

## Draytek Vigor 2860Ln 3G/4G LTE & VDSL 802.11n Wireless Router



Product Name: Draytek Vigor 2860Ln 3G/4G LTE & VDSL 802.11n Wireless Router

Manufacturer: -

Model Number: V2860LN-K

Draytek Vigor 2860Ln 3G/4G LTE & VDSL 802.11n Wireless Router

The Draytek Vigor 2860L 3G/4G LTE & VDSL 802.11 Wireless Router features the same specification as the standard Vigor2860 product with the addition of built-in 4G (Cellular/LTE) connectivity, compatible with all UK/Ireland cellular networks (apart from 'Relish'). The embedded 4G/LTE connectivity provides a self-contained solution as opposed to having to add external/USB modems to your router. A standard SIM slot on the back of the router is secured with a cover to prevent accidental removal (you can leave the cover off if you need easy access).

Draytek Vigor 2860L Key Features

- Standard-Size SIM Slot
- Sending/Receiving of SMS (Text) messages to Web Interface
- Status Reports & alerts via SMS, and SMS-initiated reboot
- LTE Cat 4 / 3GPP Release 9 with fallback to 3G
- LTE Max Speed : 150/50Mb/s (RX/TX)
- Standard size SIM Slot on with fixed cover
- Unlocked to any network (BT, EE, 3, O2, Vodafone, Eircom)
- LTE (4G) Bands: Bands 20 (800Mhz), 3 (1800Mhz), 7 (2600Mhz) & 8 (900Mhz)
- LTE Bandwidth: 1.4/3/5/10/15/20 Mhz
- LTE Power : Class 3 (23dBm +-2dB)
- LTE Duplex : FDD (Frequency Division)
- UMTS (3G) Bands: Band 1 (2100MHz), Band 8 (900MHz)
- GSM Bands: 850MHz, 900MHz, 1800MHz, 1900MHz
- 3G Data Modes: GPRS/HSDPA/HSPA+
- GPRS MS Output : Class 12
- Included Antennae : Two with magnetic extension bases
- LTE Antenna Connection : SMA Female x 2

The Vigor 2860L ships with two LTE aerials (antennae) which can rotate and tilt for optimum reception. The included extension bases provide a 1M extension cable to allow optimum positioning, avoiding obstructions, cabinets or equipment. On the wireless LAN-equipped model (Vigor 2860Ln), there are two additional aerials. The WiFi (outer two, white) and LTE aerials (inner two, black) have different plugs to ensure that the correct socket is used.

Draytek Vigor 2860L - Technical Specifications

The Vigor 2860 and 3G/4G cellular modem setup is ideal for:

- Backup to your primary Internet feed (ADSL, cable etc.)
- Providing lower cost broadband than a fixed line solution
- Areas without fixed line broadband access
- Compatible with a wide range of 3G modems/phones
- Temporary Locations
- Mobile Homes
- Locations on the move - coaches, trains
- Fairgrounds & temporary exhibitions
- Outdoor locations (the router and modem itself must be indoors!)
- Disaster Planning & High Availability
- Important Note: Please refer to the main Vigor 2860 product page for more details of standard features included in the range. The specification and compatibility listed here applies only to the UK model for use in the UK & Ireland - product code V2860L-K

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(without WiFi) or V2860LN-K (with WiFi). For use in other regions, you should ensure that you are buying the model intended for that country and its cellular networks. When purchasing your unit, ensure it matches your region (the outer box is clearly labelled) in order that it has the correct regional network support and compatibility.

### Text Message (SMS) Control & Reporting

As a cellular network device, the Vigor 2860L takes advantage of text messaging (SMS) to allow remote interrogation and control. Sending a simple command ('router status') to the router from a regular cellphone will get an instant reply telling you about the router's current status, firmware version, each WAN port's IP address, status and data volumes.

Another command ('router reboot') enables you to reboot the router remotely. For security, the commands require a password and a whitelist can allow messages only from your specified phones preventing unauthorised persons from being able to send rogue commands. See the screenshot on the right for examples.

The Vigor 2860L can also send and receive text messages from its web interface; checking incoming messages allows you to read service messages, for example that you are low on credit but it's also a quick way to type a message to anyone else's mobile phone from your web browser.

The facility is also useful to confirm your credit balance (for PAYG SIMs) or to use top-up vouchers (where these are accepted by SMS). You can also send text messages from the command line via a telnet connection - more suited for automation/integration.

