

DrayTek

Vigor2865 Series

35b Security Firewall



QUICK START GUIDE (WIRED MODEL)

V1.0

Vigor 2865

VDSL 35b Security Firewall

Quick Start Guide

(Non-Wireless models)

Version: 1.1

Firmware Version: V4.0.5.1

Region: United Kingdom & Ireland

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

Date: March 20, 2020

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

Safety Instructions and Approval

Safety Instructions

- Read the installation guide thoroughly before you set up the router.
- The router is a complicated electronic unit that may be repaired only by authorized and qualified personnel. Do not try to open or repair the router yourself.
- Do not place the router in a damp or humid place, e.g. a bathroom.
- Do not stack the routers.
- The router should be used in a sheltered area, within a temperature range of +5 to +40 Celsius.
- Do not expose the router to direct sunlight or other heat sources. The housing and electronic components may be damaged by direct sunlight or heat sources.
- Do not deploy the cable for LAN connection outdoor to prevent electronic shock hazards.
- Keep the package out of reach of children.
- When you want to dispose of the router, please follow local regulations on conservation of the environment.

Warranty

We warrant to the original end user (purchaser) that the router will be free from any defects in workmanship or materials for a period of two (2) years from the date of purchase from a DrayTek authorized dealer in the UK/Ireland. Please keep your purchase receipt in a safe place as it serves as proof of date of purchase. During the warranty period, and upon proof of purchase, should the product have indications of failure due to faulty workmanship and/or materials, we will, at our discretion, repair or replace the defective products or components, without charge for either parts or labour, to whatever extent we deem necessary to restore the product to proper operating condition. Any replacement will consist of a new or re-manufactured functionally equivalent product of equal value, and will be offered solely at our discretion. This warranty will not apply if the product is modified, misused, tampered with, damaged by external factors, used with unapproved accessories or subjected to abnormal working conditions. Warranty applies to hardware only, not software or firmware. Defects which do not significantly affect the usability of the product will not be covered by the warranty. We reserve the right to revise the manual and online documentation and to make changes from time to time in the contents hereof without obligation to notify any person of such revision or changes.



EU Declaration of Conformity

We DrayTek Corp. , office at No.26, Fu Shing Road, HuKou County, Hsin-Chu Industry Park, Hsinchu 300, Taiwan , R.O.C., declare under our sole responsibility that the product

- **Product name:** VDSL2 Security Firewall
- **Model number:** Vigor2865
- **Manufacturer:** DrayTek Corp.
- **Address:** No.26, Fu Shing Road, HuKou County, Hsin-Chu Industry Park, Hsinchu 300, Taiwan , R.O.C.
- **Importer:** SEG, 11 Capital Business Park, Borehamwood, Herts, WD6 1GW

is in conformity with the relevant Union harmonisation legislation:

EMC Directive 2014/30/EU , Low Voltage Directive 2014/35/EU , ErP 2009/125/EC and RoHS 2011/65/EU with reference to the following standards

Standard	Version / Issue date
EN 55032	2012+AC:2013 class B
EN 61000-3-2	2014 Class A
EN 61000-3-3	2013
EN 55024	2010+A1:2015
EN 62368	2014+A11:2017
EC No. 1275/2008	2008

Hsinchu
(place)

2nd September, 2019
(date)


Calvin Ma / President .
(Legal Signature)



Join the UK mailing list

Users in the UK & Ireland can sign up to our mailing list which goes out approximately 4 times per year with products news, updates, hints & tips and offers. For details, please visit www.draytek.co.uk/list

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.

	1	2	3	4	5	6	7	8	9
A Manufacturer	CWT	CWT	CWT	CWT	CWT	APD	APD	APD	APD
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
C Model identifier	ZABB012F UK ZABB012F EU	ZABB018F UK ZABB018F EU	ZABLO24F UK ZABLO24F EU	ZABLO30F UK ZABLO30F EU	ZABNO36F UK ZABNO36F EU	WA-12M12FG WA-12M12FK	WB-18D12FG WB-18D12FK	WA-24Q12FG WA-24Q12FK	WA-36A12FG WA-36A12FK
D Input voltage	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
Output voltage DC	12.0V	12.0V	12.0V	12.0V	12.0V	12.0V	12.0V	12.0V	12.0V
F Output current	1.0A	1.5A	2.0A	2.5A	3.0A	1.0A	1.5A	2.0A	3.0A
G Output power	12.0W	18.0W	24.0W	30.0W	36.0W	12.0W	18.0W	24.0W	36.0W
H Average active efficiency	84.9%	86.2%	87.6%	87.8%	89.8%	83.7%	85.4%	88.6%	88.2%
I Efficiency at low load 10%	73.6%	78.0%	81.3%	83.3%	83.7%	74.5%	80.5%	86.4%	85.4%
J No-load power consumption	0.07W	0.07W	0.07W	0.07W	0.07W	0.07W	0.10W	0.07W	0.10W

External power supply (Power Adapter) information. For more updates, please visit www.draytek.co.uk.

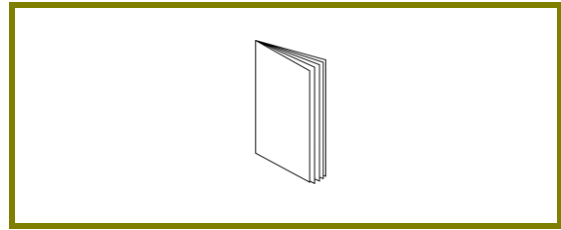
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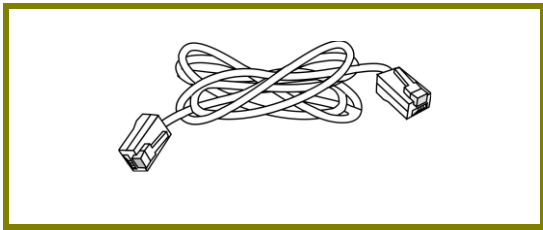
1. Package Contents



Vigor router



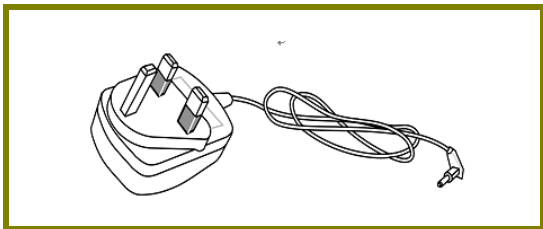
Quick Start Guide
(This document)



RJ-45 Cable (Ethernet)
(Connects to your PC or Switch)



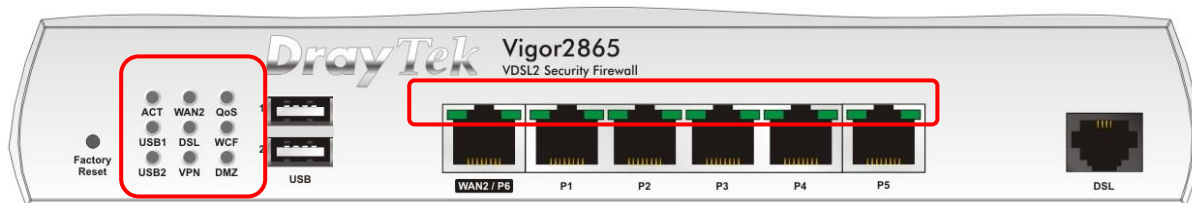
RJ-11 to RJ-11 Cable (Annex A)
(Connects to your DSL line)



UK Power Adapter

The maximum power consumption is **22 Watts**.

