

Vigor 166

G.Fast Modem

Quick Start Guide

Version: 2.2

Firmware Version: V4.2.7_BT

Region: United Kingdom & Ireland

For updates and support, visit www.draytek.co.uk

Date: Dec. 2024

Note: Product specification is subject to continuous evolution which may not always be reflected in current documentation. For the formal specification and details of the supported features of your product, please refer only to the web site at www.draytek.co.uk

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EU Declaration of Conformity

We DrayTek Corp. , office at No.26, Fushing Rd., Hukou, Hsinchu Industrial Park, Hsinchu 303, Taiwan, declare under our sole responsibility that the product

- Product name: G.Fast Modem
- Model number: Vigor166
- Manufacturer: DrayTek Corp.
- Address: No.26, Fushing Rd., Hukou, Hsinchu Industrial Park, Hsinchu 303, Taiwan



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- Importer: UK - CMS Distribution Limited, 15 Worship Street, London, EC2A 2DT
Ireland - CMS Distribution Limited, Bohola Road, Kiltimagh, Co Mayo, Ireland

UK PSTI STATEMENT OF COMPLIANCE

We, DrayTek Corp., office at No.26, Fushing Rd., Hukou, Hsinchu Industrial Park, Hsinchu 303, Taiwan, declare under our sole responsibility that the product

The full text of the PSTI Declaration of Conformity is available at the following internet address:
<https://fw.draytek.com.tw/UK/PSTI/>

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is in conformity with the relevant UK Statutory Instruments: The Product Security and Telecommunications Infrastructure (Security Requirements for Relevant Connectable Products) Regulations 2023 ("Security Requirements").

Standard	Version
The Product Security and Telecommunications Infrastructure Regulations	2023 Schedule 1
Support Period	3 years after the EOS notification

Please note that this statement of compliance, including the Defined Support Period stated herein, is only applicable to products sold in the UK.

This Statement of Compliance is retained by DrayTek for 10 years after date of issue.

Hsinchu
(place)

19th Nov., 2024
(date)

Alan Wen
Chief Executive Officer, CEO
(Legal Signature)



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Firmware & Tools Updates

Due to the continuous evolution of DrayTek technology and emerging risks, router firmware updates may be issued. Please consult the DrayTek web site for more information on newest firmware, tools and documents: www.draytek.co.uk (For UK/Ireland)

Regional and Network Compatibility

For all models, please check that you have been supplied with a device intended for your geographic region and networks. Hardware and software varies by region, as well as local support and warranty services. To be sure of compatibility and local support, ensure that you are buying the correct product through authorized channels. The outside of the product's box will state the region compatibility (e.g. "Applied Region: UK"). If you are unsure, check with DrayTek or your supplier. The use of unofficial components (e.g. PSUs) or adapting interfaces or the use of unauthorized software/firmware may cause malfunction, product damage or personal danger and invalidates your warranty and access to support services.

The external power supply used for each product will be model dependent.

A	Manufacturer	1	2	3	4	5	6	7	8	9	10	11	12
B	Address	No. 222, Sec. 2, Nankan Rd., Lujhu Township, Taoyuan County 338, Taiwan	No. 222, Sec. 2, Nankan Rd., Lujhu Township, Taoyuan County 338, Taiwan	No. 222, Sec. 2, Nankan Rd., Lujhu Township, Taoyuan County 338, Taiwan	No. 222, Sec. 2, Nankan Rd., Lujhu Township, Taoyuan County 338, Taiwan	No. 222, Sec. 2, Nankan Rd., Lujhu Township, Taoyuan County 338, Taiwan	No. 5, Lane 83, Lung-Sou St., Taoyuan City 330, Taiwan	No. 5, Lane 83, Lung-Sou St., Taoyuan City 330, Taiwan	No. 5, Lane 83, Lung-Sou St., Taoyuan City 330, Taiwan	No. 5, Lane 83, Lung-Sou St., Taoyuan City 330, Taiwan	Sangtai Industrial Park, Guanwai Xiaobaimang Songbai Road, Nanshan District, 518108 Shenzhen, Guangdong, China	Sangtai Industrial Park, Guanwai Xiaobaimang Songbai Road, Nanshan District, 518108 Shenzhen, Guangdong, China	Sangtai Industrial Park, Guanwai Xiaobaimang Songbai Road, Nanshan District, 518108 Shenzhen, Guangdong, China
C	Model identifier	2ABB012F UK	2ABB018F UK	2ABL024F UK	2ABL030F UK	2ABN036F UK	WA-12M12F G	WB-18D12F G	WA-24Q12F G	WA-36A12F G	MS-V2000R120-024Q0-GB	MS-V2500WR120-030E0-GB	V30-V3000R120-036T0-GB
D	Input voltage	100-240V	100-240V	100-240V	100-240V	100-240V	100-240V	100-240V	100-240V	100-240V	100-240V	100-240V	100-240V
E	Input AC frequency	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
F	Output voltage DC	12.0V	12.0V	12.0V	12.0V	12.0V	12.0V	12.0V	12.0V	12.0V	12.0V	12.0V	12.0V
G	Output current	1.0A	1.5A	2.0A	2.5A	3.0A	1.0A	1.5A	2.0A	3.0A	2.0A	2.5A	3.0A
H	Output power	12.0W	18.0W	24.0W	30.0W	36.0W	12.0W	18.0W	24.0W	36.0W	24.0W	30.0W	36.0W
I	Average active efficiency	84.9%	86.2%	87.6%	87.8%	89.8%	83.7%	85.4%	88.6%	88.2%	87.8%	89.5%	89.3%
J	Efficiency at low load 10%	73.6%	78.0%	81.3%	83.3%	83.7%	74.5%	80.5%	86.4%	85.4%	85.4%	84.7%	87.7%
K	No-load power consumption	0.07W	0.07W	0.07W	0.07W	0.07W	0.07W	0.10W	0.07W	0.10W	0.10W	0.08W	0.10W

