

Adtran

Data sheet

SDG 8612

Wi-Fi 6 dual-band gateway with 2.5GigE WAN and LAN ports

Benefits

- **True multigigabit Wi-Fi 6 gateway delivering 2.5Gbit/s throughput on the WAN and LAN.**
- **Zero-touch install via intuitive mobile app and QR code**
- **High-performance dual-band mesh Wi-Fi for coverage across the home and business.**
- **Multi-core ARM processor to power next-generation smart home applications.**
- **Advanced H-Pol Omni antennas deliver 360° coverage.**
- **Enhanced service provider software tools and SaaS solutions to deliver an amazing customer experience.**
- **Standards-based support – Intellifi, TR-369 and TR-069.**
- **USB-C powered.**

Overview

Adtran's 8600 Series Service Delivery Gateways (SDGs) build upon the successes of their predecessors, enabling multigigabit services and increased Wi-Fi service reach, with better than ever, class-leading subscriber experience enhancements.

Carrier-class multigigabit ready

The SDG 8612 is a carrier-class, dual-band Wi-Fi 6 (802.11ax) residential gateway with a 2.5GbE WAN port, making it ideal for delivering reliable, wireless Gigabit or 2+Gbit/s whole-home coverage to homes and small businesses. With 4x4 streams on both 2.4GHz and 5GHz bands and support for 160MHz wide channels, the SDG 8612 delivers up to 6Gbit/s aggregate throughput to hundreds of smart-home devices and the growing universe of IoT devices. Advanced mesh capabilities simplify extending Wi-Fi coverage using high-performance 800 and 8600 Series mesh satellites. The SDG 8612 also supports multigigabit on the LAN with a 2.5GbE Ethernet port and three 1GbE ports for Gigabit wired connections.

Powerful yet power-efficient

With advanced ARM multicore processors, the SDG 8612 boasts 4x more processing power to support multiple 4K streams, low latency gaming applications, and innovative revenue-boosting smart home apps. Intelligent power management, power-efficient 12nm processors, and the use of recyclable materials ensure a sustainable, environmentally friendly Wi-Fi solution. In addition, the elegant, compact design with USB-C powering allows placement on a desk, bookshelf, or tabletop, to deliver exceptional Wi-Fi experiences to all users.

Open platforms unlock innovation

Adtran residential Wi-Fi solutions, including SDG 800, 8600, and 8700 Series, provide operators a choice of market-leading open-source platforms. We support both Intellifi and Plume platforms, allowing you to deliver the right cloud-managed Wi-Fi solution customized to your market and business needs. In addition, we support Intellifi, TR-369 and TR-069, enabling remote management of the SDGs.

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Product specifications

Network interfaces

- 2 x 2.5GBASE-T ports (IEEE 802.3bz-2016)
  - 1 x WAN
  - 1 x LAN
- 3 x 10/100/1000BASE-T ports (RJ-45)
  - MDI/MDI-X automatically sense
  - RJ-45 ports with an integrated link and activity LEDs

WLAN interfaces

- Compliant with IEEE 802.11b/g/n/ac/ax
- Dual-band radio configuration
  - 2.4GHz 4x4 up to 40MHz
  - 5GHz 4x4 up to 160MHz
- 3 x SSIDs per radio
- Integrated internal antenna array
- WPA3 support

Software features*

- Multiple WAN services
  - DHCPv4/v6
  - RFC2516 PPPoE
  - PPPoE pass-through
- DNS proxy server
- Dynamic DNS client
- DHCP server, client, and relay
- DHCP options 60 and 121
- NAPT and NAT
- IGMPv2/v3 proxy and snooping
- LAN port to VLAN mapping
- Port forwarding
- Universal plug-and-play (UPnP)
- Network Time Protocol (NTP)
- Firewall with stateful packet inspection
- IPv6
- Stateless address autoconfiguration (SLAAC)
- DHCPv6
- DNSv6
- Wi-Fi features
  - IEEE 802.11 4-address (4mac) encapsulation
  - IEEE 802.11k Radio resource measurement
  - IEEE 802.11v Wireless network management
  - IEEE 802.11r Fast BSS transition
  - Zero-touch AP pairing
- Custom Default Themes (CDT)/Configurations
- Touchless Quality-of-service (wired and Wi-Fi)
- AutoWAN
- LTE WAN failover
- TR-069 remote management
- TR-369 remote management
- TR-181 Device data model

