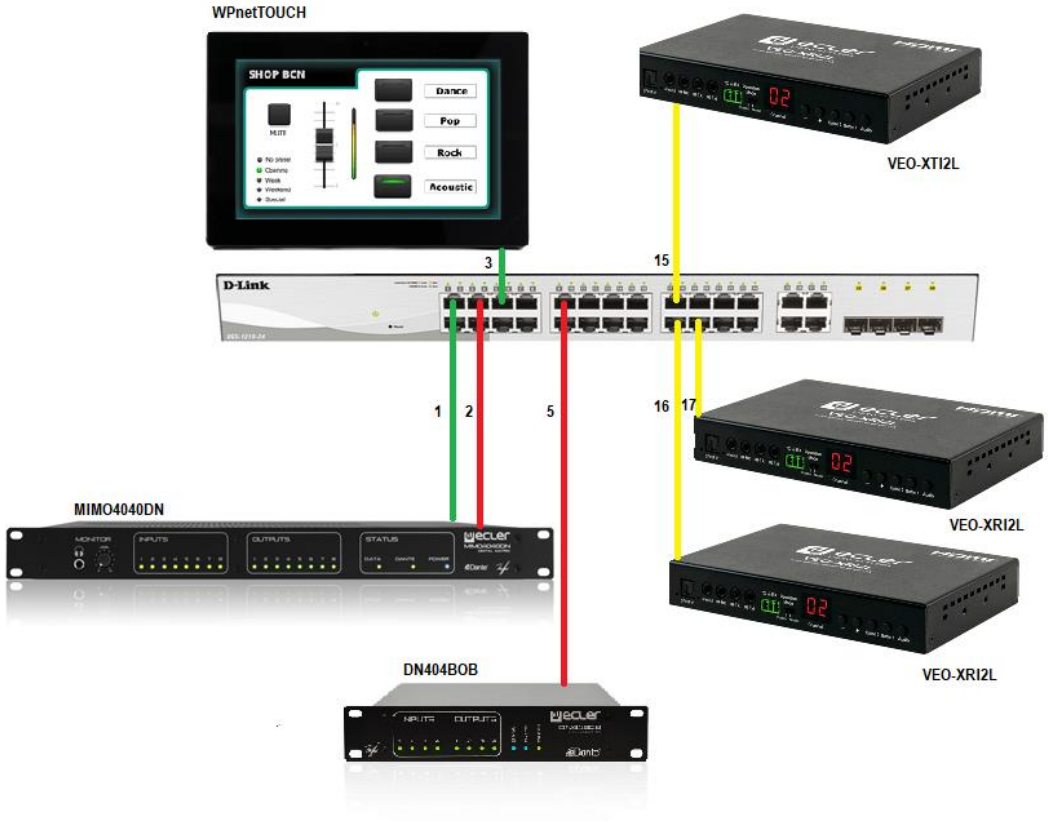
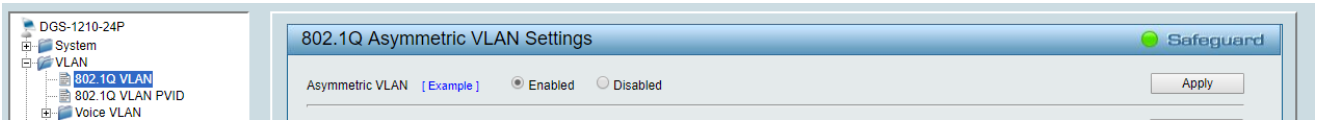
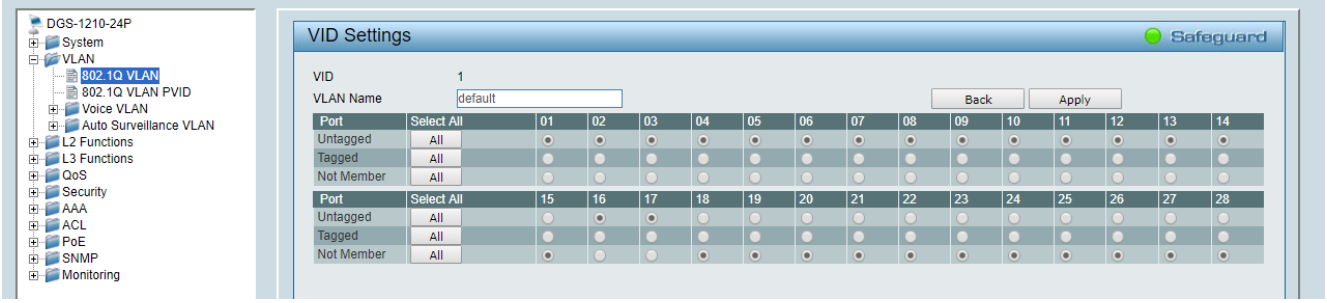


