

300Mbps 802.11n Wireless Internet Fiber Router

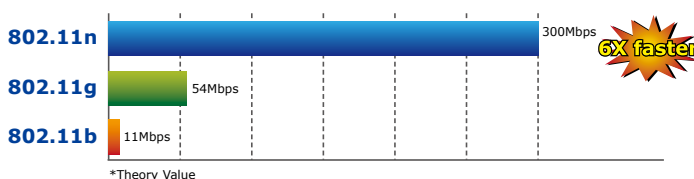


With built-in 100BASE-FX fiber interface, PLANET FRT-415N supports different optic types for WAN and the distance can be up to 15~60 km through the fiber connection. The FRT-415N is an ideal solution for FTTH (Fiber-to-the-home) applications in the IPv6 environment. It can handle multiple high-throughput services such as IPTV, on-line gaming, VoIP and Internet access, and keep the bandwidth usage smooth. The FRT-415N also incorporates a 4-port 10/100BASE-TX switching hub, which makes it easy to create or extend your LAN, and prevents DoS attacks.



High-speed 802.11n Wireless

With built-in IEEE 802.11b/g and 802.11n wireless network capability, the FRT-415N allows any computer and wireless-enabled network device to connect to it without additional cabling. 802.11n wireless capability brings users the highest speed of wireless experience ever; the data transmission rate can be as high as **300Mbps**. The radio coverage is also doubled to offer high-speed wireless connection even in widely spacious offices or houses.



Internet Access Features

- **Shared Internet Access:** All users on the LAN can access the Internet through the FRT-415N 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).
- **IEEE 802.3u 100BASE-FX standard:** The FRT-415N provides long-distance connection based on optical fiber transceiver which supports FTTH and IPTV applications.
- **Multiple WAN Connections:** Upon the Internet (WAN port) connection, the FRT-415N supports dynamic IP address (IP address is allocated upon connection), fixed IP address, PPPoE and bridge. SFP or RJ45 can be selected to be the default WAN interface.

Advanced Internet Functions

- **Virtual Servers:** This feature allows Internet users to access Internet servers on your LAN. The setup is quick and easy.
- **Firewall:** The FRT-415N 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 7, or later.
- **User-friendly Interface:** The FRT-415N can be managed and controlled through Web UI.
- **DMZ Support:** The FRT-415N 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 flexibility to run programs smoothly for programs that might be restricted in NAT environment.
- **RIP1/2 Routing:** It supports RIP v1/v2 routing protocol for routing capability.
- **IPv6 Support:** The FRT-415N supports IPv6 for new services and higher security.

Secure Wireless Access Control

To secure wireless communication, the FRT-415N supports up-to-date encryptions including WEP, WPA-PSK and WPA2-PSK. Moreover, the FRT-415N supports WPS configuration with PBC/PIN type for users to easily connect to a secure wireless network.

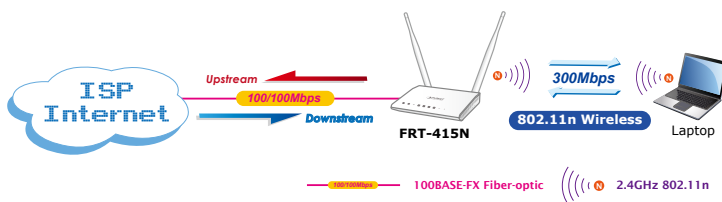
Providing Superior Function

The FRT-415N provides user-friendly management interface to be managed easily through standard web browsers. For networking management features, the FRT-415N not only provides basic router functions such as DHCP server, virtual server, DMZ, QoS and UPnP, but also provides full firewall functions including Network Address Translation (NAT), IP/Port/MAC filtering and content filtering. Furthermore, the FRT-415N serves as an Internet firewall to protect your network from being accessed by unauthorized users.

Applications

Internet Connection with Fiber Optic

With the growing network services such as HDTV, IPTV, voice-over-IP (VoIP) and Multimedia broadband applications, the demand for bandwidth rises quickly. The current broadband environment has not met its needs; the **FTTH** (fiber-to-the-home) would be the most promising NGN (Next-Generation Networking) application to fulfill the demand.



Adopting the IEEE 802.11n technology, the FRT-415N provides better wireless signal, and higher data rate and performance than 802.11g compliant routers. Furthermore, the FRT-415N features the latest security and firewall functions to prevent unauthorized access or invasion. By just clicking the **WPS** button to set it up step by step, you can easily get on the wireless network and enjoy high-speed Internet transmission in your home or office.

WPS (Wi-Fi Protected Setup) Quick & Easy Wireless Connection



LAN Features

- **4-port Switch:** The FRT-415N 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 FRT-415N can act as a DHCP Server for devices on your local LAN.

Wireless Features

- **Supports IEEE 802.11b/g/n Wireless Standards:** The 802.11n standard 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.
- **Two External Antennas with MIMO Technology:** The FRT-415N provides farther coverage, less dead spaces and higher throughput with 2T2R MIMO technology.
- **WPS Push Button Control:** The FRT-415N supports WPS (Wi-Fi Protected Setup) for users to easily connect to wireless network without configuring the security.
- **WEP Support:** WEP (Wired Equivalent Privacy) is included. Key sizes of 64 bit and 128 bit are supported.
- **WPA-PSK Support:** WPA-PSK_TKIP and WPA-PSK_AES encryption are supported.
- **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.

