

This document describes two QoS solutions for VOIP. First, you could setup QoS on the popular Linksys 54G Cable Modem/DSL router. After this, we have a standalone product: The D-Link DI-102 VOIP Packet Prioritizer.

1. Enabling QoS on Linksys SOHO Routers -- this is the Linksys 54G Router Screen

Applications & Gaming | Setup | Wireless | Security | Access Restrictions | **Applications & Gaming** | Administration | Status

Port Range Forward | Port Triggering | DMZ | GoS

QoS Enable Disable

Upstream Bandwidth Manual 768 kbps

Device Priority

Device name	Priority	MAC Address
<input type="text"/>	Low	00 : 00 : 00 : 00 : 00 : 00
<input type="text"/>	Low	00 : 00 : 00 : 00 : 00 : 00

Ethernet Port Priority

Port	Priority	Flow Control
Port 1	Low	Enable
Port 2	High	Enable
Port 3	Low	Enable
Port 4	Low	Enable

Application Priority

Optimize Gaming Applications

Application Name	Priority	Specific Port #
<input type="text"/>	Low	0
<input type="text"/>	Low	0
<input type="text"/>	Low	0
<input type="text"/>	Low	0
<input type="text"/>	Low	0
<input type="text"/>	Low	0
<input type="text"/>	Low	0
<input type="text"/>	Low	0

Wireless QoS

WMM Support: Disable (Default : Disable)

Wired QoS

Two types of Quality of Service features are available, Wired QoS which controls devices plugged in to the router with a Ethernet cable, and Wireless QoS, which control devices that are wirelessly connected to the router.

Device Priority : You may specify priority for all traffic from a device on your network by giving the device a Device Name, specifying priority and entering its MAC address.

Ethernet Port Priority : You may control your data rate according to which physical LAN port your device is plugged into. You may assign High or Low priority to data traffic from devices connected on LAN ports 1 through 4.

Application Priority : You may control your data rate with respect to the application that is consuming bandwidth. Check **Optimize Gaming Applications** to automatically allow common game application ports to have a higher priority. You may customize up to eight applications by entering the port number they use.

Wireless QoS

Wireless QoS is also referred to as **Wi-Fi MultiMedia™ (WMM)** by the Wi-Fi Alliance™. Select Enable to utilize WMM if you are using other wireless devices that are also WMM certified.

No Acknowledgement : Enable this option if you would like to disable acknowledgement. If this option

My home VOIP Phone is attached to a Linksys PAP2T Internet Phone Adapter on Port 2 of the 54G's 4-port Ethernet Switch. Thus, simply by enabling it, my VOIP materials from Home get a higher priority than other ports, and thus other non-wireless applications. As you can see from the screen choices, you can also enable application priorities and wireless options as well. This is a typical Linksys situation, not too many options and easy to do.

2. D-Link DI-102 VOIP QOS Adaptor Packet Prioritizer -- Cost 2/07 About \$80

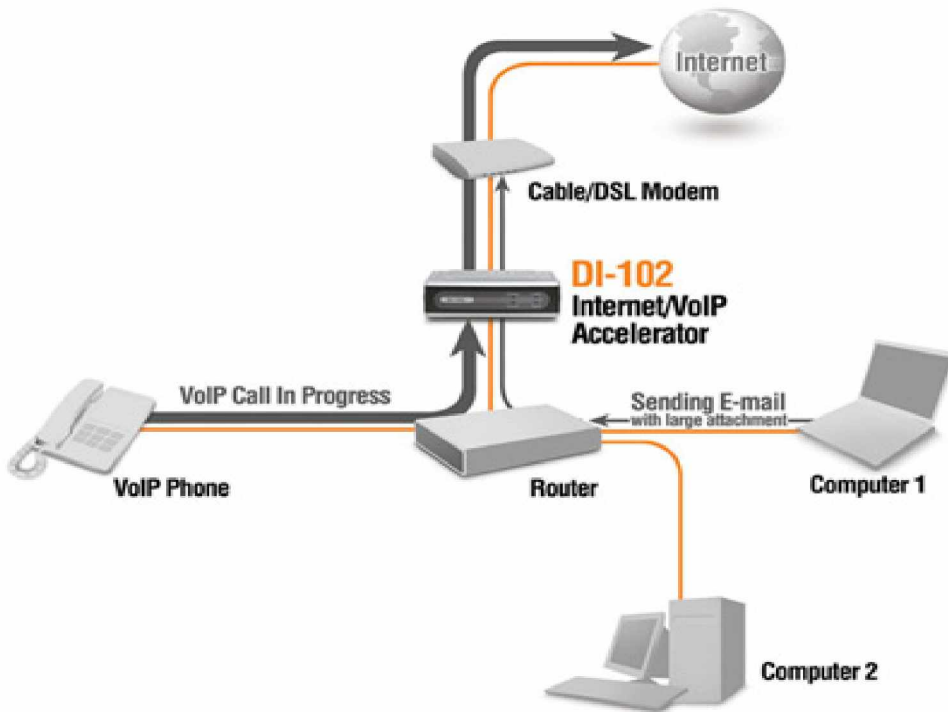
The D-Link DI-102 Broadband Internet/VoIP Accelerator is an inexpensive device designed to enhance your VoIP calling experience. This product provides Packet Prioritization, Improves QOS and Call Quality.

Typical Internet applications such as e-mail and chat require minimal bandwidth. But other applications such as Voice over IP (VoIP) and video streaming/conferencing require much higher bandwidth as they are real-time sensitive. The DI-102 Broadband Internet/VoIP Accelerator uses an intelligent engine to detect and prioritize bandwidth-sensitive packets so that they can be sent over the Internet as soon as the request is made. This results in faster processing of real-time based packets, less latency, and a better user experience.

Product Features:

- Intelligently Prioritizes Bandwidth-Sensitive Traffic
- Ideal for Real-Time Applications such as VoIP, Video Streaming and Gaming
- Improves Call Quality and Minimizes Interruptions
- Plug and Play

For instance, there are two computers on your network and both are online - one is using an e-mail program and the other is making a VoIP call. When data packets from each computer are sent to the Internet at the same time, the DI-102 will automatically classify the VoIP call as more important and send the VoIP packets first, and the e-mail data second. The user on the phone can immediately notice the benefits whereas the user sending e-mails will barely notice a change.



Setting up the DI-102 only requires 3 easy steps. Power it up, connect your cable or DSL modem to the WAN port and then your router's WAN port to the LAN port. You don't have to worry about compatibility because this device works with virtually all Internet connection types and broadband routers on the market. In addition, the DI-102 dynamically configures itself by automatically detecting your Internet upload speed and is ready for use once it's plugged into your existing network infrastructure. It's a pure plug and play solution!

This solution will not work exactly as diagrammed at a home site with no DMZ. You have to add some more products to make this work.

Now, with this Internet/VoIP Accelerator, experience static-free VoIP calls, jitter-free video conferencing, and lag-free online gaming.