300Mbps 802.11n Wireless Internet Fiber Router

Internet Access Features

- **Shared Internet Access:** All users on the LAN can access the Internet through the FRT-405N 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-405N provides long distance connection based on optical fiber transceiver which supports FTTH and IPTV applications.
- **Multiple WAN Connection:** Upon the Internet (WAN port) connection, the FRT-405N supports Dynamic IP address (IP address is allocated upon connection), fixed IP address, PPPoE, PPTP and L2TP.
- **Bridge and Router Application:** The FRT-405N supports two application modes: bridging and routing modes. Currently, the default mode is routing mode. (Note: routing mode and bridging mode cannot be used simultaneously.)

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-405N 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 ME, XP, or later.
- **User Friendly Interface:** The FRT-405N can be managed and controlled through Web UI.
- **DMZ Support:** The FRT-405N 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 RIPv1/2 routing protocol for routing capability.
- **VPN Pass-through Support:** PCs with VPN (Virtual Private Networking) software are transparently supported - no configuration is required.
- **802.1Q VLAN:** The FRT-405N supports 802.1Q VLAN for IPTV applications.
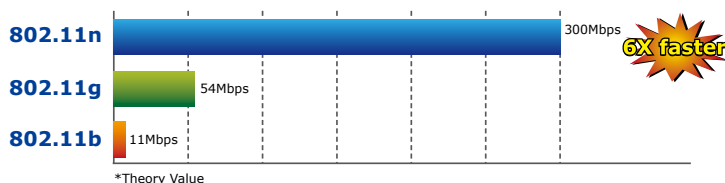
Delivering High-Demand Service Connectivity for ISP / Triple Play Devices

The FRT-405N is the ideal solution for FTTH (Fiber-to-the-home) applications. With built-in 100Base-FX fiber interface, the FRT-405N supports different optic types for WAN and the distance can be up to 15~60 km through the Fiber connection. It can handle multiple high-throughput services such as **IPTV**, **on-line gaming**, **VoIP** and **Internet** access, and keep the bandwidth usage smoothly. The FRT-405N also incorporates a 4-port 10/100Base-TX switching hub, which makes it easy to create or extend your LAN and prevent the attacks from Internet.

High-Speed 802.11n Wireless

With built-in IEEE 802.11b/g and 802.11n wireless network capability, the FRT-405N allows any computer and wireless-enabled network device to connect to it without additional cabling. 802.11n wireless capability brings users the high speed wireless data transmission rate as high as **300Mbps**. The radio coverage is also doubled to offer strong wireless connection even in widely spacious offices or houses.

Secure Wireless Access Control

To secure wireless communication, the FRT-405N supports the most up-to-date encryptions including WEP, WPA-PSK and WPA2-PSK. Moreover, the FRT-405N supports WPS configuration with PBC/PIN type for users to easily connect to a secured wireless network.
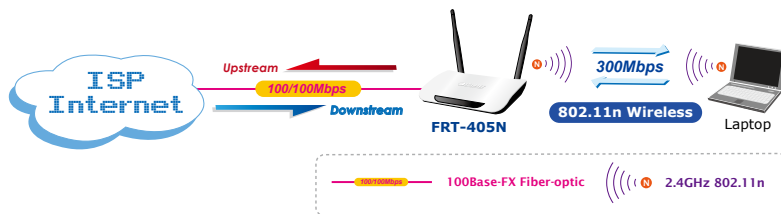
Providing Superior Function

The FRT-405N provides user-friendly management interface that can be managed easily through standard web browsers. For networking management features, the FRT-405N 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-405N 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-405N provides better wireless signal, and higher data rate and performance than 802.11g compliant routers. Furthermore, the FRT-405N features the latest security and firewall functions to prevent unauthorized access or invasion. By just clicking the **WPS** button and setup 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

- **PLANET DDNS/PLANET Easy DDNS:** Connecting the devices anywhere on the Internet with a meaningful or easy-remembered name you gave.

LAN Features

- **4-Port Switch:** The FRT-405N incorporates a 4-Port 10/100Base-TX switching hub, making it easy to create or extend your LAN.
- **DHCP Server Support:** **D**ynamic **H**ost **C**onfiguration **P**rotocol provides a dynamic IP address to PCs and other devices upon request. The FRT-405N can act as a DHCP Server for devices on your local LAN.

Wireless Features

- **Supports IEEE 802.11b, g and 802.11n Wireless Stations:** 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 up to 300Mbps data rate.
- **Two External Antennas with MIMO Technology:** The FRT-405N provides farther coverage, less dead spaces and higher throughput with 2T2R MIMO technology.
- **WPS Push Button Control:** The FRT-405N 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 WAP-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.

100Base-FX SFP Slot

Specifications

Model	FRT-405N	
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 detachable antenna
Optic Interface	Connector	SFP (Small form-factor Pluggable)
	Mode	Varies on module
	Distance	Varies on module
LED Indicators		PWR, WAN, LAN1-4, WLAN, WPS, Security
Button		1 x Reset button 1 x WPS button
Dimensions (W x D x H)		186 x 143 x 35 mm
Power		12V DC, 1A
Router Features		
Internet Connection Type		Shares data and Internet access for users, supporting the following internet accesses: ■ PPPoE ■ Dynamic IP ■ Static IP ■ PPTP ■ L2TP
Max. Session		15000
Fiber-optic Cable		■ 50/125µm or 62.5/125µm multi-mode fiber cable, up to 2km ■ 9/125µm single-mode cable, provide long distance for 15/20/35/50km or longer (varies on SFP module)
Protocol / Feature		Router, Bridge and WISP mode WDS and WPS DMZ and Virtual Server 802.1D QoS DHCP Server / Client 802.1Q VLAN IGMP Proxy and DNS Proxy UPnP and DDNS
Routing Protocol		Static Routing RIPv1/2
VPN		VPN Pass-through
Security		Built-in NAT Firewall MAC / IP/ Port Filtering Content Filtering SPI Firewall support
System Management		Web-based (HTTP) configuration SNTP time synchronize System Log supports Remote Log Password protection for system management
Wireless Interface Specifications		
Wireless Standard		IEEE 802.11b, g and 802.11n
Frequency Band		2.4 to 2.4835GHz (Industrial Scientific Medical Band)
Modulation Type		DBPSK, DQPSK, QPSK, 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)
Channel		Maximum 14 Channels, depending on regulatory authorities
Antenna Connector		2 x 5dBi detachable 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 U0 Band Support (25KHz to 276KHz) Packet Transfer Mode Ethernet in the First Mile (PTM-EFM)
Environment Specifications	
Temperature / Humidity	Operating: 0~50 degrees C, 5%~ 90% (non-condensing), Storage: -20~70 degrees C, 0~95% (non-condensing)
Certification	FCC, CE

Ordering Information

FRT-405N	802.11n Wireless Internet Fiber Router (4 x RJ45, 1 x mini-GBIC, SFP)

Accessories

Transceivers	
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 degrees C)

FRT-405N