2. Panel Explanation

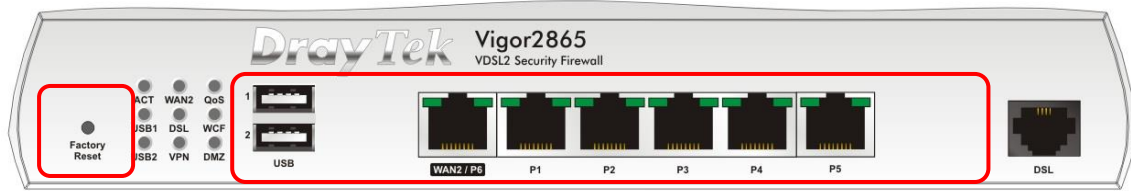


LED	Status	Explanation
ACT (Activity)	Off	The router is powered off.
	Blinking	The router is ready and operating normally.
WAN2	On	Internet connection is ready for use
	Off	Internet connection is offline
	Blinking	Data is being transmitted over WAN2
QoS	On	Quality of Service is active
	Off	Quality of Service is inactive
USB1~2	On	USB device is connected and ready for use
	Off	No USB device is connected
	Blinking	Data is being transmitted over USB
DSL	On	DSL connection synchronised
	Blinking	Slowly: DSL connection not currently synchronising or not detected Quickly: DSL connection is synchronising
WCF	On	Web Content Filter is active. (It is enabled from [Firewall] > [General Setup]).
	Off	Web Content Filter is inactive
VPN	On	At least one VPN tunnel is active
	Off	VPN service disabled or no VPN tunnels active
	Blinking	Traffic is passing through a VPN tunnel
DMZ	On	DMZ Port is enabled
	Off	DMZ Port is not enabled
	Blinking	Data is being transmitted through DMZ Port

LED on Connector

WAN2 / P6	Left LED	On	Ethernet WAN (RJ45) is connected
		Off	Ethernet WAN is disconnected
		Blinking	Data is transmitting (sending/receiving)
	Right LED	On	The port is connected with 1000Mbps
		Off	The port is connected with 10/100Mbps
LAN P1-P5	Left LED	On	Ethernet LAN (RJ45) is connected
		Off	Ethernet LAN is disconnected
		Blinking	Data is transmitting (sending/receiving)
	Right LED	On	The port is connected with 1000Mbps
		Off	The port is connected with 10/100Mbps

The port “WAN2 / P6” is switchable. It can be used for LAN connection or WAN connection according to the settings configured in WUI.



Switch on Rear Side

Interface	Description
Factory Reset	Restore the default settings. Usage: Turn on the router (ACT LED is blinking). Press gently and hold for more than 5 seconds. When the ACT LED blinks rapidly, release the button and the router will restart with its factory default configuration.
USB1~2	Connector for a USB 3G/4G LTE modem, storage, printer or USB Thermometer
WAN2 / P6	RJ-45 Gigabit Ethernet connector for WAN modem / router or RJ-45 Gigabit Ethernet connector for local network devices
LAN P1-P5	RJ-45 Gigabit Ethernet connectors for local network devices
DSL	RJ-11 connector for ADSL or VDSL line
PWR	Connector for the power adapter
ON/OFF	Power Switch. Turns the unit on or off

3. Hardware Installation

This section will guide you through installing the router's port connections and fitting the router securely, either to a wall using the supplied mounting hardware, or into a 19" rack with the optional RM1 rack mounting kit.

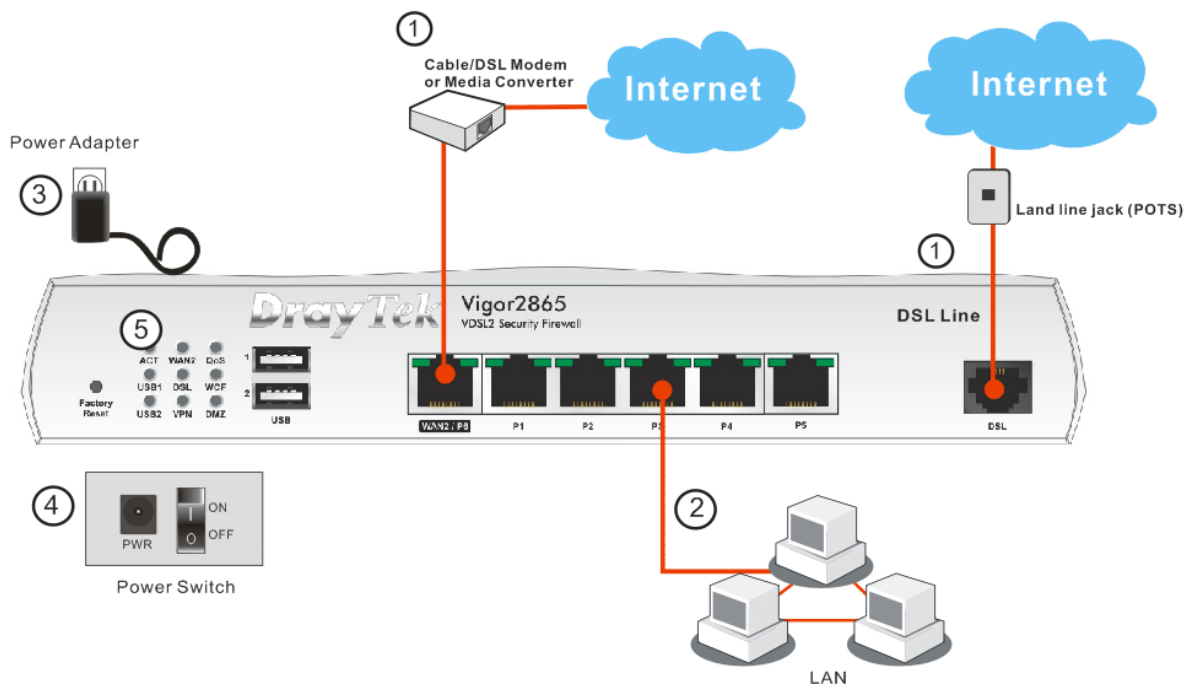
Before starting to configure the router, you must first connect up the cables.

3.1 Network Connection

1. **ADSL/VDSL Connections:** Connect the **VDSL/ADSL** interface to the **Modem** or **DSL** port of the external splitter/microfilter (not supplied) with the RJ-11 line cable. In some cases, your RJ-11 DSL socket will be built-into your phone line socket on the wall and you won't have a separate microfilter/splitter.

WAN2 Connections: Connect the cable Modem/DSL Modem/Media Converter to the WAN port of router with Ethernet cable (RJ-45).

