VRG-21412-WF Series Triple Play Gateway

4 ports 10/100Mbps RJ-45; 2 ports VoIP FXS and 1 port 100Mbps fiber optics uplink VoIP Residential Gateway

Features

- **NAT/Bridge Hybrid Mode**
  VRG-21412-WF supports NAT/Bridge hybrid mode to intelligently prioritize transported video/voice/data traffic and optimize the service performance as well as utilization of limited IP resource for service providers.

- **Flexible Auto Provision Schemes**
  Provide either DHCP auto provision or TR-069 to fulfill the choice of deployment scale and reduce the OPEX of device maintenance for service providers.

- **Power Down Trap**
  Built-in CTS unique SNMP power down trap function to rapidly identify network fault due to power outage and reduce truck rolls to save OPEX for operators or service providers.

- **Built-in Cable Tray**
  VRG-21412-WF built-in cable tray is for friendly fiber management in the FTTH deployment.

Description

Connection Technology Systems (CTS) VRG-21412-WF series triple play solution is a Web & SNMP managed fiber optical residential gateway which is designed to meet the FTTH deployment for delivering high speed internet access, VoIP and IPTV services. VRG-21412-WF provides one fiber optic port for broadband internet connections, four 10/100base-TX RJ45 ports for LAN application and two FXS ports for VoIP telephony service.

Aim at the operators or service providers who will deliver the multiple services for residential users, the VRG-21412-WF can allow the triple play service in a Fiber-to-the-home deployed infrastructure in a single device. The extensive four 10/100Base-TX RJ45 ports allow users to connect PC or laptop for internet application such as web surfing, email, file upload/download and online gaming…etc as well as connect a set top box for provisioning video application like IPTV, VoD and E-learning and so on. The built-in two FXS ports support popular SIP protocol to enable the service of VoIP telephony with toll quality and can significantly reduce cost for voice communication.

The fiber optic port of VRG-21412-WF can support connection distance from 2 km to 20 km or even reach 100 km via multi-mode fiber, single mode fiber or Bi-directional single mode fiber for the deployment to the household, apartment or campus. The device management is based on popular Web or SNMP interface, to fulfill the requirement of mass deployment, the device also supports the auto provisioning mechanism to allow the operators or service providers managing the device configuration automatically and dynamically. Consequently, it can significantly help saving the OPEX (operational cost) for the operators or service providers.

Target Applications

- Managed triple play CPE with built-in cable tray is for FTTH deployment application to deliver high speed internet, VoIP and IPTV triple play service.
Application Diagram

**Interface**
- 10/100Base-TX RJ45 x 4
- 100Base-FX F/O x 1
- VoIP FXS RJ-11 x 2

**Standards**
- IEEE 802.3 10Base-T
- IEEE 802.3u 100Base-TX/FX
- IEEE 802.1p Priority
- IEEE 802.1q Tag VLAN
- IEEE 802.3x Flow Control
- SIP (RFC3261)
- G.711/G.723/G.726 /G.729 Annex A/B

**H/W Specification**
- MAC Address Table: 2K
- Support up to 16 VLAN Groups
- VLAN ID: 4K
- Priority Queues: 4 Queues

**Forward / Filter Rate**
- 10M: 14,880/14,880pps
- 100M: 148,800/148,800pps

**LED**
- POWER, STATUS, WAN, Link/Act,
  Speed, Phone 1 & 2

**Layer 2 Switching**
- PPPoE Client
- IEEE 802.1p priority / 802.1Q tag VLAN
- Q-in-Q VLAN tag
- Application QoS
- Rate limit control

**Layer 3 routing**
- NAT/Bridge hybrid mode
- DHCP client & server
- DNS client & DDNS
- IGMP proxy
- IGMP snooping v1/v2
- DMZ host

**Security**
- Attack detection & blocking
- Firewall

**VoIP Function**
- VAD & CNG
- Echo cancellation (G.165/G.168)
- DTMF tone generation
- T.38 Fax/modem relay
- T.38/G.711 Fax pass through
- Adaptive jitter buffer
- Dialing plan
- Caller ID display
- Call forward
- Call hold
- Call transfer
- 3-way conference

**Network Management**
- Web UI management
- SNMP Management
- Support SNMP v1/v2c
- URL filtering & filtering schedule
- SNTP
- Event syslog
- Power down trap

**Power Requirement**
- External Power adaptor
- AC input: 100VAC~240VAC
- Frequency range: 50~60Hz
- DC output rating: 12V/1.5A
- Power Consumption: 7.5 W

**Environmental Condition**
- Operation: 0° ~ 50 °C
- Storage Temperature: -20° ~ 60 °C
- Humidity: 5% ~ 90%, non-condensing

**Dimension & Weight**
- Size: 210 x 153 x 54.5 mm (WxDxH)
- Shipping Weight: 0.7KG

**EMC/Safety**
- FCC class A, CE

For further reports, please contact us for update

"*" means coming soon

<table>
<thead>
<tr>
<th>Model</th>
<th>WAN</th>
<th>Distance</th>
<th>LAN</th>
<th>FXS port</th>
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<tbody>
<tr>
<td>VRG-21412FC - WF</td>
<td>100M MM/SC</td>
<td>2Km</td>
<td>4 x 1/100M TP</td>
<td>2</td>
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<tr>
<td>VRG-21412FT - WF</td>
<td>100M MM/ST</td>
<td>2Km</td>
<td>4 x 1/100M TP</td>
<td>2</td>
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<td>100M SM/SC</td>
<td>30/50/80/100Km</td>
<td>4 x 1/100M TP</td>
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<td>-</td>
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Built-in Cable Tray Overview

* This is an overview of CTS VRG-21412G series and does not represent specific product