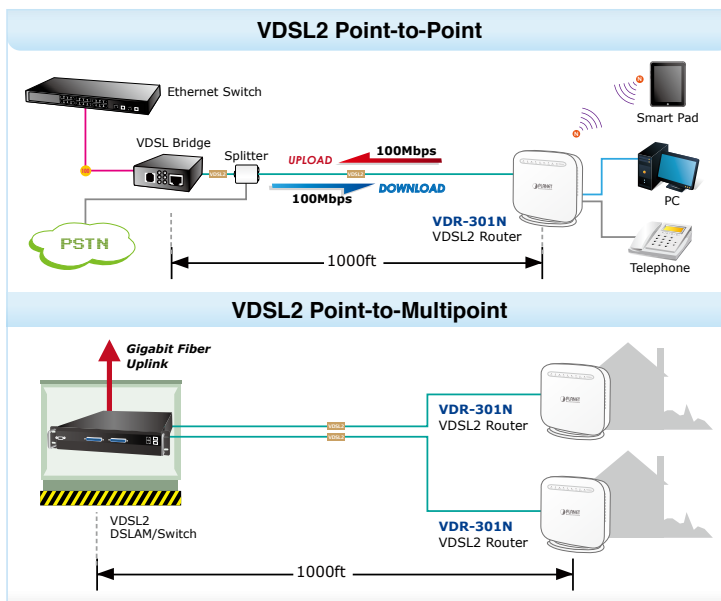# 802.11n Wireless VDSL2 Bridge Router

High-performance Ethernet over VDSL2

Via the latest VDSL2 technology with **30a profile** supported, PLANET VDR-301N offers very high-performance access to Internet, up to **100Mbps** for both **downstream** and **upstream** data transmission. VDSL2 absolutely offers the fastest data transmission speed over the existing copper telephone lines without the need for rewiring. With integrated support for the ITU-T's new **G.993.5 Vectoring** technology, the VDR-301N works in conjunction with vectoring-enabled DSLAMs to remove crosstalk interference and improve maximum line bandwidth across the existing copper infrastructure.

VDSL2 Point-to-Point

Ethernet Switch

VDSL Bridge
Splitter
UPLOAD
100Mbps
DOWNLOAD
100Mbps
Smart Pad
PSTN
VDR-301N
VDSL2 Router
PC
Telephone
1000ft

VDSL2 Point-to-Multipoint

Gigabit Fiber
Uplink
VDR-301N
VDSL2 Router
VDR-301N
VDSL2 Router
VDSL2
DSLAM/Switch
1000ft

VDSL2 phone wire
100BASE-FX Fiber-optic
100BASE-TX UTP
Telephone wire
2.4GHz 802.11n

Internet Access Features

- **Shared Internet Access**: All users on the LAN can access the Internet through the VDR-301N using only one single external IP address. The local (invalid) IP addresses are hidden from external sources. This process is called NAT (Network Address Translation).
- **Built-in VDSL2 Modem**: The VDR-301N provides VDSL2 modem and supports all common VDSL2 connections.
- **G. Vectoring**: G.993.5 (G. Vector) support for significant reduction of crosstalk levels and improvement of VDSL2 line performance
- **Multiple WAN Connections**: Upon the Internet (WAN port) connection, the VDR-301N supports ADSL2+ and VDSL2.

Advanced Internet Functions

- **Virtual Servers**: This feature allows Internet users to access Internet servers on your LAN. The setup is also quick and easy.
- **Firewall:** The VDR-301N supports simple firewall with NAT technology.
- **Universal Plug and Play (UPnP)**: UPnP allows automatic discovery and configuration of the Broadband Router. UPnP is supported by Windows XP, 7 or later.
- **DMZ Support**: The VDR-301N can translate public IP addresses into private IP address to allow unlimited 2-way communication with the servers or individual users on the Internet. It provides the most flexible way to run programs smoothly for programs that might be restricted in NAT environment.
- **RIPv1/v2 Routing**: It supports RIPv1/v2 routing protocol for routing capability.

LAN Features

- **4-port Switch**: The VDR-301N incorporates a 4-port 10/100BASE-TX switching hub, making it easy to create or extend your LAN.
- **DHCP Server Support**: Dynamic Host Configuration Protocol provides a dynamic IP address to PCs and other devices upon request. The VDR-301N can act as a DHCP Server for devices on your local LAN.

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Delivering High-demanding Service Connectivity for ISP/Triple Play Devices

The VDR-301N provides excellent bandwidth to meet the demand of the triple play devices for home entertainment and communication. With the capability of 100/100Mbps symmetric data transmission, the VDR-301N enables many multi-media services to work on local Internet, such as **VOD (Video on Demand)**, Voice over IP, **Video phone**, **IPTV**, Internet caching server, distance education, and so on.

