

ServerIPAddress	The LAN side IP address to forward the packet to when it is received at a port on the WAN side within the port range in this rule with matching transport protocol	
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## QoS Settings

QoS only applies to upstream traffic to the WAN side. The QoS settings described here takes effect in router mode only. It is based on Traffic Control(TC) and Hierarchy Token Bucket (HTB). Refer to the HTB home pages for details on TC and HTB (<http://luxik.cdi.cz/~devik/qos/htb/>).

Four priority classes of upstream traffic are defined in the OBi QoS policy: The Restricted class has the highest priority, followed by the High, the Medium, and the Low classes. To fully utilize the upstream bandwidth, it is important to have a relatively accurate upstream bandwidth estimation configured in the UpStreamBandwidth parameter; this tells the OBi the total upstream bandwidth to allocate to the four priority classes.

The guaranteed uplink bandwidth for Restricted class traffic is configured in the RestrictedBandwidth parameter. The rest of the upstream bandwidth (the UpStreamBandWidth less the RestrictedBandwidth) is divided among the High, Medium, and Low classes proportionally according to the assigned weighting factor for each class in the configuration. Let  $W_{high}$ ,  $W_{medium}$ , and  $W_{low}$  be the respective weight assigned to the High, Low, and Medium classes, the corresponding guaranteed uplink bandwidth for each class is calculated using the following formulae:

$$BW_{high} = (\text{UpstreamBandwidth} - \text{RestrictedBandwidth}) * W_{high} / (W_{high} + W_{medium} + W_{low}) \quad (\text{Kbps})$$

$$BW_{medium} = (\text{UpstreamBandwidth} - \text{RestrictedBandwidth}) * W_{medium} / (W_{high} + W_{medium} + W_{low}) \quad (\text{Kbps})$$

$$BW_{low} = (\text{UpstreamBandwidth} - \text{RestrictedBandwidth}) * W_{low} / (W_{high} + W_{medium} + W_{low}) \quad (\text{Kbps})$$

The native voice related traffic is always classified as Restricted. Other network packets are classified based on the Differentiated Service Code Point (DSCP) in their IP headers. The 64 possible DSCP codes (0 – 63) can be mapped into one of the four priority classes using the configurable DSCP to Priority Class Mapping table.

Below is a screen shot of the QoS Settings web page.

Setup Wizard

- Status
- Router Configuration
  - WAN Settings
  - LAN Settings
  - DHCP Reservation
  - Firewall and DMZ
  - Port Forwarding
  - QoS Settings
- System Management
- Service Providers
- Voice Services
- Physical Interfaces
- Codecs
- Tone Settings
- Ring Settings
- Star Codes
- User Settings
- External USB Storage

**QoS Settings**



QoS General Settings

Parameter Name	Value	Default	
Enable	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<a href="#">?</a>
UpStreamBandwidth	2048	<input checked="" type="checkbox"/>	<a href="#">?</a>
RestrictedBandwidth	256	<input checked="" type="checkbox"/>	<a href="#">?</a>

Priority Class Bandwidth Allocation

Parameter Name	Value	Default	
High	5	<input checked="" type="checkbox"/>	<a href="#">?</a>
Medium	3	<input checked="" type="checkbox"/>	<a href="#">?</a>
Low	2	<input checked="" type="checkbox"/>	<a href="#">?</a>

DSCP to Priority Class Mapping

Parameter Name	Value	Default	
0	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
1	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
2	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
3	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
4	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
5	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
6	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
7	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
8	Low	<input checked="" type="checkbox"/>	<a href="#">?</a>
9	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
10	Low	<input checked="" type="checkbox"/>	<a href="#">?</a>
11	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
12	Low	<input checked="" type="checkbox"/>	<a href="#">?</a>
13	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
14	Low	<input checked="" type="checkbox"/>	<a href="#">?</a>
15	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
16	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
17	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
18	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
19	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
20	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
21	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
22	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
23	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
24	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
25	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
26	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>

28	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
29	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
30	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
31	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
32	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
33	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
34	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
35	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
36	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
37	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
38	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
39	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
40	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
41	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
42	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
43	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
44	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
45	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
46	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
47	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
48	High	<input checked="" type="checkbox"/>	<a href="#">?</a>
49	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
50	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
51	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
52	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
53	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
54	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
55	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
56	High	<input checked="" type="checkbox"/>	<a href="#">?</a>
57	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
58	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
59	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
60	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
61	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
62	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>
63	Medium	<input checked="" type="checkbox"/>	<a href="#">?</a>

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### QoS Parameter Guide:

Parameter	Description	Default Setting
<b>QoS General Setting</b>		
Enable	Enable QoS Service (take effect in router mode only)	No
UpStreamBandwidth	The total upstream bandwidth in Kbps	2048
RestrictedBandwidth	The guaranteed bandwidth for Restricted class traffic in Kbps	512
<b>Priority Class Bandwidth Allocation</b>		
High	The guaranteed uplink bandwidth allocation weight for High Priority class traffic. It must be a value between 1 and 10	5
Medium	The guaranteed uplink bandwidth allocation weight for Medium Priority class traffic. It must be a value between 1 and 10	3

Low	The guaranteed uplink bandwidth allocation weight for Low Priority class traffic. It must be a value between 1 and 10	2
<b>DSCP to Priority Class Mapping</b>		
$N$ ( $N = 0 - 63$ )	<p>The priority class to be assigned to the packet which has the DSCP code equal to <math>N</math> in the IP header. The choices are:</p> <p>Restricted High Medium Low</p> <p>Note: Restricted class has the highest priority</p>	<p>For <math>N = 8, 10, 12,</math> or <math>14,</math> the default is Low.</p> <p>For <math>N = 48</math> or <math>56,</math> the default is High.</p> <p>For all other DSCP codes, the default is Medium</p>

## OBiWiFi Wireless USB Adapter

Note: OBiWiFi is available on the OBi2 Series and OBi3 Series models only.

OBiWiFi supports the 802.11 b/g/n wireless standards so that an OBiWiFi Wireless Adapter may be used with the USB 2.0 port of the OBi2 Series and OBi3 Series devices. From an IP routing point of view, OBiWiFi is an additional WAN interface. If both WAN interfaces are connected (Ethernet port and OBiWiFi), the traffic destined to the WAN side will route through the Ethernet interface only, unless a) the WAN (Ethernet) interface and OBiWiFi are on different subnet and b) the destination address is on the same subnet as OBiWiFi.

If the OBi is set to function as a LAN switch rather than a router, OBiWiFi is disabled internally.