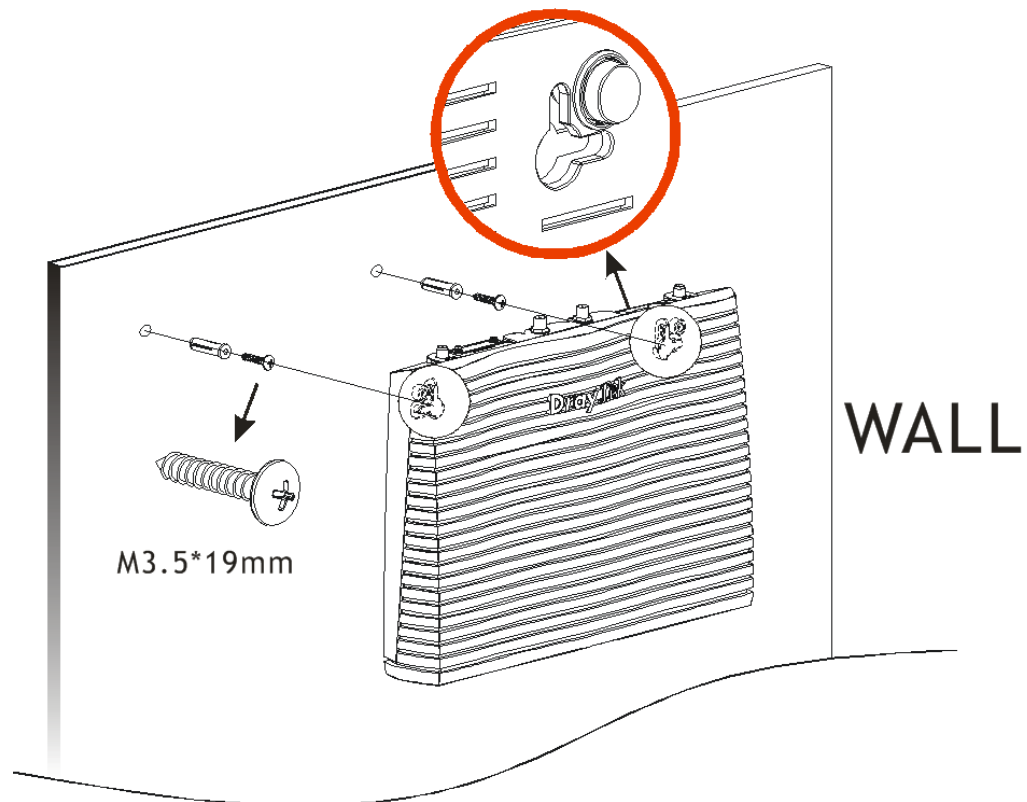
2. **LAN Connections:** Connect a LAN port of the router to your computer or switch.
3. **Power Supply:** Connect the power adapter to the Vigor 2865's PWR socket on the rear and plug the power adapter into a suitable mains socket. Turn the Vigor 2865 on using its power switch.
4. The router will start up. After completing the system test, the **ACT** LED will light up and start blinking once per second to indicate that it is ready for use. (For more detailed information of LED status, please refer to section 2. Panel Explanation)



3.2 Wall-Mounted Installation

DrayTek Vigor 2865 series routers have keyhole type mounting slots on the underside to hang the router on, using screws attached to a wall or other surface.

1. A template is provided in the Vigor router packaging box to enable you to space the screws correctly on the wall
2. Place the template on the wall in the desired position and drill holes through the cardboard template at the marked points
3. Fit screws into the wall using the appropriate type of wall plug for the wall material



Note

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

4. With the screws installed, the router can be slotted into place

3.3 Rack Mount Kit Installation

The DrayTek Vigor2865 series router can be fitted securely in a standard 19" 1U rack mount space using the **RM1 Rack Mount Plate** (available separately). When fitted, the router is held firmly and cannot be removed, pushed back or fall off the bracket accidentally.



The router must be fitted into the bracket before you fix the bracket into your rack.

To fit it correctly, locate the groove around the edge of the front panel of the router. The front of the RM1 bracket slides into this groove, therefore preventing the router from moving once fitted.



Once the router has been dropped into the groove, you can fit the bracket into the rack using the screws supplied.

4. Setup & Configuration

This section provides examples of how to initially access the router and configure internet access for the most common types of Internet connection in the UK.

If the instructions in this quick start guide do not allow you to get online with your ISP or type of Internet connection, there are additional guides available from the Product Knowledgebase on www.draytek.co.uk.



Note

To access the router, your PC will need to either get its IP address using DHCP or have an IP address in the 192.168.1.x range.

For details on how to change this, please refer to the “Trouble Shooting” section in the User Guide.

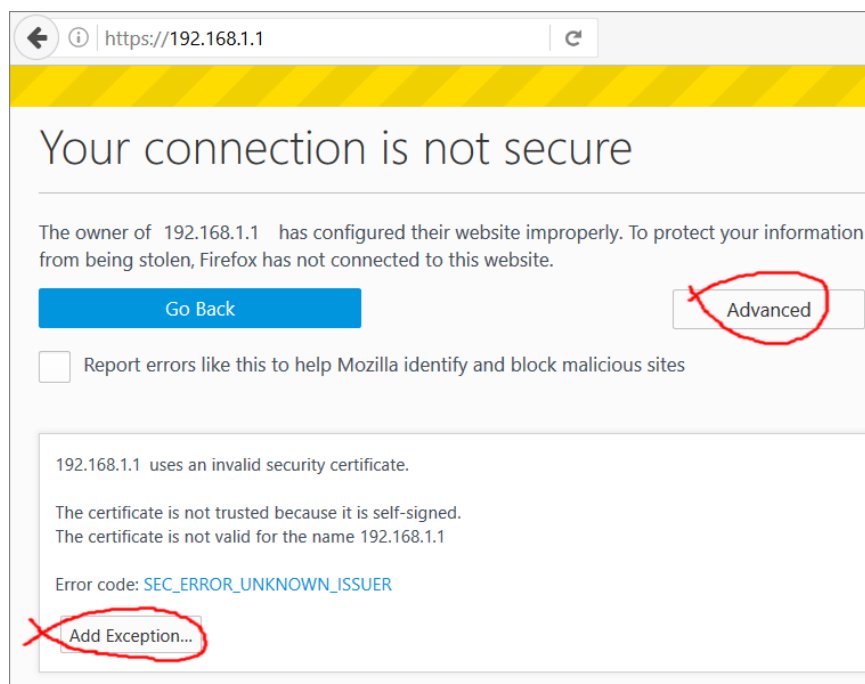
4.1 Accessing the Router Web Interface

Open a web browser on your PC and type `https://192.168.1.1`.

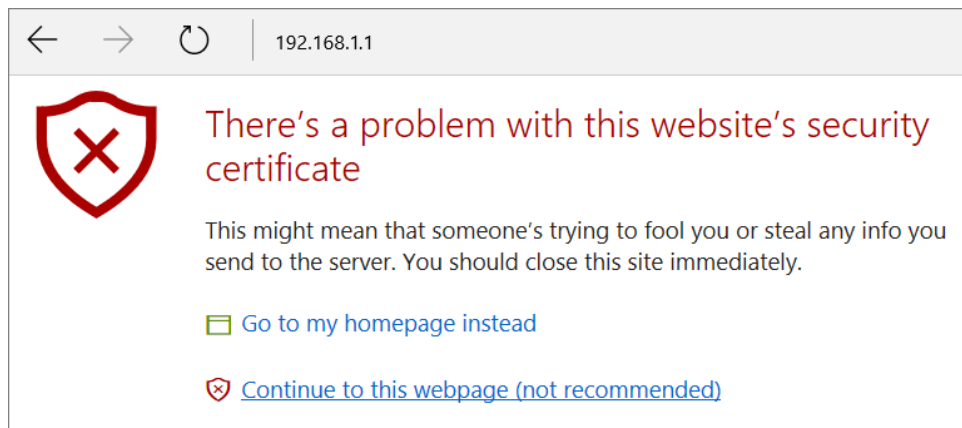
The `https://` prefix ensures that your connection is encrypted using SSL so that your session data cannot be intercepted. Without that prefix, your data passes in clear text.

You may get a warning from your browser (IE, Chrome, Edge, Safari etc.) about your server (the router) having an invalid certificate. Your browser will demand further confirmation or exception before allowing access. The warnings will look something like these examples.