External power supply (Power Adapter) information.

For more information, please visit www.draytek.co.uk.

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1. Introduction

Thank you for purchasing this DrayTek Vigor 166 G.Fast DSL modem. It provides Internet connectivity through G.Fast, VDSL and ADSL lines, outputting to 2x Gigabit (1000BaseT) Ethernet ports.

The Vigor 166's primary function is as a transparent bridge modem for G.Fast and xDSL services - not as a router/firewall in itself. It connects a secondary router or other device to your G.Fast / DSL line, where that device does not directly support DSL itself.

As a bridge, the Vigor 166 only provides the physical conversion from G.Fast & xDSL (ADSL or VDSL) to Ethernet, adding the VLAN tag 101 required for communication on the OpenReach VDSL network.

All firewalling, routing and other advanced routing functions are managed by your secondary device, such as; a separate router without built-in xDSL capability, Hardware Firewall, PC-based software router, etc.

The Vigor 166 comes preconfigured for most UK ISPs. Therefore, in most cases you do not need to perform any setup of the Vigor 166 at all. You only need to physically connect it (plug it in) and then configure your connected router/firewall.

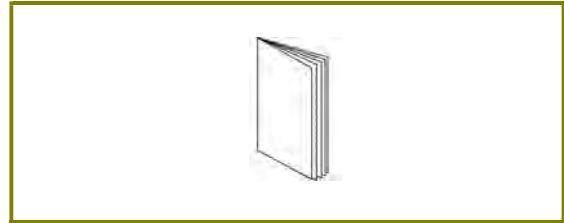
Your ISP username and password go into your router, not the Vigor 166, which just acts as the G.Fast/DSL-to-Ethernet bridge.

Alternatively, the Vigor 166 can operate as the NAT router on your network, with the Vigor 166 handling the connection to the ISP directly. This allows any devices connected to its network ports to access the Internet.

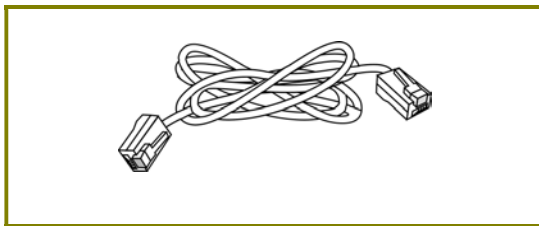
2. Package Contents



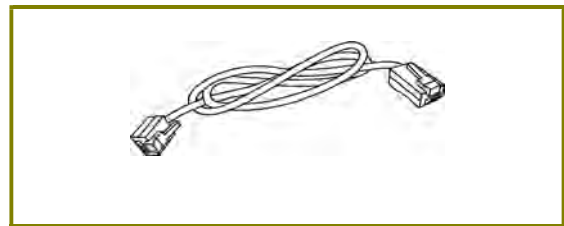
Vigor 166 Modem



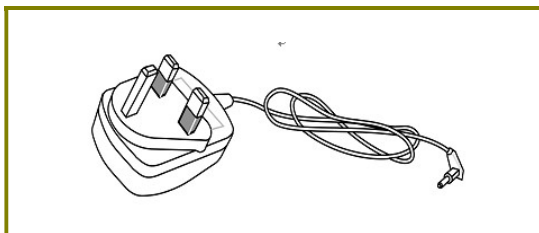
Quick Start Guide



RJ-45 Cable (Ethernet)



RJ-11 to RJ-11 Cable



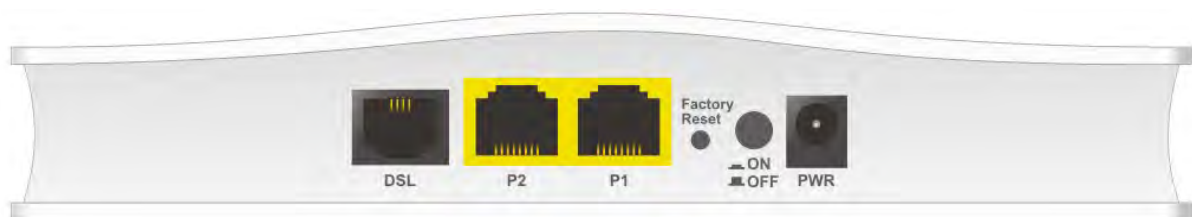
UK-type Power Adapter



The type of the power adapter depends on the country that the modem will be installed. * The maximum power consumption is **7.5 Watts**.

