

ADTRAN

825-v6

# Multi-gigabit/RG

Wi-Fi 6 Service Delivery Gateway/XGS-PON ONT



FTTH



IPTV



Wi-Fi 6



Zero-Touch



VoIP



Gigabit+

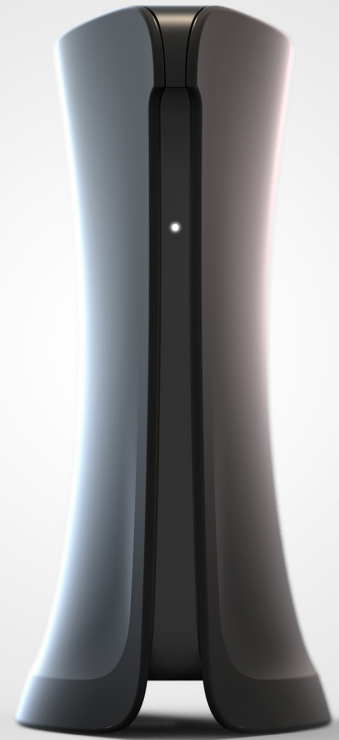


Programmable

# ADTRAN 825-v6 XGS-PON RG Wi-Fi 6 Service Delivery Gateway

## Benefits

- Supports multi-gigabit broadband over Wi-Fi 6
- Rapid home installation
- Remote service troubleshooting and home management via TR-069
- Optimized for multiuser homes via OFDMA and MU-MIMO technology
- Provides Class of Service (CoS) levels for prioritizing multiuser, multiservices
- Integrated XGS-PON uplink
- 2.5GE UNI for multi-gigabit wired speeds
- USB 3.0 interface and storage support
- Provides two SIP-enabled phone ports
- Supports both IPTV and OTT 4K video
- Supports whole home mesh Wi-Fi
- OpenSync™-enabled



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## Overview

The ADTRAN® 825-v6 Wi-Fi 6 Service Delivery Gateway (SDG) is a carrier-class, dual-band residential gateway with integrated XGS-PON uplinks, 2.5GE LAN port, voice ports and OpenSync support. With a powerful dual-core ARM Cortex-A53 processor, built-in MU-MIMO and OFDMA, and omni-directional antennas, the 825-v6 SDG offers up to multi-gigabit wireless and wired speeds, delivering the highest wireless and multi-gigabit wired performance to all connected devices across the home and the property.

## The Solution

ADTRAN® 825-v6 Service Delivery Gateways are integrated wireless routers and gateways supporting Wi-Fi 6 (802.11ax) - the latest Wi-Fi standard with four times the data capacity to handle growing home network needs.

## Enhanced Multiuser HDTV Quality over Wireless

ADTRAN® 825-v6 SDGs include built-in dual-band concurrent 802.11ax radios with OFDMA and MU-MIMO to deliver wired-equivalent performance, including full 4K UHD video.

## The OFDMA Advantage

OFDMA can significantly reduce contention and preamble overhead, especially for short packets that are prevalent in many networks. Both OFDMA and multiuser MIMO are used to parallelize control traffic wherever possible.

With OFDMA, the 825-v6 SDG delivers improved performance in all directions, making it possible to lower latency and jitter as well as improve overall QoS.

## Game-changing Operational Savings

The 825-v6 SDGs drastically reduce the time and labor required to install, provision, and initiate billing for a new service. This is a result of the eliminated home wiring due to a wireless feature set from the simplified and automated back-office ONT service provisioning.

A subscriber simply plugs in the ADTRAN SDG into the wall and the device automatically directs them to the auto-provisioning portal to choose their service options which then automatically provision the service and initiate the billing cycle.

# Product Specifications

## Ethernet Interfaces

- 4x 10/100/1000BASE-T Ports with LAN Ports
- 2.5GBASE-T (IEEE 802.3bz-2016) LAN Port
- Ethernet Port Auto Negotiation or Manual Configuration
- MDI/MDIX Automatic Sense
- Hardware Priority Queues on the Downstream Direction in Support of CoS

## Ethernet Services

- Symmetric 2+ Gbps Throughput
- 802.1D Bridging
- 802.1x Authentication
- Virtual Switch Based on 802.1q VLAN
- VLAN Tagging/Untagging 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 Supported
- 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/ax
- Optional 160Mhz channel
- 2.4 GHz and 5.0 GHz
- Dual Band Radios
  - 2.4 GHz 3x3
  - 5.0 GHz 4x4
- 4x SSIDs per Radio
- WPA3 Support
- Push Button WPS

## USB Interface

- 1 USB Host Interface
- Compliant to USB 3.0
- Network Storage

## POTS Interface

- RJ-11 Interface
- 3-REN, 50V RMS
- VoIP Voice: SIP
- 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

# Product Specifications

## XGS-PON Interface

- XGS-PON WAN Port
- Compliant with ITU-T G.9807 XGS-PON Standards
- DBA (Dynamic Bandwidth Allocation)
- Mapping of xGEM Ports into a T-CONT with Priority
- Queue-Based Scheduling

## Dimensions

- 249mm / 90mm / 195mm - (Height / Width / Depth)

## Power Supply

- +12V (Feed via External AC/DC Adapter)
- Dying Gasp Support
- Power Consumption: Less than 30W

## Working Environment

- Temperature: 41° F – 104° F (5° C – 40° C)
- Humidity: 5% – 85% Relative Humidity

## Safety and EMI

- CE Certificate
- FCC / Industry Canada Certified, UL Listed

## Environmental Directive

- RoHS 6 of 6

## LEDs

- Multifunction RGBW
- 2.4GHz
- WPS
- Fiber
- 5GHz
- Tel 1/2
- LAN 1-4 Link/Act

## 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

## Ordering Information

SDG-825-v6 (XGS-PON RG)	17600139Fx*
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\*Available in US, UK, EU, and AU versions.

## 61760013xFx-8C

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