Vigor 2860 ADSL/VDSL Series - Technical Specification

### LAN Ports (Switch)

- 6 X Gigabit Ethernet (1000Mb/s) Ports
- Port-Based VLAN (Inclusive/Exclusive Groups)
- 802.1q VLAN Tagging
- Multiple LAN IP Subnets

### WAN Ports:

- WAN1 : ADSL/VDSL, RJ11
- WAN2 : Gigabit Ethernet (1000Mb/s) Ethernet for load balance and WAN failover
- WAN3 : USB Port for 3G/4G Cellular Modem or Printer
- WAN4 : Built-in 3G/4G Modem with SIM-slot

### Performance:

- Firewall: Up to 200Mb/s
- IPSec VPN: Up to 50Mb/s

### Cellular Compatibility/Features:

- Standard-Size SIM Slot
- Sending/Receiving of SMS (Text) messages to Web Interface
- Status Reports & alerts via SMS, and SMS-initiated reboot
- LTE Cat 4 / 3GPP Release 9 with fallback to 3G
- LTE Max Speed : 150/50Mb/s (RX/TX)
- Standard size SIM Slot on with fixed cover
- Unlocked to any network (BT, EE, 3, O2, Vodafone, Eircom)
- LTE (4G) Bands: Bands 20 (800Mhz), 3 (1800Mhz), 7 (2600Mhz) & 8 (900Mhz)
- LTE Bandwidth: 1.4/3/5/10/15/20 Mhz
- LTE Power : Class 3 (23dBm +-2dB)
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• UMTS (3G) Bands: Band 1 (2100MHz), Band 8 (900MHz)  
• GSM Bands: 850MHz, 900MHz, 1800MHz, 1900MHz  
• 3G Data Modes: GPRS/HSDPA/HSPA+  
• GPRS MS Output : Class 12  
• Included Antennae : Two aerials with magnetic extension bases  
• LTE Antenna Connection : SMA Female x 2

### ADSL Compatibility:

• ANSI T1.413 Issue2  
• ITU-T G.992.1 G.dmt (ADSL)  
• ITU-T G.992.2 G.lite  
• ITU-T G.992.3 ADSL2  
• ITU-T G.992.5 ADSL2+  
• Annex L (REDSL)  
• Annex A  
• Annex M  
• ANFP Issue 3 Compliant/Certified (for Annex A & Annex M)  
• DSL Forum : TR-048/67 & TR-100

### VDSL Compatibility:

• BT Infinity Option 1 & Option 2 Compatible  
• ITU-T VDSL2 G.993.2  
• ITU-T G.993.1, G.997.1  
• Band Plan: G.998, G.997  
• Annex A, Annex B, Annex C  
• VDSL2 Profile: 8a, 8b, 8c, 8d, 12a, 12b, 17a, 30a  
• OLR, UPBO, DPBO Supported  
• US0 Supported  
• Loop Diagnostic Mode  
• DSL Forum WT-114

### Load Balance/Failover Features:

• Outbound Policy-Based Load-Balance  
• WAN Connection Fail-over  
• BoD (Bandwidth on Demand)  
• Vigor 2860 ATM Protocols (DSL):  
• RFC-2684/RFC-1483 Multiple Protocol over AAL5  
• RFC-2516 PPP over Ethernet  
• RFC-2364 PPP over AAL5  
• PPPoE pass through LAN/WLAN  
• PPPoE/PPPoA Relay  
• Transparent bridge for MPoA  
• Multiple PVC support for Triple Play Applications (up to 8 simultaneous)  
• Support for RFC4638 for MTU up to 1500

### Wireless LAN Features ('Vigor 2860Ln' model only):

• 802.11n Compatible with backward support for 802.11b/g  
• Multiple SSID : Create up to 4 virtual wireless LANs (independent or joined)  
• Packet Aggregation and Channel Bonding

## Draytek Vigor 2860Ln 3G/4G LTE & VDSL 802.11n Wireless Router

- Optional Higher Gain or directional aerials available - [Click Here](#).
- Active Client list in Web Interface
- Wireless LAN Isolation (from VLAN groups and wired Ethernet interfaces)
- 64/128-bit WEP Encryption
- WPA/WPA2 Encryption
- Switchable Hidden SSID
- Restricted access list for clients (by MAC address)
- Time Scheduling (WLAN can be disabled at certain times of day)
- Access Point Discovery
- WDS (Wireless Distribution system) for WLAN Bridging and Repeating
- 802.1x Radius Authentication
- Wireless VLAN
- Wireless Rate-Control
- Automatic Power Management
- 802.11e WMM (Wi-Fi Multimedia)

### WAN

#### Protocols (Ethernet):

- DHCP Client
- Static IP
- PPPoE
- PPTP
- BPA
- IGMP v3 MultiCast
- Support for RFC4638 for MTU up to 1500
- Support for RFC3021 (31-bit prefix for WAN subnet mask)