3. Panel Explanation



LED	Status	Explanation
ACT	Off	The system is not ready or has failed.
	Blinking	The system is ready and operating normally.
P1/P2	On	Ethernet LAN (RJ45) is connected.
	Off	Ethernet LAN is disconnected.
	Blinking	Data is transmitting (sending/receiving).
DSL	On	DSL connection synchronized.
	Blinking	DSL connection is synchronizing.



Interface	Description
DSL	RJ11 Connector for your G.Fast / VDSL2 / ADSL2+ line
P2-P1	RJ45 Connector for connected router/firewall/PC.
Factory Reset	Restore the default settings. Usage: Turn on the modem. Press the button and hold for more than 10 seconds. Then the modem will restart with the factory default configuration.
	ON/OFF: Power switch.
	Connector for a power adapter. Use only the original PSU supplied with the unit, or an original replacement supplied by DrayTek.



Note

Remove the protective film from the modem before use to ensure ventilation.

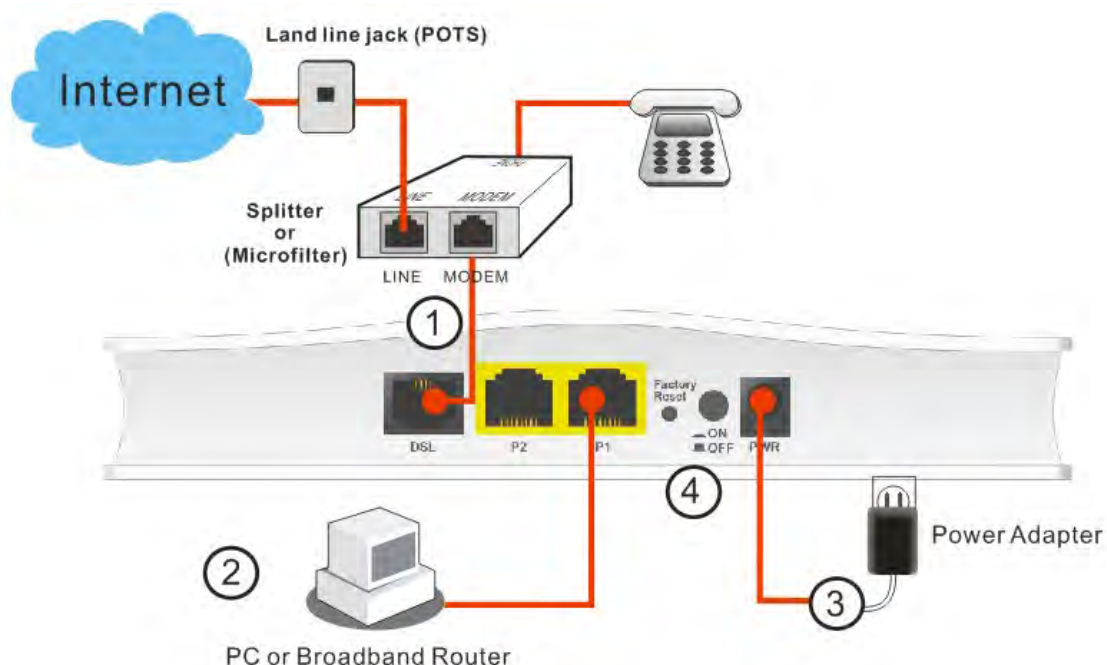
4. Hardware Installation

This section details the physical installation of the Vigor 166 modem, connecting up the cables to the modem so that it can be used for Internet access.

The modem can optionally be wall-mounted for secure installation.