An example of how to access the router via HTTPS with Mozilla Firefox:



An example from Microsoft Edge, click “Continue to this webpage” to proceed:



Most other browsers will present equivalent warnings. In each case, following the prompts/links will allow you to access the router's web interface. It is still encrypted with SSL/TLS.



Note

This warning appears because the router's default certificate is 'self-signed' rather than issued to you by a certificate authority who has verified your identity.

A self-signed certificate means that you cannot verify the identity of the server, but as it's your own local router, that shouldn't be an issue - your connection is still encrypted.

The router login prompt will then request a username and password to allow access.



The factory default login details are:

Username: admin
Password: admin



Note

If you cannot access the web interface, please go to the “Trouble Shooting” section in the User Guide to determine the cause of and solve your problem.

Upon successful login, the router will display the **Dashboard**, which shows a summary of the router model, WAN status, front panel port status and other information:

DrayTek Vigor2865 Series Dashboard

System Information

Model Name	Vigor2865ac	System Up Time	0:20:59
Router Name	DrayTek	Current Time	Sat Jan 01 2000 00:20:38
Firmware Version	4.0.5.1 STD	Build Date/Time	Dec 23 2019 11:08:56
DSL Version	8B0F07_A/B/C HW: A	LAN MAC Address	00-1D-AA-4A-CF-C0

IPv4 LAN Information

Interface	IP Address	DHCP	Interface	IP Address	DHCP
LAN1	192.168.1.1/24	v	LAN2	192.168.17.1/24	v
LAN3	192.168.3.1/24	v	LAN4	192.168.4.1/24	v
LAN5	192.168.5.1/24	v	LAN6	192.168.6.1/24	v
LAN7	192.168.7.1/24	v	LAN8	192.168.8.1/24	v
DMZ PORT	192.168.254.1/24	v	IP Routed Subnet	192.168.0.1/24	v

IPv4 Internet Access

Line / Mode	IP Address	MAC Address	Up Time
WAN1 VDSL2 / ---	Disconnected	00-1D-AA-4A-CF-C1	00:00:00
WAN2 Ethernet / Static IP	172.16.3.135	00-1D-AA-4A-CF-C2	0:20:06
WAN3 Wireless 2.4G / ---	Disconnected	06-1D-AA-4A-CF-C0	00:00:00
WAN4 Wireless 5G / ---	Disconnected	06-0D-AA-4A-CF-C0	00:00:00
WAN5 USB / ---	Disconnected	00-1D-AA-4A-CF-C5	00:00:00
WAN6 USB / ---	Disconnected	00-1D-AA-4A-CF-C6	00:00:00

Interface

DSL	Connected : Down Stream : 0Kbps / Up Stream : 0Kbps
WAN	Connected : 1, WAN1 WAN2 WAN3 WAN4 WAN5 WAN6
LAN	Connected : 0, Port1 Port2 Port3 Port4 Port5
WLAN	Connected : 0
WLAN5G	Connected : 0
USB	Connected : 0, USB 1, USB 2

Quick Access

- System Status
- Dynamic DNS
- TR-069
- User Management
- IM/P2P Block
- Schedule
- SysLog / Mail Alert
- LDAP
- RADIUS
- Firewall Object Setting
- Data Flow Monitor



Note

We recommend configuring a secure password when first logging in to the router’s administration interface.

The router’s administration password can be changed from [System Maintenance] > [Administrator Password]

4.2 WAN1 - ADSL and VDSL2 Connection Setup

The WAN1 interface of the Vigor 2865 router can connect to either an ADSL / ADSL2+ connection or a VDSL2 / 35b Supervectoring connection.

If your Internet connection uses VDSL2 or 35b and your ISP has supplied you with a Username and Password to connect to the Internet, go to section 4.2.1 PPPoE connection with VDSL and 35b

If your Internet connection uses VDSL2 and your ISP does not supply or require a Username and Password to connect to the Internet, go to section 4.2.2 DHCP / Static IP connection with VDSL and 35b

If your Internet connection uses ADSL or ADSL2+ and your ISP has supplied you with a Username and Password to connect to the Internet, go to section 4.2.3 PPPoA connection with ADSL / ADSL2+

4.2.1 PPPoE connection with VDSL and 35b

1. Go to [WAN] > [General Setup] and click on the WAN1 link:

WAN >> General Setup

Load Balance Mode:

Index	Enable	Physical Mode/Type	Line Speed(Kbps) DownLink/UpLink	Active Mode
WAN1	<input checked="" type="checkbox"/>	ADSL/-	0 / 0	Always On
WAN2	<input checked="" type="checkbox"/>	Ethernet/Auto negotiation	0 / 0	Always On
WAN3	<input checked="" type="checkbox"/>	USB/-	0 / 0	Always On
WAN4	<input checked="" type="checkbox"/>	USB/-	0 / 0	Always On

2. On the settings page, Enable the Service - VLAN Tag insertion:

WAN >> General Setup

WAN 1

Enable:	<input type="text" value="Yes"/>	
Display Name:	<input type="text"/>	
Physical Mode:	ADSL	
DSL Mode:	<input type="text" value="Auto"/>	
DSL Modem Code:	<input type="text" value="Default"/>	
Line Speed(Kbps):		
DownLink	<input type="text" value="0"/>	
UpLink	<input type="text" value="0"/>	
Active Mode:	<input type="text" value="Always On"/>	Load Balance: <input checked="" type="checkbox"/>
VLAN Tag insertion	Service	Customer
ADSL		<input type="text" value="Disable"/> Tag value <input type="text" value="0"/> Priority <input type="text" value="0"/> (0~4095) (0~7)
VDSL2	<input type="text" value="Enable"/> Tag value <input type="text" value="101"/> Priority <input type="text" value="0"/> (0~4095) (0~7)	<input type="text" value="Disable"/> Tag value <input type="text" value="0"/> Priority <input type="text" value="0"/> (0~4095) (0~7)

Set the **Service - Tag** value to **101** if you're in the **UK**.

Set the **Service - Tag** value to **10** if you're in **Ireland**.



Note

These VLAN tag values are required to connect to ISPs that operate on the Openreach or OpenEir VDSL2 networks, if your ISP operates on a different VDSL2 network, this tag value may differ. Please check with your ISP or the DrayTek UK Knowledgebase for ISP specific guides.

The DSL mode can be set to “VDSL2 only” but this is not required.

Click **OK** on that page to apply the changes.

3. Go to **[WAN] > [Internet Access]**

Set the **WAN1 Access Mode** to **PPPoE / PPPoA**, then click the **Details Page** button to proceed:

WAN >> Internet Access

Index	Display Name	Physical Mode	Access Mode	Details Page	IPv6
WAN1		ADSL / VDSL2	PPPoE / PPPoA	Details Page	IPv6
WAN2		Ethernet	None	Details Page	IPv6
WAN3		USB	None	Details Page	IPv6
WAN4		USB	None	Details Page	IPv6

4. On the PPPoE / PPPoA settings tab:

WAN >> Internet Access

WAN 1

Enable Disable

Modem Settings (for ADSL only)

Multi-PVC channel: Channel 1

VPI: 0

VCI: 38

Encapsulating Type: VC MUX

Protocol: PPPoA

Modulation: Multimode

ISP Access Setup

Service Name¹: []

Username: A123456@HG00.btclick.c

Password: []

Fallback account

Fallback Username: []

Fallback Password: []

Select the **Enable** radio button at the top of the page to ensure that the PPPoE interface is enabled.

