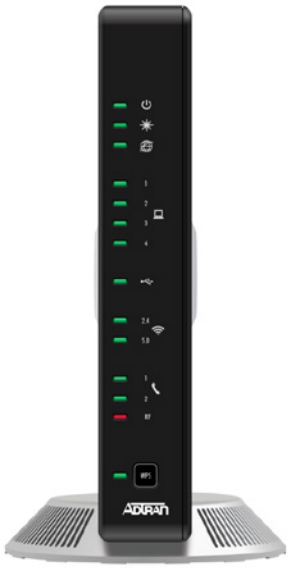


Data Sheet

ADTRAN

# 434RG

## Wireless Residential Gateway ONT

FTTH | VoIP | IPTV | Gigabit | SDN Enabled | Wi-Fi | Programmable

## Benefits

- **Supports Gigabit Broadband over Wi-Fi**
- **Eliminates Wi-Fi dead spots via Wave 2 IEEE 802.11ac performance**
- **Rapid home installation from eliminated home wiring and ONT provisioning steps**
- **Remote service troubleshooting and home management via TR-69**
- **Optimized for multiuser homes via MU-MIMO technology**
- **Provides Class of Service (CoS) levels for prioritizing multiuser, multi-services**
- **Supports both GPON and Active Ethernet deployment models**
- **USB 2.0 interface device and storage support**
- **Supports both VoIP and TDM Voice**
- **Supports both IPTV and OTT video support**

## Overview

**Wi-Fi device access has become an absolute requirement in today's homes and businesses.** Smartphones, tablets, streaming devices, and Wi-Fi-enabled smart-home devices are placing a tremendous strain on the home network. In addition, the emergence of Gigabit broadband offerings have exposed Wi-Fi as a potential bottleneck for delivering advertised speeds down to the device. 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® 434RG Wireless Residential Gateway is an integrated wireless router and gateway with the industry's first 5GHz 3x3 802.11ac & 2.4GHz 2x2 802.11n MIMO implementation, designed to deliver near Gigabit throughput and the extended coverage to make the fully wireless home a reality.

### Enhanced Multi-user HDTV Quality over Wireless

The ADTRAN 434RG includes built-in 802.11ac 3x3 antennas with Multi-User Multiple Input Multiple Output (MU-MIMO) to deliver wired equivalent performance, including full HDTV quality with 1080p video resolution. It simultaneously 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 434RG 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. Beamforming makes it possible to steer these data streams in the direction of associated clients, ensuring dedicated bandwidth to the wirelessdevices while simultaneously avoiding interference.

### Game-changing Operational Savings

The ADTRAN FTTH solution inclusive of the 434RG drastically reduces the time and labor required to install, provision and initiate billing for a new service. This is a result of eliminated home wiring due to the wireless feature set of the 434RG and from the simplified and automated back-office ONT service provisioning. A single technician simply plugs-in the Wireless Residential Gateway into the wall and is automatically directed to the auto-provisioning portal to choose their service options which then automatically provision the service and initiate the billing cycle.

# ADTRAN 434RG

## 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 5.0 GHz
- MIMO:2x2
- Dual Band Radios
  - 2.4 GHz 2x2
  - 802.11 b/g/n
  - 5.0 GHz 3x3
  - 802.11 n/ac
- 4x SSIDs per Radio
- 64 and 128 Bit Wireless Encryption Protocol (WEP) Support
- Push Button WPS

### USB Interface

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

## 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 15W

## 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

## CATV RF-Video Interface

- Single F-Type CATV connector
- RF Output level: 26dB
- RF Output Impedance: 75 Ohms
- Total RF Output Power: 36 dBmV