4.1 Network Connection

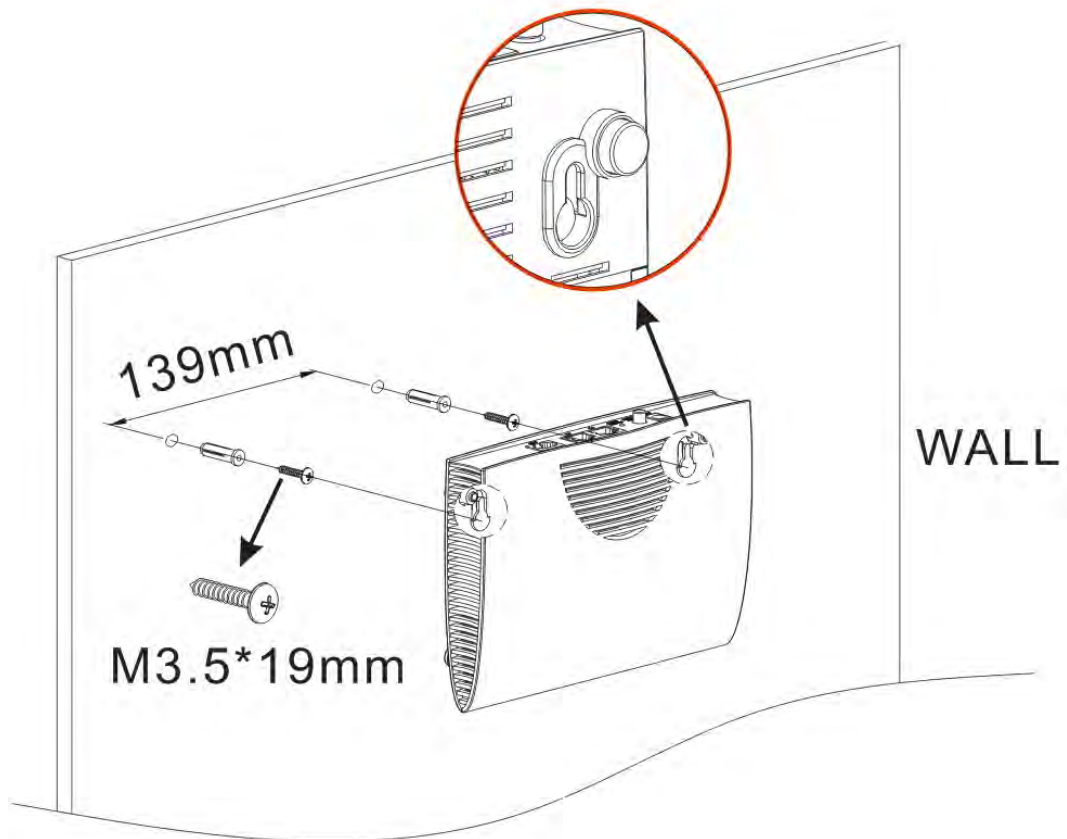
1. Connect the DSL interface to the **MODEM** or **DSL** port of the external splitter/microfilter (not supplied) with the RJ-11 line cable. In most cases, your RJ11 DSL socket will be built-into your phone line socket on the wall and you won't have a separate microfilter/splitter.
2. Connect the LAN port to your router or computer with the RJ-45 cable.
3. Connect the power adapter to the Power port of the modem and plug the power adapter into a suitable mains outlet.
4. Turn the Vigor 166 on using its power switch.
5. Check the **ACT** and **LAN** LEDs light up or blink.



4.2 Wall-Mounted Installation

The Vigor 166 modem has keyhole type mounting slots on the underside for secure wall mounting.

1. Drill the holes on the wall according to the recommended instruction.
2. Fit screws into the wall using the appropriate type of wall plug.



Note

The recommended drill bit diameter is 6.5mm (1/4").

3. Fit the Vigor 166 modem onto the protruding screwheads and lower the modem to affix it securely in place on the wall.

5. Setup & Configuration

The Vigor 166 can be used either as a modem, bridging G.Fast or VDSL2 to its Ethernet ports, or as a router, connecting directly to the Internet and providing connectivity to any connected devices.

The Vigor 166 is pre-configured to work with most UK ISPs, with ideal settings for connecting to the Openreach G.Fast / VDSL2 network, adding VLAN tag 101 to any traffic passing through it.

Out of the box, the Vigor 166 operates in **Modem/Bridge mode**. To use the Vigor 166 as a modem for G.Fast or VDSL2 connections, connect it up to the DSL line and connect your router to one of the Vigor 166's LAN ports.

In your router's configuration, set up the Internet connection to use PPPoE if your ISP has provided a Username and Password for you to connect to the Internet with. Otherwise, configure the Internet connection to connect automatically (using DHCP) or with a static IP if your ISP has supplied one. See **Section 5.2** for more details.

The Vigor 166 can be used as a router, connecting to the Internet directly and providing connectivity to all connected devices.
See section **"5.5 Using the Vigor 166 as a Router"** for more information.

5.1 Accessing the Web Interface

The Vigor 166 is a full-bridge modem, which is pre-configured to pass-through both DHCP/Static IP and PPPoE-based VDSL and G.fast Internet connections.

Typically, the Vigor 166 is ready to pass-through these connections once your Router or Firewall are connected and the DSL light on the Vigor 166 is lit solidly.

To avoid interference with these types of connections, the Vigor 166 does not provide DHCP for local management, it is instead necessary to manually configure a computer's IP to access the web interface and perform the final setup steps.

To connect to the Vigor 166's web interface, connect its Ethernet (RJ45) port directly to your PC. Make sure your PC is connected by checking the LAN P1 or P2 LEDs on the modem.