ADSL2+ Fallback

For those ISPs that still provide ADSL broadband service, the VDR-301N can support transmission rates up to 24Mbps downstream and 3.5Mbps upstream with ADSL2+ technology. The VDR-301N supports PPPoA (RFC 2364 - PPP over ATM Adaptation Layer 5), RFC 2684 encapsulation over ATM (bridged or routed), PPP over Ethernet (RFC 2516), and IP over ATM (IPoA, RFC 1483) to establish a connection with ISP and it can be also directly switched over to VDSL2 after the ISP network upgrade.

High-speed 802.11n Wireless Connectivity

The VDR-301N applies 2T2R MIMO antenna technology and provides two modes for network applications -- **Router** and **Bridge**. With built-in 2.4GHz IEEE 802.11b/g/n wireless network capability, the VDR-301N allows any computer and wireless-enabled network device to connect to it without additional cabling. 802.11n wireless capability brings users the data transmission rate as high as **300Mbps**. The radio coverage is also doubled to offer high-speed wireless connection even in spacious offices or houses.

Secure Wireless Access Control

To secure wireless communication, the VDR-301N supports most up-to-date encryptions including WEP, WPA-PSK and WPA2-PSK. Moreover, the VDR-301N supports WPS configuration with PBC/PIN type for users to easily connect to a secure wireless network.

WPS (Wi-Fi Protected Setup)
Quick & Easy Wireless connection
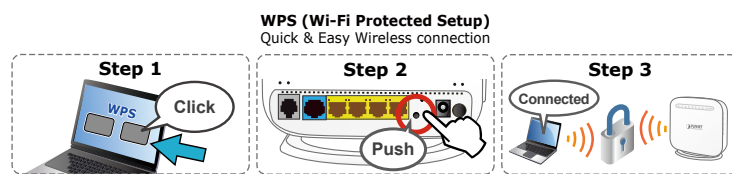
Superior Management Functions

The VDR-301N provides user-friendly management interface that can be managed easily through standard web browsers. For networking management features, the VDR-301N not only provides basic router functions such as DHCP server, virtual server, DMZ, QoS, and UPnP, but also full firewall functions including Network Address Translation (NAT), IP/Port/MAC Filtering and Content Filtering. Furthermore, the VDR-301N serves as an Internet firewall to protect your network from being accessed by unauthorized users.

Wireless Features

- **IEEE 802.11b/g/n Wireless Stations**: The VDR-301N supports 802.11n standard which provides backward compatibility with the 802.11b and 802.11g standard, so 802.11b, 802.11g, and 802.11n can be used simultaneously. IEEE 802.11n wireless technology is capable of having a data rate of up to 300Mbps.
- **WPS Push Button Control**: The VDR-301N supports WPS (Wi-Fi Protected Setup) for users to easily connect to wireless network without configuring the security.
- **Advanced Security**: Supports 64/128-bit WEP, WPA / WPA2 and WPA-PSK / WPA2-PSK (TKIP/AES encryption), and 802.1x.
- **Wireless MAC Access Control**: The Wireless Access Control feature can check the MAC address (hardware address) of wireless stations to ensure that only trusted wireless stations can access your LAN.
- **Multiple SSIDs**: It allows users to access different networks through a single AP.

Management Features

- **TR069 compliant**: Support for centralized management node of multiple VDSL2 CPEs

Applications

Multiple Functions for Broadband Communications

The VDR-301N integrates **VDSL2**, **ADSL2+** and wireless **LAN** services into one unit. It is designed to provide a simple and cost-effective xDSL Internet connection for a private Ethernet and 802.11b/g/n wireless network. The Router combines high-speed xDSL Internet connection and IP routing for the LAN and wireless connectivity in one package. It is usually preferred to provide high access performance applications for the individual users, SOHOs and small enterprises.
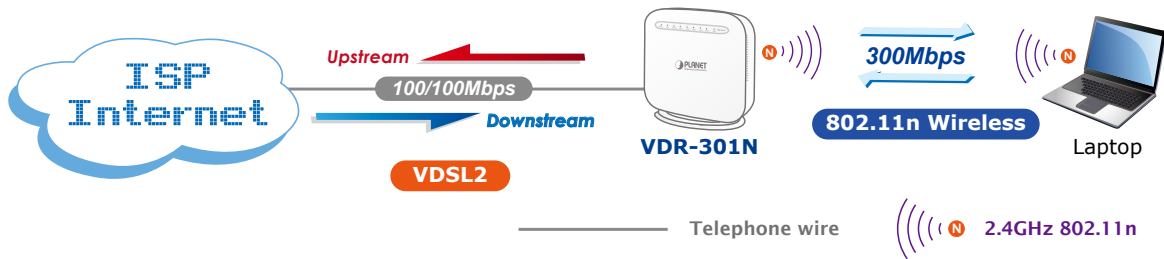
IPv6/IPv4 Dual Stack Capability

With fully supporting both IPv4 and IPv6 protocols, the VDR-301N can work with original IPv4 network structure and also support the new IPv6 network structure now and in the future. As more network devices are growing and the need for larger addressing and higher security becomes critical, the VDR-301N is the best choice for ISPs to build the IPv6 FTTx edge service and for SMBs to connect with the IPv6 network.