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.

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

Click **OK** to restart the router.

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

If the WAN1 section shows an IP address, it has connected to the internet successfully:

Auto Logout IPv6

Dashboard
Quick Start Wizard
Online Status
Physical Connection
Virtual WAN

WAN
LAN
NAT
Firewall
User Management
Objects Setting
CSM
Bandwidth Management
Applications
VPN and Remote Access
Certificate Management
Wireless LAN
SSL VPN
USB Application
System Maintenance
Diagnostics
External Devices

Support Area
Product Registration

Online Status

Physical Connection System Uptime: 0:8:44

IPv4		IPv6	
LAN Status		Primary DNS: 194.72.0.98	
Secondary DNS: 213.120.234.26			
IP Address	TX Packets	RX Packets	
192.168.1.1	0	0	

WAN 1 Status >> Drop PPPoA

Enable	Line	Name	Mode	Up Time		
Yes	VDSL2		PPPoE	0:07:41		
IP	GW IP	TX Packets	TX Rate(Bps)	RX Packets	RX Rate(Bps)	
217.34.6.35	217.42.145.215	224580	805	339568	963	

WAN 2 Status

Enable	Line	Name	Mode	Up Time		
Yes	Ethernet		---	00:00:00		
IP	GW IP	TX Packets	TX Rate(Bps)	RX Packets	RX Rate(Bps)	
---	---	0	0	0	0	

WAN 3 Status

Enable	Line	Name	Mode	Up Time	Signal
Yes	USB		---	00:00:00	-
IP	GW IP	TX Packets	TX Rate(Bps)	RX Packets	RX Rate(Bps)
---	---	0	0	0	0

VDSL2 Information (VDSL2 Firmware Version: 05-04-08-00-00-06)

Profile	State	UP Speed	Down Speed	SNR Upstream	SNR Downstream
17A	SHOWTIME	20000 (Kbps)	80000 (Kbps)	15 (0.1dB)	6 (0.1dB)



Note

If the WAN 1 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.

4.2.2 DHCP / Static IP connection with VDSL and 35b

1. Go to [WAN] > [General Setup] and click on the WAN1 link:

Auto Logout IR6
WAN >> General Setup

Load Balance Mode: Auto Weight Session Based

Setup

Index	Enable	Physical Mode/Type	Line Speed(Kbps) DownLink/UpLink	Active Mode
WAN1	V	ADSL/-	0 / 0	Always On
WAN2	V	Ethernet/Auto negotiation	0 / 0	Always On
WAN3	V	USB/-	0 / 0	Always On
WAN4	V	USB/-	0 / 0	Always On

2. On the settings page, Enable the Service - VLAN Tag insertion.
 Set the Tag value setting to 101 if you're in the UK.
 Set the Tag value setting to 10 if you're in Ireland.
 The DSL mode can be set to "VDSL2 only" but this is not required.
 Click OK on that page to apply the changes.

WAN >> General Setup

WAN 1

Enable:	Yes	
Display Name:	<input style="width: 100%;" type="text"/>	
Physical Mode:	ADSL	
DSL Mode:	Auto	
DSL Modem Code:	Default	
Line Speed(Kbps):		
DownLink	<input style="width: 50%;" type="text" value="0"/>	
UpLink	<input style="width: 50%;" type="text" value="0"/>	
Active Mode:	Always On	Load Balance: <input checked="" type="checkbox"/>
VLAN Tag insertion	Service	Customer
ADSL		Disable Tag value Priority <input style="width: 50%;" type="text" value="0"/> <input style="width: 50%;" type="text" value="0"/> (0~4095) (0~7)
VDSL2	Enable Tag value Priority 101 <input style="width: 50%;" type="text" value="0"/> (0~4095) (0~7)	Disable Tag value Priority <input style="width: 50%;" type="text" value="0"/> <input style="width: 50%;" type="text" value="0"/> (0~4095) (0~7)



Note

These VLAN tag values are required to connect to ISPs that operate on the Openreach or OpenEir VDSL2 networks, if your ISP operates on a different VDSL2 network, this tag value may differ.

Please check with your ISP or the DrayTek UK Knowledgebase for ISP specific guides.

- Go to [WAN] > [Internet Access]
Set the WAN1 Access Mode to MPoA / Static or Dynamic IP, then click the Details Page button to proceed:

WAN >> Internet Access

Index	Display Name	Physical Mode	Access Mode	Details Page	IPv6
WAN1		ADSL / VDSL2	MPoA / Static or Dynamic IP	Details Page	IPv6
WAN2		Ethernet	None	Details Page	IPv6
WAN3		USB	None	Details Page	IPv6
WAN4		USB	None	Details Page	IPv6

- In the MPoA / Static or Dynamic IP settings:
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.

WAN >> Internet Access

WAN 1

Enable Disable

Modem Settings (for ADSL only)
 Multi-PVC channel: Channel 2
 Encapsulation: 1483 Bridged IP LLC
 VPI: 0
 VCI: 101
 Modulation: Multimode

WAN Connection Detection
 Mode: ARP Detect

MTU
 Path MTU Discovery: Detect (Max: 1500)

RIP Protocol
 Enable RIP

Bridge Mode
 Enable Bridge Mode
 Bridge Subnet: LAN 1

WAN IP Network Settings WAN IP Alias

Obtain an IP address automatically
 Specify an IP address

Router Name: Vigor
 Domain Name:
 DHCP Client Identifier
 Username:
 Password:
 IP Address:
 Subnet Mask:
 Gateway IP Address:

Default MAC Address
 Specify a MAC Address
 MAC Address: 00 · 1D · AA · FE · FA · 79

DNS Server IP Address
 Primary IP Address: 8.8.8.8
 Secondary IP Address: 8.8.4.4

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

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

Auto Logout IPv6

Dashboard
Quick Start Wizard
Online Status
Physical Connection
Virtual WAN

WAN
LAN
NAT
Firewall
User Management
Objects Setting
CSM
Bandwidth Management
Applications
VPN and Remote Access
Certificate Management
Wireless LAN
SSL VPN
USB Application
System Maintenance
Diagnostics
External Devices

Support Area
Product Registration

Online Status

Physical Connection System Uptime: 0:8:44

	IPv4	IPv6
LAN Status	Primary DNS: 194.72.0.98 Secondary DNS: 213.120.234.26	
IP Address	TX Packets	RX Packets
192.168.1.1	0	0

WAN 1 Status >> Drop PPPoA

Enable	Line	Name	Mode	Up Time		
Yes	VDSL2		PPPoE	0:07:41		
IP	GW IP	TX Packets	TX Rate(Bps)	RX Packets	RX Rate(Bps)	
217.34.6.35	217.42.145.215	224580	805	339568	963	

WAN 2 Status

Enable	Line	Name	Mode	Up Time		
Yes	Ethernet		---	00:00:00		
IP	GW IP	TX Packets	TX Rate(Bps)	RX Packets	RX Rate(Bps)	
---	---	0	0	0	0	

WAN 3 Status

Enable	Line	Name	Mode	Up Time	Signal
Yes	USB		---	00:00:00	-
IP	GW IP	TX Packets	TX Rate(Bps)	RX Packets	RX Rate(Bps)
---	---	0	0	0	0