Note

Configure the IP address of the computer to be within the same subnet. **The default IP address of Vigor 166 modem is 192.168.2.1, with a subnet mask of 255.255.255.0.**

For a full demonstration of how to configure an IP address manually, see this guide:

<https://www.draytek.co.uk/support/guides/kb-windows-fixedip>

Once the computer is configured with an address in the 192.168.2.x subnet, the Vigor 166 should then be accessible on its default address of **http://192.168.2.1** from your web browser.



Please enter “admin/admin” as the Username/Password and click **Login**.

Next, the following page will appear. You must change the login password before accessing the web user interface. Please set a password with the highest level of strength for network security.

For security reason, you must change the password before proceeding to the router webpage

New Password

Password	<input type="password" value="*****"/>
Confirm Password	<input type="password" value="*****"/>

Password Strength:



Strong password requirements:

1. Minimal length is 8 characters.
2. Must use at least 1 Upper and 1 lower character.
3. Must use at least 1 numeric or special character.
4. The Password cannot contain only the character "a".

OK

Now, the Main Screen will pop up.

The Dashboard of the Vigor 166 shows the current DSL sync status and connected ports:

System Information

Model Name	Vigor166	System Up Time	0:7:37
Router Name	DrayTek	Current Time	2000 Jan 1 Sat 0:7:26
Firmware Version	r89166_beta	Build Date/Time	Mar 17 2020 15:52:28
DSL Version	1232304 HW: A	LAN MAC Address	00-1D-AA-96-D5-78

IPv4 Internet Access

	Line / Mode	IP Address	MAC Address	Up Time
WAN1	VDSL2 / Static IP	Disconnected	00-1D-AA-96-D5-79	00:00:00

Interface

DSL	Connected : Down Stream : 79996Kbps / Up Stream : 19996Kbps
WAN	Connected : 0, WAN1
LAN	Connected : 0, Port1 Port2

By default, the Vigor 166 is operating in **Modem/Bridge mode**, this means that the interface is streamlined, providing only options required for operating as a modem.

To access all menu items available on the Vigor 166, switch it to **Router mode** as shown in section “5.5 Using the Vigor 166 as a Router”.

5.2 Using the Vigor 166 as a VDSL or G.fast Modem

The Vigor 166 functions as a modem straight out of the box, bridging a G.Fast or VDSL2 connection directly to whatever is connected to its LAN ports, whether that’s a Router, Firewall, Network Appliance or a PC.

Because the Vigor 166 bridges G.Fast and VDSL2 to its LAN ports, your router will need to be configured to establish its connection to the Internet.

To connect to the Internet, some ISPs assign an IP address automatically, while others will require a username & password (supplied by your ISP). The Vigor 166 passes through both types of connection with no further configuration required.

Check your ISP’s documentation to determine what type of connection to use.

Refer to your router’s documentation to set up an Internet connection.

The Vigor 166 handles the VLAN tag that your ISP might require. We recommend not to configure any VLAN tag on your router as that could stop the Internet connection from establishing.

To use the Vigor 166 as a modem, connect a LAN port (P1/P2) to your router’s RJ-45 Ethernet (WAN) port.

Connect the DSL port of the Vigor 166 to your ISP’s RJ-11 DSL wall socket or microfilter.

Check the LED lights on the Vigor 166 to determine its connection status:

- The **ACT** light should be flashing slowly to indicate normal operation.
- The **DSL** light will be lit solidly when it has connected to a G.Fast or VDSL2 connection and is ready to pass-through connectivity.
- The **P1** or **P2** LAN port light that's connected to your router will be lit to indicate connectivity.

Once your router's Internet connection settings are configured with the correct settings for your ISP the Internet connection will establish shortly after. If your ISP provides a username and password, then your router should be configured to PPPoE mode.

5.3 Checking G.Fast & DSL Status

Once the Vigor 166 is connected to your G.Fast / DSL line, you can check the **[Online Status]** > **[Physical Connection]** page for more information.

This displays connection status, DSL type, signal quality and the link speed (e.g. 80Mb/s as shown below):

Online Status

Physical Connection

System Uptime: 0:3:1

IPv4					
LAN Status					
IP Address	TX Packets	RX Packets	Router Primary DNS:	Router Secondary DNS:	
192.168.2.1	1375	989	8.8.8.8	8.8.4.4	
Line 1 Information (Firmware Version: 1232302 HW: A)					
Profile	State	UP Speed	Down Speed	SNR Upstream	SNR Downstream
17A	SHOWTIME	19,996 (Kbps)	79,996 (Kbps)	20 (dB)	20 (dB)

The **[Dashboard]** also shows a summary of DSL information with DSL port status and the DSL link speed.

5.4 Changing VLAN Tag Configuration

To check the VLAN tag setting that will be applied to traffic going through the modem to the ISP, go to the **[Internet Access]** > **[General Setup]** page.

The default setting of VLAN tag 101 does not normally need to be changed.

