

# Enabling WAN VLAN Tagging

---

#### Copyright

Copyright© 2016 NetComm Wireless Limited. All rights reserved.

The information contained herein is proprietary to NetComm Wireless. No part of this document may be translated, transcribed, reproduced, in any form, or by any means without prior written consent of NetComm Wireless.

Trademarks and registered trademarks are the property of NetComm Wireless Limited or their respective owners. Specifications are subject to change without notice. Images shown may vary slightly from the actual product.



**Note:** This document is subject to change without notice.

This document covers the following products:

NetComm Wireless VDSL/ADSL WiFi Gigabit Modem Router (NF4V)

NetComm Wireless VDSL/ADSL WiFi Modem Router (NF10W)

NetComm Wireless VDSL/ADSL N300 WiFi Modem Router with VoIP (NF10WW)

NetComm Wireless VDSL/ADSL Dual Band AC1600 Gigabit WiFi Modem Router with VoIP (NF17ACV)

NetComm Wireless VDSL/ADSL AC1600 WiFi Gigabit Modem Router (NF8AC)

DOCUMENT VERSION	DATE
1.0 - Initial document release	9 August 2016
1.1 – Minor corrections to VLAN Tagging instructions	22 August 2016

*Table 1 - Document Revision History*

## Logging in to the router

Log in to your router as described in the User Guide. If you have not customized the router settings, you may use the default settings below:

DEFAULT SETTINGS	
IP Address	192.168.20.1
Username	admin
Password	admin

Authentication Required x

http://192.168.20.1 requires a username and password.  
Your connection to this site is not private.

User Name:

Password:


## Creating a Layer 2 Interface

Click on the hyperlink below for your Layer 2 Interface type and follow the instructions to configure your Layer 2 Interface type:

-  [ATM \(ADSL\) Interface](#)
-  [VDSL \(PTM\) Interface \(FTTN / FTTB\)](#)
-  [ETH Interface \(FTTH / FTTP / Fixed Wireless\)](#)

### Configuring an ADSL ATM Interface

- Navigate to **Advanced Setup** -> **Layer2 Interface** -> **ATM Interface**. Click on the **“Add”** button.


**NetCommWireless**

Device Info

Basic Setup

Advanced Setup

Layer 2 Interface

ATM Interface

PTM Interface

ETH Interface

WAN Service

VPN

LAN

NAT

DSL ATM Interface Configuration

Choose Add, or Remove to configure DSL ATM interfaces.

Interface	VPI	VCI	DSL Latency	Category	Peak Cell Rate(cells/s)	Sustainable Cell Rate(cells/s)	Max Burst Size(bytes)	Min Cell Rate(cells/s)	Link Type	Connection Mode	IP QoS	MPAAL Precedence/Algorithm/Weight	Remove
<div style="display: flex; justify-content: center; gap: 20px;"> <input type="button" value="Add"/> <input type="button" value="Remove"/> </div>													

2. Configure ADSL Layer 2 Interface settings:
  - a. Enter the VPI and VCI settings as defined by your ISP.
  - b. Select the DSL Link type (EoA / PPPoA / IPoA) as defined by your ISP.

**ATM PVC Configuration**

This screen allows you to configure a ATM PVC.

VPI:  [0-255]  
 VCI:  [32-65535]

Select DSL Latency  
 Path0 (Fast)  
 Path1 (Interleaved)

Select DSL Link Type (EoA is for PPPoE, IPoE, and Bridge.)  
 EoA  
 PPPoA  
 IPoA

Encapsulation Mode:  ▼

Service Category:  ▼

Minimum Cell Rate:  [cells/s] (-1 indicates no shaping)

Select Scheduler for Queues of Equal Precedence as the Default Queue  
 Weighted Round Robin  
 Weighted Fair Queuing

Default Queue Weight:  [1-63]  
 Default Queue Precedence:  [1-8] (lower value, higher priority)

VC WRR Weight:  [1-63]  
 VC Precedence:  [1-8] (lower value, higher priority)

Note: VC scheduling will be SP among unequal precedence VC's and WRR among equal precedence VC's. For single queue VC, the default queue precedence and weight will be used for arbitration. For multi-queue VC, its VC precedence and weight will be used for arbitration.

3. To complete the VLAN Tagging configuration, continue to [Configuring VLAN Tagging for an ADSL WAN interface](#)

## Configuring a VDSL PTM Interface (FTTN / FTTB)

1. Navigate to **Advanced Setup -> Layer2 Interface -> PTM Interface**. Click the “Add” button.

**PTM Configuration**

This screen allows you to configure a PTM connection.

Select DSL Latency  
 Path0 (Fast)  
 Path1 (Interleaved)

Select Scheduler for Queues of Equal Precedence as the Default Queue  
 Weighted Round Robin  
 Weighted Fair Queuing

Default Queue Weight:  [1-63]  
 Default Queue Precedence:  [1-8] (lower value, higher priority)

Default Queue Minimum Rate:  [1-0 Kbps] (-1 indicates no shaping)  
 Default Queue Shaping Rate:  [1-0 Kbps] (-1 indicates no shaping)  
 Default Queue Shaping Burst Size:  [bytes] (shall be >=1600)

2. To complete the VLAN Tagging configuration, continue to [Configuring VLAN Tagging for a VDSL WAN interface](#)

## Configuring an ETH Interface (FTTH / FTTP / Fixed Wireless)

1. Navigate to **Advanced Setup** -> **Layer2 Interface** -> **ETH Interface**. Click the “**Add**” button.
2. Select the ETH WAN interface port. Click the “**Apply/Save**” button.

