

ADTRAN 424RG

Wireless Residential Gateway ONT



Product Features

- Cost-effective delivery of triple-play services
- Provides integrated residential gateway functionality with IEEE 802.11 b/g/n/ac compliant Wi-Fi®
- Supports symmetric gigabit services
- G.984 compliant 2.5 Gbps downstream and 1.25 Gbps upstream
- Auto-negotiating/sensing 10/100/1000Base-T Ethernet ports
- USB 2.0 interface for network storage
- Built-in Layer 2 switch and Layer 3 router
- Native Ethernet transport over GPON (GEM Based)
- VoIP using SIP and MGCP
- Native POTS RJ-11 port with full suite of voice quality features
- IPTV video support including IGMP snooping feature set
- Traffic management through priority queuing, scheduling and traffic shaping
- Full OMCI integration

Wi-Fi device access has become an absolute requirement in today's homes and businesses.

From smartphones, laptops and tablets, to gaming and streaming devices, to Wi-Fi-enabled smart-home devices, and now growing number of personal health and productivity devices, placing a tremendous strain on the home network. In addition, the growing number of streaming services and cloud-apps place a greater strain on the network. All this requires service providers to rethink how they deliver residential connectivity over a wireless network as they look to minimize operational costs while ensuring higher customer satisfaction.

The Solution

The ADTRAN® 424RG Wireless Residential Gateway, an integrated wireless router and gateway with the industry's first 802.11ac 4x4:4 "quantenna", designed to deliver near Gigabit throughput and the extended coverage to make the fully wireless home a reality.

Full HDTV Quality over Wireless

The ADTRAN 424RG includes built-in 802.11ac 4x4 antennas with Multi-User Multiple Input Multiple Output (MU-MIMO) to deliver wired equivalent performance, including full HDTV quality with 1080p video resolution. It delivers up to four flawless High-Definition (HD) video streams at more than 100 Mbps data rates, over 100 feet, and guarantees this performance nearly 100 percent of the time through near-zero Packet Error Rate (PER) data transfers, regardless of signal impairments and dead zones that are typical in the home.

Better 802.11ac Performance with Beamforming

The ADTRAN 424RG Wireless Residential Gateway incorporates MU-MIMO with beamforming technology to deliver dramatic improvement in Wi-Fi 802.11ac/n performance, reliability, range and coverage. MU-MIMO supports four simultaneous data streams and beamforming makes it possible to steer these datastreams in the direction of associated clients, ensuring dedicated bandwidth to the wireless-devices while simultaneously avoiding interference.

Auto-Provisioning Portal

Reducing truck-rolls and automating service provisioning is key to delivering cost-effective Gigabit services. The ADTRAN 424RG changes the game with an auto-provisioning portal. Customers simply plug-in their Wireless Residential Gateway into the wall to be taken directly to tea customers portal to choose their service options to automatically provision the service and initiate the billing cycle.



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Product Specifications

Ethernet Interfaces

- 10/100/1000Base-T Interface with RJ-45 Connectors
- Ethernet Port Auto Negotiation or Manual Configuration
- MDI/MDIX Automatically Sense
- Hardware Priority Queues on the Downstream Direction in Support of CoS

Ethernet Services

- Symmetric 1 Gbps Throughput
- 802.1D Bridging
- 802.1x Authentication
- Virtual Switch Based on 802.1q VLAN
- VLAN Tagging/Detagging Per Ethernet Port
- VLAN Stacking (Q-in-Q) and VLAN Translation
- IP ToS/DSCP to 802.1p Mapping
- Quality of Service (QoS)
 - VLAN-ID
 - 802.1p bit
 - DSCP to p Bit Translation
- Marking/Remarking of 802.1p
- IGMP v2/v3 Snooping
- Broadcast/Multicast Rate Limiting

Gateway Features

- Multiple WAN Interfaces Supporting
- WAN Connection
 - Point-to-Point Protocol over Ethernet (PPPoE)
 - Dynamic Host Configuration Protocol (DHCP)
 - Static
- DHCP Server for LAN Devices
- DNS Relay
- Network Address Translation (NAT)/Network Address Port Translation (NAPT)
- Port Forwarding
- Static Routing
- Access Control List (ACL)

- VPN Pass Thru for Point to Point Tunneling Protocol (PPTP), Layer 2 Tunneling Protocol (L2TP) and IP Security Protocol (IPSec)
- Firewall
- Application Layer Gateway (ALG)
- Demilitarized Zone (DMZ)
- Dynamic Domain Name Server (DDNS)
- Network Time Protocol (NTP)
- Universal Plug and Play (uPnP)
- IGMP Proxy
- IPv6
 - Stateless Address Autoconfiguration (SLAAC)
 - DHCPv6
 - PPPoEv6
 - DNSv6