The modem adds VLAN tag 101 for any VDSL2/G.Fast connections, so your router does not need to be configured to add its own VLAN tag.

WAN 1

Display Name: <input type="text"/>		
Physical Mode: VDSL2		
DSL Mode: <input type="text" value="Auto"/>		
DSL Modem Code: <input type="text" value="Default"/>		
VLAN Tag insertion	Customer	Service
ADSL	<input type="text" value="Disable"/> Tag value <input type="text" value="0"/> Priority <input type="text" value="0"/> (0~4095) (0~7)	
VDSL2/G.fast	<input type="text" value="Disable"/> Tag value <input type="text" value="0"/> Priority <input type="text" value="0"/> (0~4095) (0~7)	<input type="text" value="Enable"/> Tag value <input type="text" value="101"/> Priority <input type="text" value="0"/> (0~4095) (0~7)

Note:

In DSL auto mode, the router will reboot automatically while switching between VDSL2 and ADSL lines.

OK

Cancel

**Note**

This value is correct for ISPs that operate over the Openreach VDSL2 & G.Fast network. If your ISP operates over a different xDSL network, this tag value may differ. Please check with your ISP or the DrayTek UK Knowledgebase for ISP specific guides.

5.5 Using the Vigor 166 as a Router

The Vigor 166 can be used as either a modem or router, with the default being **Modem/Bridge mode**.

To configure the Vigor 166 as a router, access the web interface and go to the **[Operation Mode]** menu:

Operation Mode

☐ **Modem/Bridge Mode**

Currently does not support ADSL.

The Vigor166 operates as a modem, bridging DSL to ethernet. The device connected to the Vigor166 LAN ports establishes a connection to the ISP directly. Some functions are unavailable when operating in Modem/Bridge Mode, for ease of configuration.

☒ **Router Mode**

The Vigor166 establishes the connection to the ISP directly, providing internet access to all local network devices. Firewall and Network Address Translation (NAT) are handled by the Vigor166 in Router Mode.

Next

Select **Router Mode** and click **Next**.

Go through the steps in the setup wizard to complete the process, which configures the Vigor 166's new LAN IP and its Internet connection type.

Operation Mode >> Router Mode

Setting Configuration

WAN Interface:	WAN1
Physical Mode:	ADSL / VDSL2 / G.fast
MPoA / Full Bridge Mode:	Disable
Router LAN IP Address:	192.168.2.1
DHCP Server:	Enable

< Back

Next >

Apply & Reboot

Cancel

Click **Apply & Reboot**.

Upon restarting, access the web interface of the Vigor 166 from the Router LAN IP Address that was configured in the Router Mode setup wizard.

When accessing the web interface of the Vigor 166, it will now show additional menu options:

DrayTek Vigor166

Auto Logout | **IR6**

Dashboard
Wizards
Online Status

Search menu

Operation Mode
Internet Access
LAN
Routing
NAT
Hardware Acceleration
Firewall
Objects Setting
CSM
Applications
System Maintenance
Diagnostics

Support Area
Product Registration

Dashboard

DSL P2 P1 Factory Reset

System Information

Model Name	Vigor166	System Up Time	0:13:55
Router Name	DrayTek	Current Time	2020 Mar 17 Tue 15:6:24
Firmware Version	r89166_beta	Build Date/Time	Mar 17 2020 15:52:28
DSL Version	1232304 HW: A	LAN MAC Address	00-1D-AA-96-D5-78

IPv4 Internet Access

	Line / Mode	IP Address	MAC Address	Up Time
WAN1	VDSL2 / PPPoE	172.16.15.74	00-1D-AA-96-D5-79	0:13:19

Interface

DSL	Connected : Down Stream : 79996Kbps / Up Stream : 19996Kbps
WAN	Connected : 1, WAN1
LAN	Connected : 0, Port1 Port2

User Mode is OFF now.

Quick Access

System Status
Dynamic DNS
TR-069
Schedule
SysLog / Mail Alert
Firewall Object Setting

To configure your Internet connection, refer to the next two sections of this quick start guide.

If these settings don't work for you, or if you're not sure what to set, see the DrayTek knowledgebase on www.draytek.co.uk/support for further information (for UK/Ireland users - other countries or regions will likely be completely different).

5.5.1 Connect to ISP with Username & Password

If your Internet connection requires a Username & Password to connect, usually with a username that resembles an email address, configure the Vigor 166 to connect to the Internet with these settings.

Once the Vigor 166 is operating in **Router mode**, go to **[Internet Access] > [PPPoE / PPPoA]**.

Select the **Enable** radio button at the top of the page to enable the interface.

Input the username into the **Username** field and password in the **Password** field, as required. The Service Name does not need to be specified.

If your ISP has provided a static IP address, that can be specified by setting the **Fixed IP** setting to **Yes** and entering the IP in the **Fixed IP Address** field.