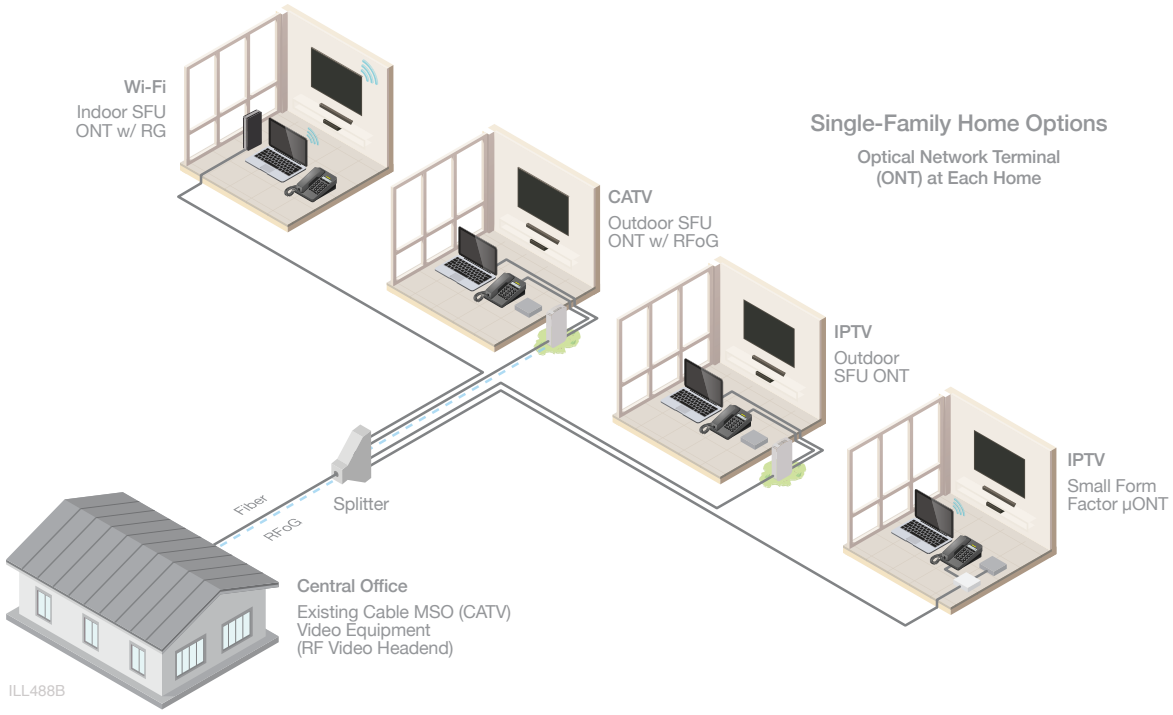
## RF Return

- Fully integrated into the ONT
- Three wavelength only solution
- SCTE 55-1 and 55-2 standards
- 24 to 60 dBmV received power input level

## MoCA 2.0

- 800 Mbps sustained data throughput over coax
- Uses internal Gigabit media independent interfaces (GMII) for full-duplex communication with the on board MAC interface
- Support up to 15 MoCA nodes
- Operating frequency Band D from 1125-1525 MHz
- Compatible with existing devices on the coax with no interference
- Compatible with existing services on the coax with no interference

# ADTRAN 434RG




## Ordering Information

| Equipment | Part No. |
|---|---|
| ADTRAN 434RG Wireless Residential Gateway ONT | 1287782F1 |


**ADTRAN, Inc.**
901 Explorer Boulevard
Huntsville, AL 35806
256 963 8000

**General Information**
800 9ADTRAN
www.adtran.com/contactus

**Canada Headquarters—Toronto, Ontario**
+1 877 923 8726
+1 905 625 2515
sales.canada@adtran.com

**Canada—Montreal, Quebec**
+1 877 923 8726
+1 514 940 2888
sales.canada@adtran.com

**Mexico and Central America**
+1 256 963 3321
+1 52 55 5280 0265 Mexico
sales.cala@adtran.com

**South America**
+1 256 963 3185
sales.brazil@adtran.com
sales.latam@adtran.com



**61287782F1-8A**