Specifications

Product		FRT-415N
Hardware Specifications		
Interface	LAN	4 x 10/100BASE-TX, auto-negotiation, auto MDI/MDI-X RJ45 port
	WAN	1 x 100BASE-FX SFP slot
	Wireless	2x 5dBi fixed antenna
Optic Interface	Connector	SFP (Small form-factor Pluggable)
	Mode	Vary on module
	Distance	Vary on module
LED Indicators		PWR, WAN, Internet, LAN1-4, WLAN, WPS, Security
Button		1 x Reset button 1 x WPS button 1 x Power button
Material		Plastic
Dimensions (W x D x H)		132 x 93 x 25 mm
Power		12V DC, 0.5A
Router Features		
Internet Connection Type		Shares data and Internet access for users, supporting the following internet accesses: <ul style="list-style-type: none"> ■ PPPoE ■ Dynamic IP ■ Static IP ■ Bridge
Max. Session		45659
Fiber-optic Cable		<ul style="list-style-type: none"> ■ 50/125µm or 62.5/125µm multi-mode fiber cable, up to 2km ■ 9/125µm single-mode cable, providing long distance of 15/20/35/50km or longer (vary on SFP module)
Routing Protocol		Static routing RIP v1/v2
Security		Built-in NAT firewall MAC/IP/Port filtering Content filtering SPI firewall
Protocol/Feature		WPS DMZ and virtual server 802.1D QoS DHCP server/relay IGMP snooping IGMP proxy and MLD proxy UPnP and DDNS
System Management		Web-based (HTTP) configuration SNTP time synchronization System log supports remote log Password protection for system management TR-069
Wireless Interface Specifications		
Wireless Standard		IEEE 802.11b, 802.11g, 802.11n
Frequency Band		2.4 to 2.4835GHz (Industrial Scientific Medical Band)
Modulation Type		DBPSK, DQPSK, CCK and OFDM (BPSK/QPSK/16-QAM/64-QAM)
Data Transmission Rates		802.11n (40MHz): 270/243/216/162/108/81/54/27Mbps 135/121.5/108/81/54/40.5/27/13.5Mbps (dynamic)
		802.11n (20MHz): 130/117/104/78/52/39/26/13Mbps 65/58.5/52/39/26/19.5/13/6.5Mbps (dynamic)
		802.11g: 54/48/36/24/18/12/9/6Mbps (dynamic)
		802.11b: 11/5.5/2/1Mbps (dynamic)
Receive Sensitivity (dbm)		270M: -68dBm@10% PER 130M: -68dBm@10% PER 108M: -68dBm@10% PER 54M: -68dBm@10% PER 11M: -85dBm@8% PER 6M: -88dBm@10% PER 1M: -90dBm@8% PER

Wireless Output Power	ETSI: 11b @11M 18dBm 11g @54M 16dBm 11n 20 @mcs7 16dBm 11n 40 @mcs7 16dBm
Channel	Maximum 13 Channels, depending on regulatory authorities
Antenna Connector	2 x 5dBi fixed antenna
Wireless Data Encryption	64-/128-bit WEP, WPA-PSK, WPA2-PSK, 802.1x encryption, and WPS PBC
Standards Conformance	
Standard	Fiber Interface Complaint with IEEE802.3/802.3u 10/100 BASE-TX, 100BASE-FX standard UP band support (25KHz to 276KHz) Packet Transfer Mode Ethernet in the first mile (PTM-EFM)
Environment Specifications	
Temperature/Humidity	Operating: 0~40 degrees C, 10%~ 90% (non-condensing), Storage: -10~70 degrees C, 0~95% (non-condensing)
Certification	CE

Ordering Information

FRT-415N	802.11n Wireless Internet Fiber Router (4 x RJ45, 1 x mini-GBIC, SFP)
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Accessories

MFB-F20	SFP-Port 100BASE-FX Transceiver (1310nm) – 20km
MFB-F40	SFP-Port 100BASE-FX Transceiver (1310nm) – 40km
MFB-F60	SFP-Port 100BASE-FX Transceiver (1310nm) – 60km
MFB-FA20	SFP-Port 100BASE-FX Transceiver (WDM, TX:1310nm) – 20km
MFB-FB20	SFP-Port 100BASE-FX Transceiver (WDM, TX:1550nm) – 20km
MFB-FX	SFP-Port 100BASE-FX Transceiver (1310nm) – 2km
MFB-TFX	SFP-Port 100BASE-FX Transceiver (1310nm) – 2km (-40~75°C)

Related Products

SGS-6340-20S4C4X	Layer 3 20-Port 100/1000X SFP + 4-Port Gigabit TP/SFP + 4-Port 10G SFP+ Stackable Managed Switch
GS-5220-46S2C4X	L2+ 46-Port 100/1000BASE-X SFP + 2-Port Gigabit TP/SFP + 4-Port 10G SFP+ Managed Switch
GS-5220-44S4C	L2+ 44-Port 100/1000BASE-X SFP + 4-Port Gigabit TP/SFP Managed Switch
MGSW-28240F	24-Port 100/1000BASE-X SFP + 4-Port 10G SFP+ L2/L4 Managed Metro Ethernet Switch
MGSW-24160F	16-Port 100/1000BASE-X SFP + 8-Port 10/100/1000BASE-T L2/L4 Managed Metro Ethernet Switch
WGS-4215-8T2S	Industrial 8-Port 10/100/1000T + 2-Port 100/1000X SFP Wall-mount Managed Switch (-40~75 degrees C)