Internet Access >> PPPoE / PPPoA

PPPoE / PPPoA Client Mode

PPPoE/PPPoA Client <input checked="" type="radio"/> Enable <input type="radio"/> Disable	
DSL Modem Settings (for ADSL mode only)	
Multi-PVC channel	Channel 1 ▾
VPI	0
VCI	38
Encapsulating Type	VC MUX ▾
Protocol	PPPoA ▾
Modulation	Multimode ▾
ISP Access Setup	
Service Name ¹	
Username	A123456@HG00.btclick.c
Password
PPP Authentication	PAP or CHAP ▾
IP Address From ISP	WAN IP Alias
Fixed IP	<input type="radio"/> Yes <input checked="" type="radio"/> No (Dynamic IP)
Fixed IP Address	
<input checked="" type="radio"/> Default MAC Address	

Click **OK** on this page to apply the changes and the router will then prompt to restart.

Click the OK button to restart the router.

Once the router has restarted, the **[Dashboard]** and the **[Online Status] > [Physical Connection]** pages will display the VDSL information and PPP connection status.

When the WAN Status displays in green and shows an IP address, it has connected to the internet successfully:

Vigor166

Auto Logout ▾

Dashboard
Wizards
Online Status
Physical Connection
Virtual WAN

Search menu

Operation Mode
Internet Access
LAN
Routing
NAT
Hardware Acceleration
Firewall
Objects Setting
CSM
Applications
System Maintenance
Diagnostics

Online Status

Physical Connection

IPv4

IPv6

System Uptime: 0:14:28

LAN Status

IP Address	TX Packets	RX Packets	Router Primary DNS:	Router Secondary DNS:
192.168.2.1	644	413	8.8.4.4	4.2.2.1

WAN Status

Enable	Line	Name	Mode	Up Time
Yes	VDSL2		PPPoE	0:13:52
IP	GW IP	TX Packets	TX Rate(Bps)	RX Packets
172.16.15.74	172.16.15.254	117	4	20

Line 1 Information

(Firmware Version: 1232304 HW: A)

Profile	State	UP Speed	Down Speed	SNR Upstream	SNR Downstream	Up Time
17A	SHOWTIME	19,996 (Kbps)	79,996 (Kbps)	20 (dB)	20 (dB)	0:00:32



Note

If the WAN IP address displayed begins with 172.16.x.x, it's possible that the ISP has not accepted the supplied Username and Password for the Internet connection.

Check that the ISP Access Setup - Username and Password match the details supplied by your ISP.

5.5.2 Connect to ISP with DHCP / Static IP

If your Internet connection does not require a Username & Password to connect or uses a static IP with a subnet mask & gateway address, configure the Vigor 166 to connect to the Internet with these settings.

Once the Vigor 166 is operating in **Router mode**, go to **[Internet Access] > [MPoA / Static or dynamic IP]**.

Internet Access >> MPoA / Static or dynamic IP

MPoA / Static or dynamic IP

MPoA (RFC1483/2684)

☒ Enable
☐ Disable

WAN Connection Detection

Mode

ARP Detect ▾

MTU

1520 (Max:1520)

RIP Protocol

☐ Enable RIP

Bridge Mode

☐ Enable Full Bridge Mode
☐ Enable Bridge Mode

WAN IP Network Settings

☒ Obtain an IP address automatically

Router Name

Vigor *

Domain Name

*

☐ DHCP Client Identifier *

Username

Password

☐ Specify an IP address

WAN IP Alias

IP Address

0.0.0.0

Subnet Mask

0.0.0.0

Gateway IP Address

0.0.0.0

Select the **Enable** option and select **Obtain an IP address automatically** which will obtain an IP from the ISP using DHCP.

If your ISP has provided a static IP range, with a Network address and a Subnet Mask, specify that with the **Specify an IP address** option instead.

Click **OK** on this page to apply the changes and the router will then prompt to restart. Click the OK button to restart the router.

Once the router has restarted, the **[Online Status] > [Physical Connection]** page will display the VDSL information and DHCP connection status, if the WAN1 section shows an IP address, it has connected to the internet successfully:

The screenshot shows the DrayTek Vigor166 web interface. The left sidebar contains navigation links: Dashboard, Wizards, Online Status (selected), Physical Connection, and Virtual WAN. Below these are links for Operation Mode, Internet Access, LAN, Routing, NAT, Hardware Acceleration, Firewall, Objects Setting, CSM, and Applications. The main content area is titled 'Online Status' and shows 'Physical Connection' details. It includes a table for LAN Status with columns for IP Address, TX Packets, RX Packets, Router Primary DNS, and Router Secondary DNS. Below this is a table for WAN Status with columns for Enable, Line, Name, Mode, Up Time, IP, GW IP, TX Packets, TX Rate(Bps), RX Packets, and RX Rate(Bps). At the bottom is a table for Line 1 Information with columns for Profile, State, UP Speed, Down Speed, SNR Upstream, SNR Downstream, and Up Time.

