802.11n Wireless VoIP Fiber Router

Integrating the cutting edge of Internet Telephony and VoIP Router manufacturing experience, PLANET introduces the Wireless VoIP Fiber Router FRT-420SN to fulfill the high demand of bandwidth nowadays as a result of growing network services such as **HDTV**, **IPTV**, **Voice-over-IP (VoIP)** and **Multimedia broadband** applications.

The FRT-420SN provides office and residential users the ideal solution for sharing a **high-speed fiber** Internet connection and **four-10/100Mbps Fast Ethernet** backbone. It is a perfect **FTTH** digital home router which can provide very high performance accessing to Internet, with both downstream and upstream **up to 100Mbps through the fiber interface**. The FRT-420SN supports one **FSP optical** connectors for WAN connection and can be implemented easily in optical fiber deployment.

By applying the FRT-420SN, home users and companies can save installation cost and extend the VoIP network from their previous investments in telephones, conferences and speakerphones. The FRT-420SN is equipped with two telephony interfaces, so users may register to different SIP proxy servers and establish **up to 2 concurrent VoIP calls** for more flexibility in the voice communications. With advanced router and VoIP DSP processor technology, the FRT-420SN is able to make calls via SIP proxy voice communications plus the IP sharing and the **QoS mechanism**. The FRT-420SN can also be the bridge between traditional analog telephones and IP network with an extremely affordable investment.

Besides offering high-quality voice communications and wired Internet sharing capabilities, the FRT-420SN also performs the **Access Point (AP)** for flexible wireless communication. With built-in **IEEE 802.11b/g/n wireless** network capability, the FRT-420SN allows any computer and wireless enabled network client connect to it without additional cabling. The 802.11n wireless capability gives users the highest speed of wireless transmission at up to **300Mbps**..

To secure the wireless communication, the FRT-420SN supports most up-to-date encryptions: **WEP**, **WPA-PSK** and **WPA2-PSK**. In addition, it supports **WPS** configuration with PBC/PIN type for users to connect to a secured wireless network easily.

KEY FEATURES

PRODUCT FEATURES

- **Fiber Interface** support

- Long distance connection based on optical fiber transceiver

- Complies with IEEE 802.3, IEEE 802.3u 10/100Base-TX, 100Base-FX standard

- Ease of integration with PLANET 100Base-FX Media Conversion Products

- Smart QoS mechanism to ensure the voice quality

- NAT Router, Port Forwarding, DMZ

- IP ToS (IP Precedence) / DiffServ

- Voice prompt for machine configurations

- Supports **FTTH / IPTV** applications

WIRELESS FEATURES

- IEEE 802.11b/g/n wireless standard compliant

- Multi-mode: AP, AP-Client, WDS and AP+WDS

- Supports 64/128-bit WEP, WPA, WPA-PSK, WPA2, WPA2-PSK and 802.1x encryption
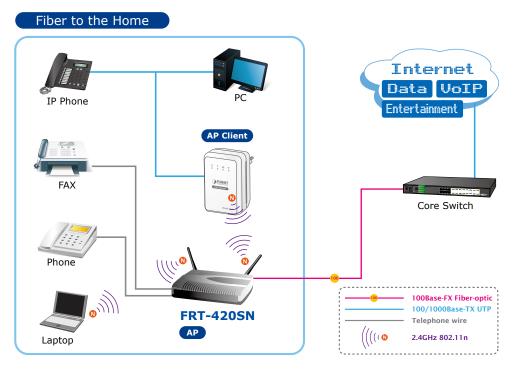
- Wireless WPS support

VOIP FEATURES

- SIP 2.0 (RFC3261) compliant

- Up to 2 concurrent VoIP calls

- Voice codec support: G.711, G.729AB, G.723, G.276, GSM and G.722

- T.38 FAX transmission over IP network (G.711 Fax pass-through)

- In-band and out-of-band DTMF Relay (RFC 2833)

- 3-Way conference calls

- Call Waiting / Forward / Transfer / Hold / Resume

- Caller ID Detection / Generation: DTMF, BELLCORE, ETSI, BT, NTT

- Voice processing: VAD, CNG, Dynamic Jitter Buffer, G.168 Line Echo Cancellation

- SNMP v1/v2 and Auto Provision management for flexible and easy system integration
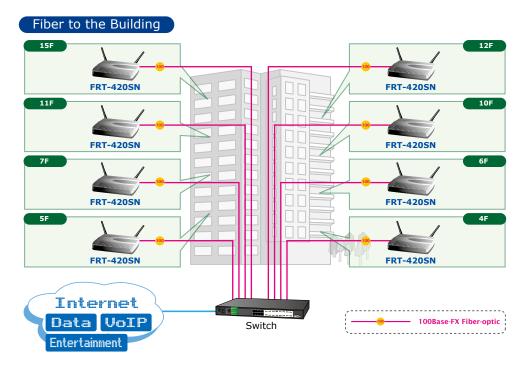
Data Sheet

APPLICATIONS

With FRT-420SN, the home owner can simply get the 100Mbps provided from the Internet Service Provider through the high performance optic wire. The two FXS interface that shall offer the calls over the Internet through the SIP account, say, call to the Skype for SIP services, Mobile SIP App to anyone worldwide. With its 300Mbps wireless interface the mobile devices such as Laptop, Smart Phone, Smart Pad that can easily get connected without boundery of wires.

Fiber to the Home

For Fiber To The Building, the Fiber Router - FRT-420SN provide a great flexibility in the long distance installation and distribution. The SFP interface empower the flexibility in the fiber optic transceiver selection where it can be pair of optic wires in few hundred meters up to hundred kilometers, or a WDM (Wavelength Division Multiplexing) single wire of dozens kilometers. Connecting with the Metro Fiber Switches, say for example PLANET MGSW-24160F, it helps to build the pure optic networks for IP networks triple play.