Robust TR-069 Remote Management

To reduce the service provider's manpower needed for on-site maintenance, the VDR-301N supports TR069 (WAN Management Protocol) standard that allows an Auto-Configuration Server (ACS) to perform auto-configuration, provision, collection, and diagnostics to this device remotely.

Specifications

Model	VDR-301N-EG
Hardware Specifications	
Interfaces — LAN	4 x 10/100BASE-TX, auto-negotiation, auto MDI/MDI-X RJ45 port
Interfaces — WAN	1 x RJ11, 1 x 1000BASE-T RJ45
Antenna	2.4GHz: 2 x 4dBi internal antennas
Button	1 x Power button 1 x Reset button 1 x WPS button 1 x WLAN button
LED Indicators	PWR, DSL, LAN1-4, WLAN, WPS
Dimensions (W x D x H)	155 x 60 x 152 mm
Weight	238g
Power	12V DC, 0.5A
Power Consumption	6W
Software Features	
Internet Connection Type	● Bridge ● Dynamic IP ● Static IP ● PPPoE ● PPPoA ● 1483 Routed
VDSL Features	● ITU-T G.993.2 VDSL2 ● Supports 8a,8b,12a,12b,17a,30a profile ● Supports G. vectoring ● Supports ATM and PTM ● Supports Annex A, B
ADSL Features	● Full-rate ANSI T1.413 Issue 2 ● ITU-T G.992.1(G.DMT) ● ITU-T G.994.1 (G.hs) ● ITU-T G.995.1 ● ITU-T G.992.3 (G.dmt.bis) ● ITU-T G.992.5
Protocol Features	● ATM Adaptation Layer Type 5 (AAL5) ● Multiple Protocol over AAL5 (RFC 2684, formerly RFC 148) ● ATM Forum UNI3.1/4.0 ● PPP over ATM (RFC 2364) ● PPP over Ethernet (RFC 2516) ● IPoA (RFC 1577/2225) ● Bridged or routed Ethernet encapsulation ● VC and LLC based multiplexing ● OAM F4/F5 ● ATM QoS: UBR, CBR, VBR-rt, VBR-nrt ● Dynamic and static IP ● IP unnumbered
Advanced Features	● Parent Control ● Traffic Shaping(ATM QoS) UBR, CBR, VBR-rt, VBR-nrt ● Dynamic Host Configuration Protocol (DHCP), DHCP relay ● Network Address Translation (NAT) ● PVC/Ethernet Port Grouping ● Static Routing, RIP v1/v2 (optional) ● DNS relay, DDNS ● G. vectoring ● IGMP proxy, MLD proxy ● PPTP, L2TP, IPSec VPN passthrough ● Virtual server, port triggering, UPnP, DMZ ● WMM, bandwidth control (IP QoS)
Security	● NAT firewall ● SPI firewall ● MAC/IP/URL filtering
Management	● Device configuration, management and update ● Web-based GUI ● Command line interface via telnet ● SSL for TR069
Wireless Interface Specifications	
Wireless Standard	IEEE 802.11b/g/n
Frequency Band	2.4GHz: 2.412~2.484GHz
	● 802.11g: 64QAM, 16QAM, QPSK, BPSK, DSSS ● 802.11b: CCK, DQPSK, DBPSK ● HT20 and HT40: 64 QAM, 16QAM, QPSK, BPSK

Data Transmission Rates	**802.11n(40MHz):** up to 300 Mbps
	802.11n(20MHz): up to 144.4 Mbps
	802.11g: 54, 48, 36, 24, 18, 12, 9, 6Mbps per channel, auto fallback for extended range
	802.11b: 1, 5.5, 2, 1 Mbps per channel, auto fallback for extended range
Transmit Power	<20dBm(EIRP)
Wireless Data Encryption	64/128-bit WEP, WPA-PSK, WPA2-PSK, 802.1x encryption, and WPS PBC
Environment Specifications	
Temperature/Humidity	Operating: 0~40 degrees C, 10~ 90% (non-condensing) Storage: -20~70 degrees C, 5~90% (non-condensing)
Certification	CE

Ordering Information

| VDR-301N-EG | 802.11n Wireless VDSL2 Bridge Router |

Related Products

VC-820M	8-Port VDSL2 + 2G TP/SFP Managed Switch
VDL-2420M	24-Port VDSL2 IP DSLAM + 2-Port Gigabit TP/SFP Combo
XDL-2420R	24-Port VDSL2 / ADSL2+ with 2-Port Gigabit TP/SFP Combo IP DSLAM
VC-231	Ethernet over VDSL2 Converter (1 x RJ45, 1 x VDSL2 / RJ11, 1 x 17a / 30a)
VC-234	Ethernet over VDSL2 Converter (4 x RJ45, 1 x VDSL2 / RJ11, 1 x 17a / 30a)

VDR-301N-EG