#### Firewall & Security Features:

- CSM (Content Security Management):
  - URL Keyword Filtering - Whitelist or Blacklist specific sites or keywords in URLs
  - Block Web sites by category (e.g. Adult, Gambling etc. Subject to subscription)
  - DNS Filter with URL or category based blocking
  - Prevent accessing of web sites by using their direct IP address (thus URLs only)
  - Blocking automatic download of Java applets and ActiveX controls
  - Blocking of web site cookies

#### Block http downloads of file types :

- Binary Executable : .EXE / .COM / .BAT / .SCR / .PIF
- Compressed : .ZIP / .SIT / .ARC / .CAB/ .ARJ / .RAR
- Multimedia : .MOV / .MP3 / .MPEG / .MPG / .WMV / .WAV / .RAM / .RA / .RM / .AVI / .AU
- Time Schedules for enabling/disabling the restrictions
- Block popular P2P (Peer-to-Peer) file sharing programs
- Block Instant Messaging programs (e.g. IRC, MSN/Yahoo Messenger etc.)
- Multi-NAT, DMZ Host
- Port Redirection and Open Port Configuration
- Policy-Based Firewall
- MAC Address Filter
- SPI ( Stateful Packet Inspection ) with new FlowTrack Mechanism
- DoS / DDoS Protection IP Address Anti-spoofing
- E-Mail Alert and Logging via Syslog

## Draytek Vigor 2860Ln 3G/4G LTE & VDSL 802.11n Wireless Router

• Bind IP to MAC Address

Bandwidth Management:

• QoS

• Guaranteed Bandwidth for VoIP

• Class-based Bandwidth Guarantee by User-Defined Traffic Categories

• Layer 2 & 3 (802.1p & TOS/DCSP)

• DiffServ Code Point Classifying

• 4-level Priority for each Direction (Inbound / Outbound)

• Bandwidth Borrowed

• Temporary (5 minute) Quick Blocking of any LAN Client

• Bandwidth / Session Limitation

• Per WAN budget

Network/Router Management:

• Web-Based User Interface (HTTP / HTTPS)

• CLI ( Command Line Interface ) / Telnet / SSH

• Administration Access Control

• Configuration Backup / Restore

• Built-in Diagnostic Function

• Firmware Upgrade via TFTP / FTP

• Logging via Syslog

• SNMP v3 Management with MIB-II

• TR-069

• TR-104

Other features:

• Wireless Management of compatible DrayTek APs

• Switch Management of compatible DrayTek switches

• Temperature Monitoring (optional Thermometer)

• Wireless Guest Portal (Vigor 2860Ln only)

• Multiple Private LAN Subnets

• SMS (Text Message) Alert via Internet gateway

• VPN Trunk/Backup to remote site

• Internal RADIUS / 802.1X server

VPN Facilities:

• Up to 32 Concurrent VPN Tunnels (incoming or outgoing)

• Tunneling Protocols: PPTP, IPSec, L2TP, L2TP over IPSec, SSL VPN

• IPSec Main and Aggressive modes

• Encryption : MPPE and Hardware-Based AES / DES / 3DES

• Authentication : Hardware-Based MD5 and SHA-1

• IKE Authentication : Pre-shared Key or X.509 Digital Signature

• SSL VPN for teleworkers - Up to 5 simultaneous users. Proxy or tunnel mode

• LAN-to-LAN & Teleworker-to-LAN connectivity

• DHCP over IPSec

• NAT-Traversal ( NAT-T )

• Dead Peer Detection (DPD)

• VPN Pass-Through

## Draytek Vigor 2860Ln 3G/4G LTE & VDSL 802.11n Wireless Router

- MOTP (Mobile One Time Password)
- TACACS+ support for VPN authentication

### Network Features:

- DHCP Client / Relay / Server
- DHCP Option 66 support
- Dynamic DNS
- NTP Client (Synchronise Router Time)
- Call Scheduling (Enable/Trigger Internet Access by Time)
- RADIUS Client
- Microsoft®; UPnP Support

### Routing Protocols:

- Static Routing
- RIP V2

### Operating Requirements:

- Rack Mountable (Optional Vigor RM1 mounting bracket required)
- Wall Mountable
- Temperature Operating : 0°C ~ 45°C
- Storage : -25°C ~ 70°C
- Humidity 10% ~ 90% (non-condensing)
- Power Consumption: 20 Watt Max.
- Dimensions: L240.96 \* W165.07 \* H43.96 ( mm )
- Operating Power: DC 12V (via external PSU, supplied)
- Warranty : Two (2) Years RTB
- Power Requirements : 220-240VAC

**Please Enquire**