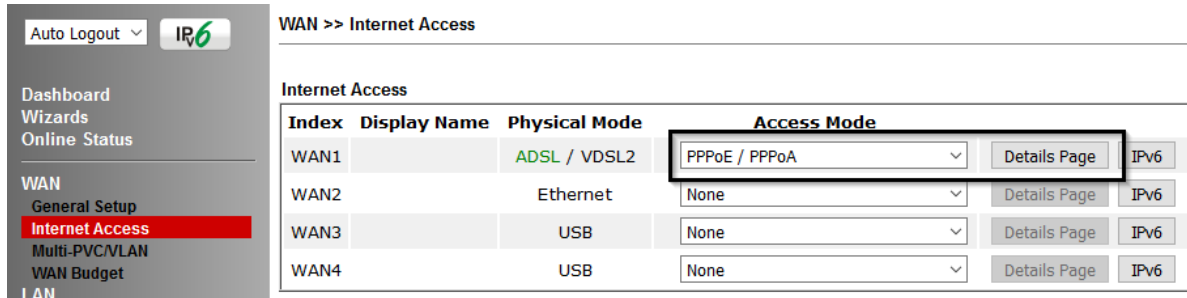
VDSL2 Information (VDSL2 Firmware Version: 05-04-08-00-00-06)

Profile	State	UP Speed	Down Speed	SNR Upstream	SNR Downstream
17A	SHOWTIME	20000 (Kbps)	80000 (Kbps)	15 (0.1dB)	6 (0.1dB)

4.2.3 PPPoA connection with ADSL / ADSL2+

1. Go to [WAN] > [Internet Access]

Firstly set the WAN1 Access Mode to PPPoE / PPPoA, then click the **Details Page** button to proceed:



WAN >> Internet Access

Index	Display Name	Physical Mode	Access Mode	Details Page	IPv6
WAN1		ADSL / VDSL2	PPPoE / PPPoA	Details Page	IPv6
WAN2		Ethernet	None	Details Page	IPv6
WAN3		USB	None	Details Page	IPv6
WAN4		USB	None	Details Page	IPv6

2. On the PPPoE / PPPoA settings tab:

The details for the **VPI** and **VCI** settings for ADSL should be correct for UK usage, with **0** and **38** being the defaults. In most cases, it will not be necessary to change these. The **Modulation** setting can be left on its default of Multimode which will auto-detect the correct ADSL type to use.

Select the **Enable** radio button at the top of the page to ensure that the PPPoE interface is enabled.

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.

WAN >> Internet Access

WAN 1

PPPoE / PPPoA	MPoA / Static or Dynamic IP	IPv6
<input checked="" type="radio"/> Enable <input type="radio"/> Disable		
Modem Settings (for ADSL 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	
<input type="checkbox"/> Fallback account		
Fallback Username		
Fallback Password		

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

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

Auto Logout IR6

Dashboard
Quick Start Wizard
Online Status
Physical Connection
Virtual WAN

WAN
LAN
NAT
Firewall
User Management
Objects Setting
CSM
Bandwidth Management
Applications
VPN and Remote Access
Certificate Management
Wireless LAN
SSL VPN
USB Application
System Maintenance
Diagnostics
External Devices

Support Area
Product Registration

Online Status

Physical Connection System Uptime: 0:8:44

IPv4		IPv6	
LAN Status		Primary DNS: 194.72.0.98	
Secondary DNS: 213.120.234.26			
IP Address	TX Packets	RX Packets	
192.168.1.1	0	0	

WAN 1 Status >> Drop PPPoA

Enable	Line	Name	Mode	Up Time	
Yes	VDSL2		PPPoE	0:07:41	
IP	GW IP	TX Packets	TX Rate(Bps)	RX Packets	RX Rate(Bps)
217.34.6.35	217.42.145.215	224580	805	339568	963

WAN 2 Status

Enable	Line	Name	Mode	Up Time	
Yes	Ethernet		---	00:00:00	
IP	GW IP	TX Packets	TX Rate(Bps)	RX Packets	RX Rate(Bps)
---	---	0	0	0	0

WAN 3 Status

Enable	Line	Name	Mode	Up Time	Signal
Yes	USB		---	00:00:00	-
IP	GW IP	TX Packets	TX Rate(Bps)	RX Packets	RX Rate(Bps)
---	---	0	0	0	0

VDSL2 Information (VDSL2 Firmware Version: 05-04-08-00-00-06)

Profile	State	UP Speed	Down Speed	SNR Upstream	SNR Downstream
17A	SHOWTIME	20000 (Kbps)	80000 (Kbps)	15 (0.1dB)	6 (0.1dB)



Note

If the WAN 1 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.

4.3 WAN2 – Ethernet Connection Setup

The WAN2 interface of the Vigor 2865 router can connect to a modem such as the Vigor 130 VDSL2 to Ethernet modem, an ISP supplied router or another network with an Internet connection.

If you are using a modem and your ISP has supplied you with a Username and Password to connect to the Internet, go to section 4.3.1 PPPoE

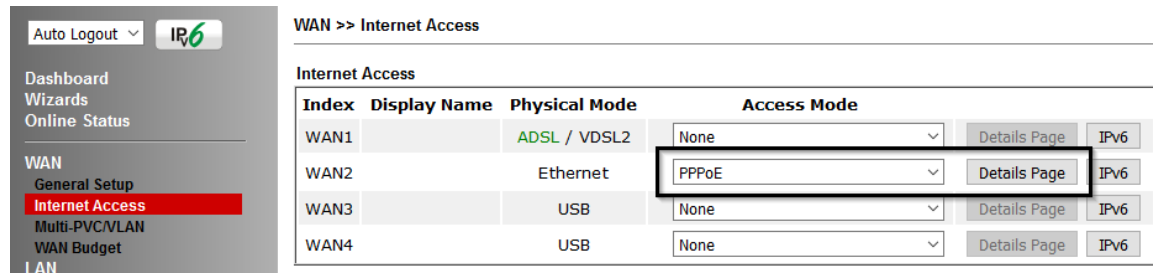
If the router is connected to a modem and the ISP does not supply or require a Username and Password to connect to the Internet, or you are connecting the WAN2 connection to another router or network go to section 4.3.2 Static or Dynamic IP

4.3.1 PPPoE

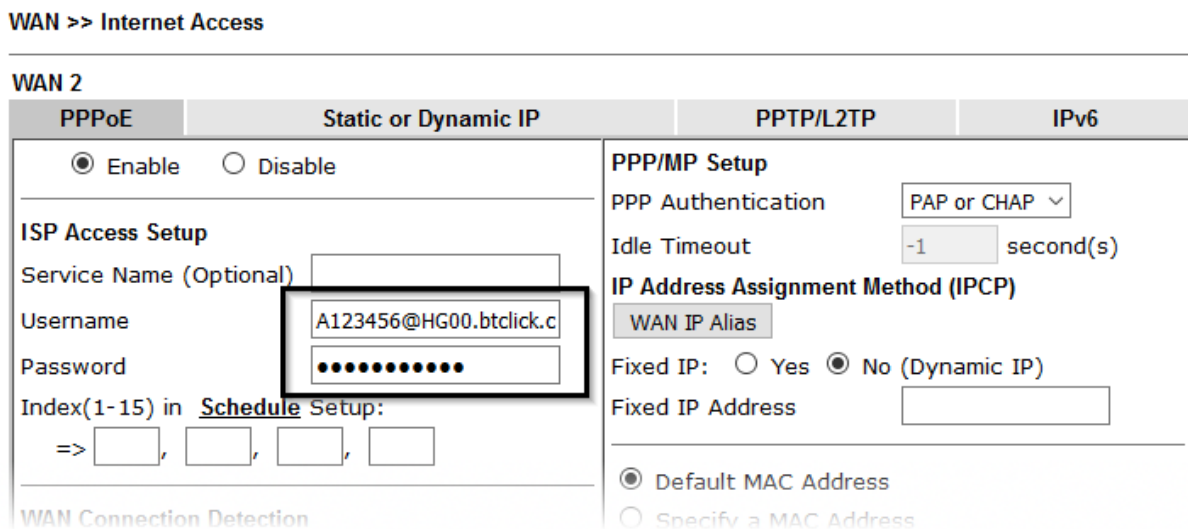
This connection method will typically be used with a modem such as the Vigor 130 VDSL2 modem, which passes through the PPPoE connection from the ISP to the router.