**ETH WAN Configuration**  
This screen allows you to configure an ETH port .

**Full Gigabit WAN Interfaces (GMAC): eth4**

Select an ETH port:

3. Navigate to **Advanced Setup** -> **WAN Service**. Click the “**Add**” button.
4. Select the created **atm0** interface. Click the “**Next**” button.

**WAN Service Interface Configuration**

Select a layer 2 interface for this service

Note: For ATM interface, the descriptor string is (portId\_vpi\_vci)  
 For PTM interface, the descriptor string is (portId\_high\_low)  
 Where portId=0 --> DSL Latency PATH0  
 portId=1 --> DSL Latency PATH1  
 portId=4 --> DSL Latency PATH0&1  
 low =0 --> Low PTM Priority not set  
 low =1 --> Low PTM Priority set  
 high =0 --> High PTM Priority not set  
 high =1 --> High PTM Priority set

5. To complete the VLAN Tagging configuration, continue to [Configuring VLAN Tagging for an ETH WAN interface \(FTTH/FTTP/Fixed Wireless\)](#)

## Configuring VLAN Tagging

### Configuring VLAN Tagging for an ADSL WAN interface

1. Select the correct WAN service type (defined by your ISP).

**WAN Service Configuration**

Select WAN service type:

PPP over Ethernet (PPPoE)  
 IP over Ethernet  
 Bridging  
 Allow as IGMP Multicast Source  
 Allow as MLD Multicast Source

Enter Service Description:

For tagged service, enter valid 802.1P Priority and 802.1Q VLAN ID.  
For untagged service, set -1 to both 802.1P Priority and 802.1Q VLAN ID.

Enter 802.1P Priority [0-7]:

Enter 802.1Q VLAN ID [0-4094]:

Network Protocol Selection:

- Configure the VLAN tagging setting (defined by your ISP). If the ISP has not defined an 802.1P Priority, enter **0** in the **Enter 802.1P Priority [0-7]** field. Click the **“Next”** button.



Note: Enter “-1” to disable tagging.

Enter 802.1Q VLAN ID [0-4094]:

- Complete the WAN service setup wizard.

## Configuring VLAN Tagging for a VDSL WAN interface (FTTN / FTTB)

- Navigate to **Advanced Setup -> WAN Service**. Click the **“Add”** button.
- Select the created **ptm0** interface. Click the **“Next”** button.

### WAN Service Interface Configuration

Select a layer 2 interface for this service

Note: For ATM interface, the descriptor string is (portId\_vpi\_vci)  
 For PTM interface, the descriptor string is (portId\_high\_low)  
 Where portId=0 --> DSL Latency PATH0  
 portId=1 --> DSL Latency PATH1  
 portId=4 --> DSL Latency PATH0&1  
 low =0 --> Low PTM Priority not set  
 low =1 --> Low PTM Priority set  
 high =0 --> High PTM Priority not set  
 high =1 --> High PTM Priority set

- Select the correct WAN service type (defined by your ISP).

### WAN Service Configuration

Select WAN service type:

- PPP over Ethernet (PPPoE)
- IP over Ethernet
- Bridging

Enter Service Description:

For tagged service, enter valid 802.1P Priority and 802.1Q VLAN ID.  
 For untagged service, set -1 to both 802.1P Priority and 802.1Q VLAN ID.

Enter 802.1P Priority [0-7]:   
 Enter 802.1Q VLAN ID [0-4094]:

Network Protocol Selection:

- Configure VLAN tagging setting (defined by your ISP). If the ISP has not defined an 802.1P Priority, enter **0** in the **Enter 802.1P Priority [0-7]** field. Click **“Next”**



Note: Enter “-1” to disable tagging

Enter 802.1Q VLAN ID [0-4094]:

- Complete the WAN service setup wizard.

## Configuring VLAN Tagging for an ETH WAN interface (FTTH/FTTP/Fixed Wireless)

1. Navigate to **Advanced Setup -> WAN Service**. Click the **“Add”** button.
2. Select the created eth4 interface. Click the **“Next”** button.

### WAN Service Interface Configuration

Select a layer 2 interface for this service

Note: For ATM interface, the descriptor string is (portid\_vpi\_vci)  
 For PTM interface, the descriptor string is (portid\_high\_low)  
 Where portid=0 --> DSL Latency PATH0  
 portid=1 --> DSL Latency PATH1  
 portid=4 --> DSL Latency PATH0&1  
 low =0 --> Low PTM Priority not set  
 low =1 --> Low PTM Priority set  
 high =0 --> High PTM Priority not set  
 high =1 --> High PTM Priority set

eth4/eth4 ▼

Back Next

3. Select your WAN service type.

### WAN Service Configuration

Select WAN service type:

- PPP over Ethernet (PPPoE)
- IP over Ethernet
- Bridging

Enter Service Description: ETH WAN

For tagged service, enter valid 802.1P Priority and 802.1Q VLAN ID.  
 For untagged service, set -1 to both 802.1P Priority and 802.1Q VLAN ID.

Enter 802.1P Priority [0-7]:

Enter 802.1Q VLAN ID [0-4094]:

Network Protocol Selection:

IPv4 Only ▼

4. Configure VLAN tagging setting (defined by your ISP). If the ISP has not defined an 802.1P Priority, enter **0** in the **Enter 802.1P Priority [0-7]** field. Click the **“Next”** button.



Note: Enter “-1” to disable tagging

Enter 802.1Q VLAN ID [0-4094]:

5. Complete the WAN service setup wizard.