Physical Connection		IPv4		IPv6		System Uptime: 0:14:28	
LAN Status							
IP Address	TX Packets	RX Packets	Router Primary DNS:	Router Secondary DNS:			
192.168.2.1	644	413	8.8.4.4	4.2.2.1			
WAN Status							
Enable	Line	Name	Mode	Up Time	>> Drop PPPoE		
Yes	VDSL2		PPPoE	0:13:52			
IP	GW IP	TX Packets	TX Rate(Bps)	RX Packets	RX Rate(Bps)		
172.16.15.74	172.16.15.254	117	4	20	3		
Line 1 Information (Firmware Version: 1232304 HW: A)							
Profile	State	UP Speed	Down Speed	SNR Upstream	SNR Downstream	Up Time	
17A	SHOWTIME	19,996 (Kbps)	79,996 (Kbps)	20 (dB)	20 (dB)	0:00:32	

5.6 Using the Vigor 166 as an ADSL Modem

The Vigor 166 can connect to ADSL and operate as a bridging modem with some re-configuration to allow it to convert the PPPoA (PPP over ATM) used by ADSL in the UK, into PPPoE (PPP over Ethernet) which is used by network Routers and Firewalls.

To use the Vigor 166 with ADSL, perform the steps defined in **Section 5.5 - Using the Vigor 166 as a Router**.

Once the Vigor 166 is in Router mode, go to the **[Internet Access] > [PPPoE/PPPoA]** and check the “**PPPoE Pass-through - For Wired LAN**” option:

The screenshot shows the DrayTek Vigor 166 web interface. The left sidebar contains navigation links: Dashboard, Wizards, Online Status, Search menu, Operation Mode, Internet Access (selected), General Setup, PPPoE / PPPoA (highlighted), MPoA / Static or dynamic IP, IPv6, Multi-PVC/VLAN, LAN, Routing, NAT, Hardware Acceleration, Firewall, Objects Setting, CSM, Applications, System Maintenance, Diagnostics, Support Area, and Product Registration. The main content area is titled 'Internet Access >> PPPoE / PPPoA'. It features a 'PPPoE / PPPoA Client Mode' section with a radio button to 'Enable' (selected) and a 'Disable' option. Below this are 'DSL Modem Settings (for ADSL mode only)' including Multi-PVC channel (Channel 1), VPI (0), VCI (38), Encapsulating Type (VC MUX), Protocol (PPPoA), and Modulation (Multimode). A red box highlights the 'PPPoE Pass-through' section, which has a checked checkbox and the option 'For Wired LAN²'. Other sections include 'ISP Access Setup' with fields for Service Name, Username, Password, PPP Authentication (PAP or CHAP), IP Address From ISP (WAN IP Alias), Fixed IP (Yes/No), and Fixed IP Address (0.0.0.0). There is also a 'WAN Connection Detection' section with a Mode dropdown (ARP Detect) and an MTU field (1520). A 'Note' at the bottom explains the 'For Wired LAN' option. An 'OK' button is at the bottom right.

Click OK, which will then require the modem to restart to apply the changes.

To use the Vigor 166 as a modem, connect a LAN port (P1/P2) to your router's RJ-45 Ethernet (WAN) port.

Check the LED lights on the Vigor 166 to determine its connection status:

- The **ACT** light should be flashing slowly to indicate normal operation.
- The **DSL** light will be lit solidly when it has connected to ADSL.
- The **P1** or **P2** port lights indicate connectivity for LAN devices.

Configure a PPPoE Internet connection on your network Router or Firewall.

The Internet connection will establish once the PPPoE connection is configured with the ISP Username and Password.

6. Getting further help

If the modem does not appear to be operating correctly or you cannot get online to the Internet, please visit our web sites for further troubleshooting advice or to contact our support technicians. Always have your serial number to hand.

Users in the UK/Ireland using qualifying products should visit www.draytek.co.uk/support for support options including email support, telephone support, our help knowledgebase and access to the UK user support forums.

If you are **outside** of the UK/Ireland, please contact your own local supplier, email to support@draytek.com or visit www.draytek.com/support

For warranty service, in the first instance, please contact the support services, as listed above, for help in diagnosing or eliminating the problem or issue. The support department can arrange repair or service if then deemed necessary.

The standard Vigor 166 warranty is 'Return to base' (RTB) unless you have VigorCare which provides enhanced services (see www.draytek.co.uk/vigorcure).

You should keep your proof of purchase (original invoice) safely in case warranty or other service is ever required.

6.1 Keep up to date with our mailing list

Now that you have your DrayTek product, you should keep up to date with product updates (firmware), security advisories and other product news, advice or special offers. Users in the UK/Ireland can subscribe to our mailing list. For details and to subscribe, please visit www.draytek.co.uk/list. In other countries or regions, please contact your local distributor/supplier for local options.

6.2 Firmware Updates

Firmware updates for your product ensure that you have the latest set of features, security updates and improvements for your product. Users in the UK/Ireland can download these from www.draytek.co.uk/support