WLAN Interface

- Compliant with IEEE 802.11 b/g/n/ac
- 2.4 GHz and 5.06 Hz
- MIMO:2x2
- Dual Band Radios
 - 2.4 GHz 2x2
 - 802.11 b/g/n
 - 5.0 GHz 4x4
 - 802.11 n/ac
- 4x SSIDs per Radio
- 64 and 128 Bit Wireless Encryption Protocol (WEP) Support
- Wireless Protected Access Support Including Pre Shared Key (WPA-PSK)
- Push Button WPS

USB Interface

- 1 USB Host Interface
- Compliant to USB 2.0
- Network Storage

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POTS Interface

- RJ-11 Interface
- 3-REN, 50V RMS
- **VoIP Voice:** Both SIP and MGCP
- **TDM Voice:** Both GR.303, GR-57 and TR-08
- Full CLASS Feature Set
- Both ANSI and ETSI POTS
- T.38 Facsimile
- Configurable Dial Plan
- Configurable Country Specific Ring-back Tones (Frequency and Cadence)
- DHCP Client or Static IP Configuration
- Optionally Metallic Loop Testing

GPON Interface

- Compliant with ITU-T G.984 GPON Standards
- Compliant with ITU-T G.984.2 Amd1, Class C+
- Support G.984.5 Blocking Filter
- Multiple T-CONTs per Device
- Multiple GEM Ports per Device
- DBA Reporting by Piggyback Reports in the DBRu (Mode 0 and Mode 1)
- 802.1p Mapper Service Profile on U/S
- Mapping of GEM Ports into a T-CONT with Priority Queues Based Scheduling
- Support Multicast GEM Port and Incidental Broadcast GEM Port

Dimensions

- 1.4 in. x 3.9 in. x 5.5 in. (35 mm x 100 mm x 140 mm) (H x W x D)

Power Supply

- +12V (Feed via External AC/DC Adapter)
- Dying Gasp Support
- Power Switch
- **Power Consumption:** Less than 4W

Working Environment

- **Temperature:** 32° F – 104° F (0° C – 40° C)
- **Humidity:** 5% – 95% Relative Humidity

Safety and EMI

- CE Certificate
- FCC/UL Compliant

Environmental Directive

- RoHS 6 of 6

Installation

- Wall Mounting and Desktop Mounting

LEDs

- Power
- GPON
- Optical
- LAN
- VoIP

OAM

- Standard Compliant OMCI (the Embedded Operations Channel) Interface as Defined by ITU-T G.988
- Provisioning all kinds of Services including Ethernet, VoIP etc.
- Alarming and Performance Monitoring
- Remote Software Image Download over OMCI, as well as Activation and Rebooting
- Hold Two Software Sets with Software Image Integrity Checking and Automatic Rollback



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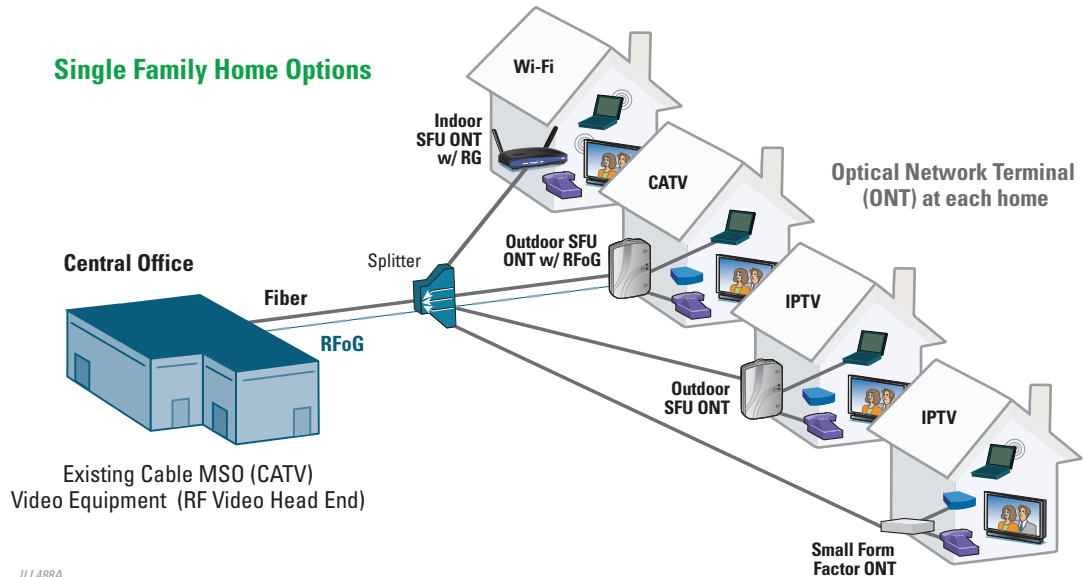
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Single Family Home Options



ILL488A

Ordering Information

Equipment

ADTRAN 424RG Wireless Residential Gateway ONT

Part No.

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