1. Go to [WAN] > [Internet Access]

Firstly set the **WAN2 Access Mode** to **PPPoE**, then click the **Details Page** button to proceed:



2. In the PPPoE settings tab:



Select the **Enable** radio button at the top of the page to ensure that the PPPoE interface is enabled.

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.

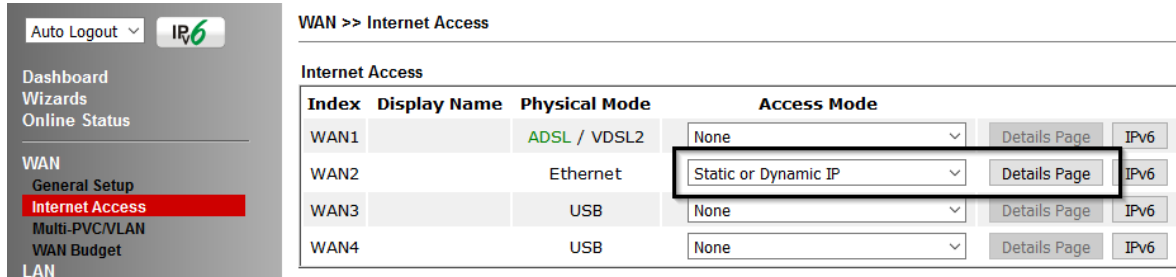
Click **OK** on that page to save the settings and the router will then prompt to restart, allow it to restart to properly apply the changes.

Once the router has restarted, log back into the web interface and select [**Online Status**] > [**Physical connection**], if it has connected, the relevant **WAN Interface** status text will be in green along with an IP address which indicates that the connection is active and ready for use.

4.3.2 Static or Dynamic IP

1. Go to [WAN] > [Internet Access]

Set the WAN2 Access Mode to Static or Dynamic IP, then click the Details Page button to proceed:

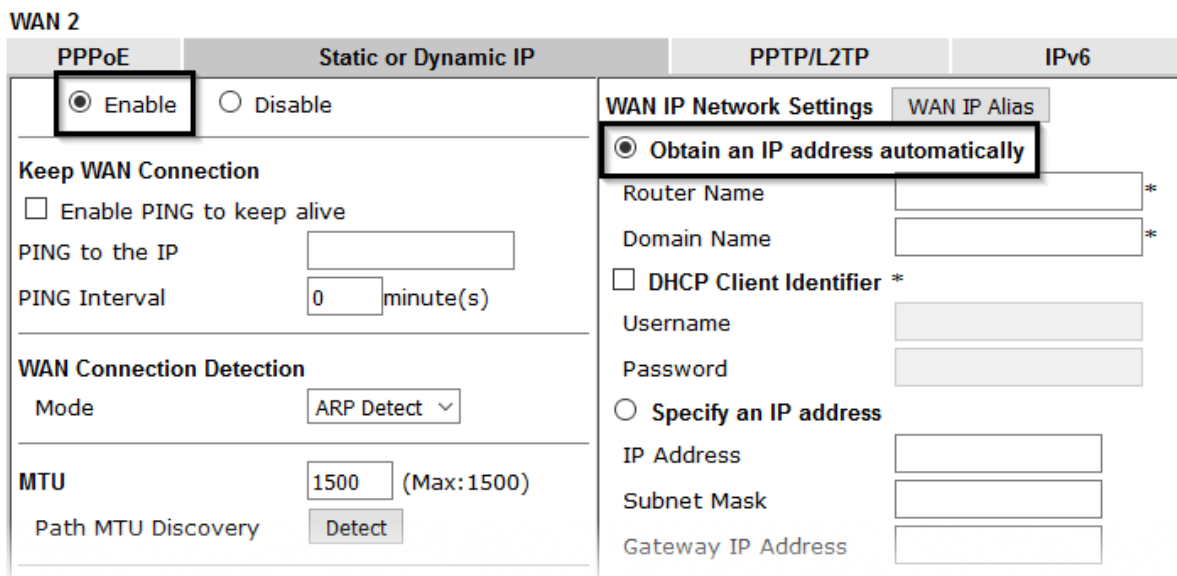


WAN >> Internet Access

Index	Display Name	Physical Mode	Access Mode	Details Page	IPv6
WAN1		ADSL / VDSL2	None	Details Page	IPv6
WAN2		Ethernet	Static or Dynamic IP	Details Page	IPv6
WAN3		USB	None	Details Page	IPv6
WAN4		USB	None	Details Page	IPv6

2. In the Static or Dynamic IP settings:

WAN >> Internet Access



WAN 2

PPPoE Static or Dynamic IP PPTP/L2TP IPv6

Enable Disable

Keep WAN Connection

Enable PING to keep alive

PING to the IP:

PING Interval: minute(s)

WAN Connection Detection

Mode:

MTU (Max: 1500)

Path MTU Discovery:

WAN IP Network Settings WAN IP Alias

Obtain an IP address automatically

Router Name: *

Domain Name: *

DHCP Client Identifier *

Username:

Password:

Specify an IP address

IP Address:

Subnet Mask:

Gateway IP Address:

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

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

Once the router has restarted, log back into the web interface and select [**Online Status**] > [**Physical connection**], if it has connected, the relevant **WAN Interface** status text will be in green along with an IP address which indicates that the connection is active and ready for use.

4.4 WAN3 / WAN4 – 4G LTE USB Modem Setup

The 4G LTE USB modem facility can be used either as a primary Internet connection or as a backup that will only activate when other WAN interfaces are offline. It allows a supported USB modem to provide internet access through the router.

The list of supported modems can be found under:
[USB Application] > [Modem Support List]

or on the DrayTek UK site:

<https://www.draytek.co.uk/support/guides/usb-3g-4g-modem-support-list>

There are two USB modem connection modes available:

PPP mode is used where the modem provides a dial-up interface and would typically require software to perform dialing and provide status information and diagnostics when used with a PC.

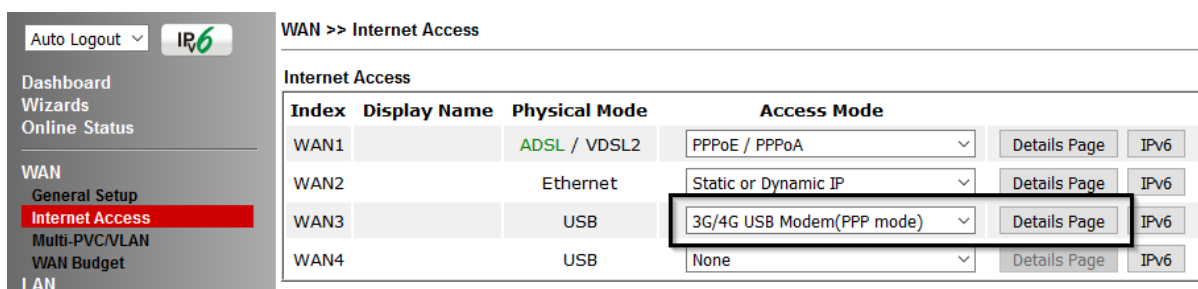
DHCP mode is used where the modem operates as a virtual network adapter / router and will usually have diagnostics and usage information shown in a web interface.