** Features depend on firmware load*

Ethernet services

- Symmetric 2.5 Gbit/s throughput
- 802.1D bridging
- 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

USB interface

- 1 x USB-A host interface
  - Compliant with USB 3.0
  - LTE WAN failover

Console Port

- Compatible with USB to TTL FDTI type serial adapters

Dimensions

- Size: 7.2" x 4.25" x 4.25" (183mm x 108mm x 108mm) (H x W x D)
- Weight: ~1lb (<500 gm)

Operating environment

- 41° F – 104° F (5° C – 40° C)
- Humidity: 5% - 85% relative humidity

Safety and EMI

- FCC certified
- Industry Canada certified
- cULus Listed (UL 62368-1)
- ETSI compliant
- CE certificate
- UKCA certified
- ACMA/RCM certified

Environmental

- RoHS 6 of 6
- RoHS: Directive 2015/863/EU
- WEEE: Directive 2012/19/EU WEEE

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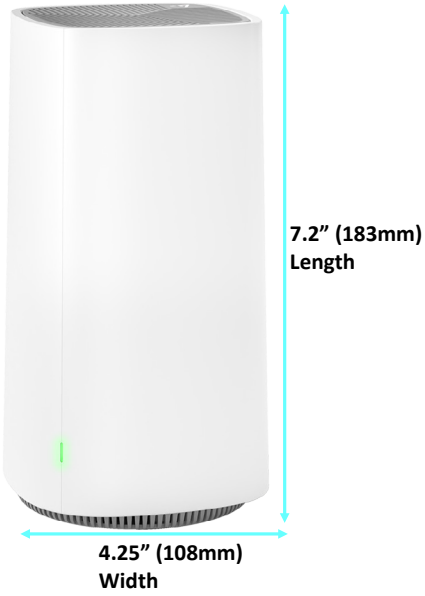
Product specifications

Power supply unit

- External USB-C power adapter
  - AC Input: 100~240V, 50/60Hz @ 1.0A
  - DC Output: 15 VDC @ 3.0A, USB-C
- Surge Protection: ITU-T K.21 Enhanced compliant (6kV)

Compliance and Safety Approvals:

- cULus Listed
- FCC: Part 15B
- ICES: ICES-003 Issue 7
- CEC: CEC-400-2019-021 VI
- US DOE: 10CFR Part 430 (EPS) VI
- NRCAN: CSA-C381.1-17 VI
- UKCA: BS EN62368-1; BS/EN55032/35
- CE Mark with NB code: EN6238-1; EN55032/35
- ERP: EN 50563 + A1 (ErP) - External power supply unit
- USB-IF: Power delivery 3.1





SDG 8612

Ordering information

Product	Region	Wi-Fi country code	Part number
SDG 8612 (SmartOS)	North America	US	17600070F1S
	United Kingdom	GB	17600070F2S
	European Union	DE	17600070F3S
	Australia/New Zealand	AU	17600070F4S
SDG 8612 (PlumeOS DHCP)	North America	US	17600070F1PD
	United Kingdom	GB	17600070F2PD
	European Union	DE	17600070F3PD
	Australia/New Zealand	AU	17600070F4PD
SDG 8612 (PlumeOS PPPoE)	North America	US	17600070F1PP
	United Kingdom	GB	17600070F2PP
	European Union	DE	17600070F3PP
	Australia/New Zealand	AU	17600070F4PP
Supported Accessories			**Part number**
SDG Wallmount kit (M)			17600201F1

Note: For additional part numbers or a custom quote, please contact sales@adtran.com.

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