Fiber to the Building

SPECIFICATION

Product		802.11n Wireless Internet Fiber Router
Model		FRT-420SN
Ports	WAN	1 x 10/100Base-FX port
	LAN	4 x 10/100Base-TX port
	Wireless	1 x 802.11b/g/n Access Point, 2 x 5dBi Detachable Antennas
Optic Interface	Connector	SFP
	Mode	Vary on module
	Distance	Vary on module
Fiber-optic cable		9/125µm single-mode cable, provides long distance transmission for 15/20/35/50km or longer (vary on SFP module)
Wireless Standard & Specification		
Wireless LAN Standards		IEEE 802.11b/g/n
Wireless Frequency Range		2.4GHz ~ 2.4835 GHz
Wireless Mode		AP, Client, WDS and AP+WDS mode
Security		64/128 bit WEP data encryption, WPA, WPA-PSK, WPA2, WPA2-PSK, WPA/WPA2 mix mode, 802.1x encryption and WPS PBC
Operating Frequencies / Channel		USA/Canada: 2.412 GHz – 2.426 GHz (11 channels) Europe: 2.412 GHz – 2.472 GHz (13 channels) Japan: 2.412 GHz – 2.477 GHz (14 channels)
Wireless Data Rate		IEEE 802.11b: CCK (11Mbps,5.5Mbps), DQPSK (2Mbps), DBPSK (1Mbps) IEEE 802.11g: OFDM (54Mbps, 48Mbps, 36Mbps, 24Mbps, 18Mbps, 12Mbps, 9Mbps, 6Mbps) IEEE 802.11n: 14/29/43/58/87/116/130/144Mps in 20MHz, 30/60/90/120/180/240/270/300Mbps in 40MHz
WDS		WDS repeater support
FXS (for telephone set connection)		2 x RJ-11 connection
Protocols and Standard		
Standard		SIP 2.0 (RFC3261), SDP (RFC 2327), Symmetric RTP, STUN (RFC 3489), ENUM (RFC 2916), RTP Payload for DTMF Digits (RFC2833), Outbound Proxy Support, uPnP (uPnPTM)
Voice Codec		G.711(A-law /µ-law), G.729AB, G.723 (6.3 Kbps / 5.3Kbps), G.276 (16,24,32,40 Kbps), GSM and G.722
Fax support*		T.38 (G.711 Fax pass-through)
Voice Standard		VAD (Voice Activity Detection) CNG (Comfort Noise Generation) G.168: LEC (Line Echo Canceller) Dynamic Jitter Buffer In-band and out-of-band DTMF Relay (RFC 2833) Caller ID Detection/Generation: DTMF, BELLCORE, ETSI, BT, NTT
Protocols		SIP 2.0 (RFC-3261), TCP/IP, UDP/RTP/RTCP, HTTP, ICMP, ARP, DNS, DHCP, NTP/SNTP, PPP, PPPoE
Internet features		NAT router, DHCP server, Static routing, Virtual server, Virtual DMZ, Smart QoS, IP ToS (IP Precedence) / DiffServ
Security		Built-in NAT Firewall MAC / IP / Port Filtering URL Filtering Port Forwarding, DMZ Password protection for system management
Network and Configuration		
Access Mode		Static IP, PPPoE, DHCP
Configuration & Management		Web-Based Graphical User Interface Remote management over the IP Network Web-Based firmware upgrade Backup and Restore Configuration file SNMP v1/v2, Auto-Provision, Keypad on telephone set
Dimension (W x D x H)		186 x 143 x 35 mm
Operating Environment		0~50 Degree C, 5~90% Humidity
Power Requirement		12V DC
EMC/EMI		CE, FCC Part 15 Class B

*T.38 support depends on fax machine, SIP provider and network / transport resilience.

ORDERING INFORMATION

FRT-420SN	802.11n Wireless VoIP Fiber Router (1 x WAN, 4 x LAN, 2 x FXS)

RELATED PRODUCTS

UMG-2200	Unified Office Gateway (8-Port FXO)
IPX-300W	Wi-Fi Internet Telephony PBX System (100 User Registrations, 30 Concurrent Calls)
IPX-1900	Internet Telephony PBX system (300 user registrations, 2 slots)
FT-802	10/100Base-TX to 100Base-FX (SC, MM) Bridge Media Converter
FT-902	10/100Base-TX to 100Base-FX (SC, MM) Web Smart Media Converter
FST-812	10/100Base-TX to 100Base-FX (SC, MM) Smart Media Converter
MGSW-24160F	16-Port 100/1000Base-X SFP + 8-Port 10/100/1000Base-T L2/L4 Managed Metro Ethernet Switch
SGSW-24240	24 100/1000 SFP Slots with 8 Shared TP Managed Stackable Switch
MC-1610MR	19" 16-slot SNMP Managed Media Converter Chassis
MFB-FX	SFP-Port 100Base-FX Transceiver (1310nm) -2km
MFB-F20	SFP-Port 100Base-FX Transceiver (1310nm) - 20km
MFB-F40	SFP-Port 100Base-FX Transceiver (1310nm) - 40KM
MFB-TFX	SFP-Port 100Base-FX Transceiver (1310nm) -2km (-40~75°C)
MFB-TF20	SFP-Port 100Base-FX Transceiver (1310nm) - 20km (-40~75°C)
MFB-FA20	SFP-Port 100Base-BX Transceiver (WDM,TX:1310nm) -20km
MFB-FB20	SFP-Port 100Base-BX Transceiver (WDM,TX:1550nm) -20km

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