When configuring the 3G/4G LTE modem, the router will require the correct **APN** (Access Point Name) details and a username and password with some ISPs. If those details are not set, the mobile network may reject the connection attempts of the router, which will result in the router showing no signal / no IP address.

4.4.1 PPP Mode

To set up the USB WAN for PPP mode, go to [WAN] > [Internet Access]
Select **3G/4G USB Modem (PPP mode)** from the drop-down box

Click the **Details Page** button to continue:



WAN >> Internet Access

Internet Access

Index	Display Name	Physical Mode	Access Mode	Details Page	IPv6
WAN1		ADSL / VDSL2	PPPoE / PPPoA	Details Page	IPv6
WAN2		Ethernet	Static or Dynamic IP	Details Page	IPv6
WAN3		USB	3G/4G USB Modem(PPP mode)	Details Page	IPv6
WAN4		USB	None	Details Page	IPv6

In the USB WAN settings, select the **Enable** option to enable the WAN interface.

The Modem String values typically do not need to be changed.

Enter the **PPP Username** and **PPP Password** if your ISP requires these to authenticate.

Enter a SIM PIN code only if your SIM card has a PIN set on it, otherwise leave this blank.

WAN >> Internet Access

WAN 3

3G/4G USB Modem(PPP mode)	3G/4G USB Modem(DHCP mode)	IPv6
Modem Support List		
3G/4G USB Modem(PPP mode)	<input checked="" type="radio"/> Enable <input type="radio"/> Disable	
SIM PIN code	<input type="text"/>	
Modem Initial String	<input type="text" value="AT&FE0V1X1&D2&C1S0=0"/> <small>(Default:AT&FE0V1X1&D2&C1S0=0)</small>	
APN Name	<input type="text"/>	<input type="button" value="Apply"/>

To set the **APN Name**, enter the APN required by the SIM card / network into the APN Name field and click the **Apply** button:

3G/4G USB Modem(PPP mode)	<input checked="" type="radio"/> Enable <input type="radio"/> Disable	
SIM PIN code	<input type="text"/>	
Modem Initial String	<input type="text" value="AT&FE0V1X1&D2&C1S0=0"/> <small>(Default:AT&FE0V1X1&D2&C1S0=0)</small>	
APN Name	<input type="text" value="exampleAPN"/>	<input type="button" value="Apply"/>
Modem Initial String2	<input type="text" value="AT"/>	
Modem Dial String	<input type="text" value="ATDT*99#"/>	

This will move the APN Name into the **Modem Initial String** to indicate that it has been saved.

3G/4G USB Modem(PPP mode)	<input checked="" type="radio"/> Enable <input type="radio"/> Disable	
SIM PIN code	<input type="text"/>	
Modem Initial String	<input type="text" value="APN:exampleAPN"/> <small>(Default:AT&FE0V1X1&D2&C1S0=0)</small>	
APN Name	<input type="text" value="exampleAPN"/>	<input type="button" value="Apply"/>
Modem Initial String2	<input type="text" value="AT"/>	
Modem Dial String	<input type="text" value="ATDT*99#"/>	

Click **OK** to save and apply the changes.

If the modem is detected successfully, the WAN interface should be able to connect. Status information can be viewed on the **[Online Status]** > **[Physical Connection]** section in the **WAN3** or **WAN4** details. If there is a successful connection, the WAN interface text will show in green and will show an IP address.

4.4.2 DHCP Mode

To set up the USB WAN for DHCP mode, go to **[WAN] > [Internet Access]**
Select **3G/4G USB Modem (DHCP mode)** from the drop-down box
Click the **Details Page** button to continue:

WAN >> Internet Access

Index	Display Name	Physical Mode	Access Mode	Details Page	IPv6
WAN1		ADSL / VDSL2	PPPoE / PPPoA	Details Page	IPv6
WAN2		Ethernet	Static or Dynamic IP	Details Page	IPv6
WAN3		USB	3G/4G USB Modem(DHCP mode)	Details Page	IPv6
WAN4		USB	None	Details Page	IPv6

In the USB WAN settings, select the **Enable** option to enable the WAN interface.

Enter a **SIM PIN** code only if your SIM card has a PIN set on it, otherwise leave this blank.

Network Mode defaults to **4G/3G/2G** which will auto-select the network type to connect to and will use whichever mode the base station recommends. Setting this to a specific mode will force that connection type, for instance “4G Only” will connect using 4G specifically

The APN Name will typically not need to be set with a USB modem that uses DHCP mode, however if the modem cannot connect then enter the APN for the SIM card used in the modem.

WAN >> Internet Access

WAN 3

<input checked="" type="radio"/> Enable <input type="radio"/> Disable	Authentication <input type="text" value="PAP or CHAP"/>
SIM PIN code <input type="text"/>	Username <input type="text"/> (Optional)
Network Mode <input type="text" value="4G/3G/2G"/> (Default:4G/3G/2G)	Password <input type="text"/> (Optional)
APN Name <input type="text" value="exampleAPN"/>	
LTE hardware version ---	
WAN Connection Detection	
Mode <input type="text" value="ARP Detect"/>	
MTU <input type="text" value="1500"/> (Default:1500)	
Path MTU Discovery <input type="text" value="Choose IP"/>	

Click **OK** to save and apply the changes.

If the modem is detected successfully, the WAN interface should be able to connect. Status information can be viewed on the **[Online Status] > [Physical Connection]** section in the **WAN3** or **WAN4** details. If there is a successful connection, the WAN interface text will show in green and will show an IP address.

5. Getting Further Help

If the router does not appear to be operating correctly or you cannot get online to the Internet, please visit our web site (www.draytek.co.uk) 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 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 2865 series warranty is 'Return to base' (RTB) unless you have VigorCare which provides enhanced services (see www.draytek.co.uk/vigorcare).

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

5.1 Additional Feature Setup

This is a quick setup guide to get you online with your new router.

Your Vigor 2865 series router is capable of very much more and has a plethora of other features.

These are covered in the main user manual, which is available on the Downloads page:

<https://www.draytek.co.uk/support/downloads>

The online knowledgebase has additional information on how to configure the router's Internet connectivity and more advanced features:

<https://www.draytek.co.uk/support/product-knowledgebase>

5.2 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

In other countries or regions, please contact your local distributor/supplier for local options.

5.3 Firmware Updates

It is strongly recommended that you keep your router firmware up to date with the latest version in order to have all of the latest security and feature improvements.

Always obtain firmware from official sources, i.e. (for UK/Ireland users).

There are two firmware file types:

.all - upgrade retaining all previous settings

.rst - upgrade and reset to factory default

It is recommended to take a configuration backup prior to upgrading the firmware.

5.4 Security & Router Best Practice

Your router is the gateway to an entire business network and data. Even the best security equipment requires correct usage in order to ensure that its features are effective.

There are many simple practices that every router user should adopt to help reduce the risk to their network or business as well as some very common and simple mistakes that people habitually make - simple mistakes which could then be exploited by others.

We've produced our free guide "**Router Best Practice**" which contains essential information for anyone installing, configuring or using a broadband router or wireless LAN.

Available to download: <https://www.draytek.co.uk/best>