Fig. 1

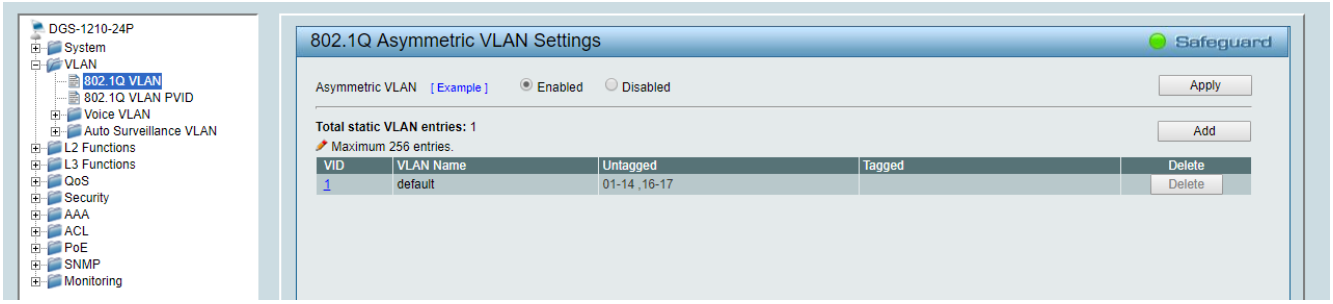
5. Select **VLAN→802.1Q VLAN,** enable **Asymmetric VLAN** and click on **Apply**



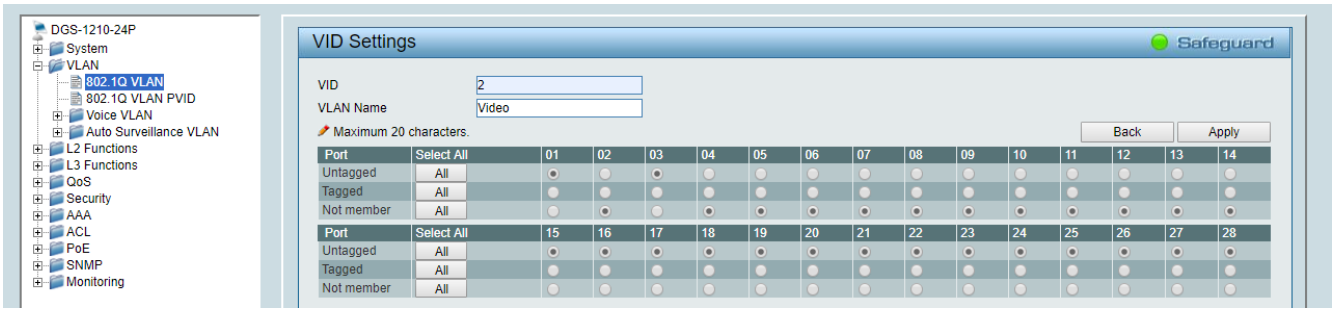
6. Click on 1 and mark as Untagged all the Audio/Control VLAN ports (1-14), adding the Video/Control VLAN ports that need to share Control (16-17). Click on the **Apply** button.



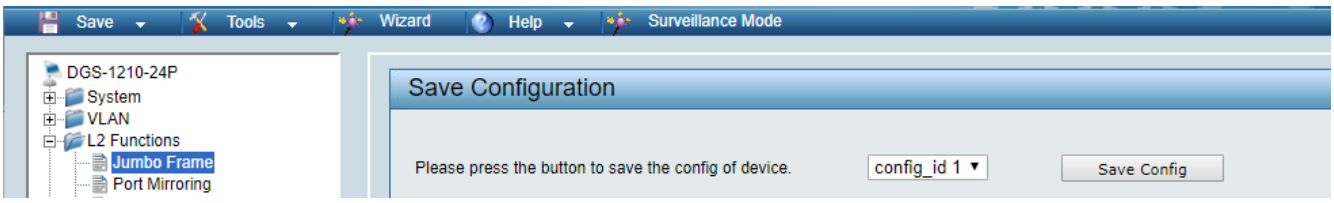
7. Create a second VLAN for Video/Control by clicking on **Add** button



8. Assign 2 as VID, and Video as Name to the new VLAN; mark as Untagged all the Video/Control VLAN ports (15-28), adding the Audio/Control VLAN ports that need to share Control traffic (1-3). Click on the **Apply** button.



9. Select **Save** in the upper left corner and press **Save Config** button in order to ensure that all changes are saved as current configuration in use.



All product characteristics are subject to variation due to production tolerances. **NEEC AUDIO BARCELONA S.L.** reserves the right to make changes or improvements in the design or manufacturing that may affect these product specifications.

For technical queries contact your supplier, distributor or complete the contact form on our website, in Support / Technical requests.

Motors, 166-168 08038 Barcelona - Spain - (+34) 932238403 | information@ecler.com | www.ecler.com