

SDX 630 Series

## 631fh

## PoE-powered XGS-PON optical network terminal (ONT)



Multi-gigabit



Zero-touch



Analytics



PoE-powered



Enabled

## Benefits

- Automatically detect power-delivering devices that comply with IEEE 802.3af
- Enhanced efficiency with cost-effective PoE installation compared to traditional electrical work
- Easy, low-voltage installation – does not require conduit or metal cladding
- Collects data to provide powerful intelligence and actionable insights for peak network optimization
- Robust, secure, and reliable PoE-powered ONT that can be deployed in an outdoor environment with a NID housing
- Broad temperature range operation is ideal for a wide array of FTTH / FTTB / FTTP applications and installations

## Overview

The Adtran SDX 631fh PoE-powered XGS-PON optical network terminal (ONT) is designed to address the demand for easier network access and improved cost savings by implementing power over Ethernet (PoE) capabilities. The flexible, open technology provides a cost-effective path to high-bandwidth services while enabling service providers to save on installation costs and valuable time by dramatically simplifying network design and installation in settings ranging from FTTH, FTTB, and FTTP.

With speeds up to 10Gbit/s, the SDX 631fh meets all connectivity needs, from streaming high-quality videos on multiple devices to running data-intensive cloud applications. The PoE-powered device is easy to deploy and features zero-touch provisioning.

The SDX 631fh is the ideal ONT solution for a broad range of applications and installations including industrial facilities, connected cities/infrastructure, sports stadiums, schools, universities, hospitals/healthcare, commercial buildings, airports, shopping malls and more.

### SDN-ready solution

The SDX 631fh ONT addresses today's key challenges around delivering cost-efficient, converged residential and business services. Part of the Adtran ecosystem of open-API access products, they enable easy integration into existing network infrastructure and SDN-based management systems. Simple zero-touch provisioning allows for end-user installations without the need for truck rolls, reducing complexity and opex. What's more, its advanced features include operational monitoring capabilities, such as Y.1731 continuity check and multigigabit speed test support.

Coupled with Adtran service delivery gateways (SDGs), the SDX 631fh ONT is future-built to meet the demands of current and next generation Wi-Fi standards while enabling seamless integration with Adtran's intelligent Mosaic One management system for enhanced control and monitoring.

Our ONTs are specifically designed to remain at the premises for the long term, meeting the requirements of ever-advancing Wi-Fi residential gateways for years to come. Maintenance-free and with a robust outdoor design, the SDX 631fh discretely blends into a wide range of operational environments.

### Committed to building environmentally responsible solutions

Meeting today's soaring bandwidth demands takes more than just great technology. It takes a company that's committed to building environmentally responsible solutions. Our SDX 630 Series is a distillation of everything we've learned since our founding in 1985. It features recyclable enclosures, cloud-hosted documentation and optimized packaging, all designed to put sustainability first.

We've worked closely with service providers to address some of their key concerns when it comes to building networks in a cost-effective and sustainable way. Just take a look at the low-power capabilities of our SDX 630 Series. It's compliant with Energy Efficient Ethernet (EEE) and European Union Code of Conduct v8. We're confident that it's going to help service providers in a big way.

# SDX 631fh

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## Product specifications

### Network interfaces

- XGS-PON optical interface BOSA on Board (BoB)
- Single-fiber SC/APC connector
- 9.9532Gbps symmetric throughput
- 1577nm downstream and 1270nm upstream
- Compliant with ITU-T G.9807.1 XGS-PON PMD standards
- Forward Error Correction (FEC) support
- Advanced Encryption Standard (AES) support
- Supports up to 1:128 split
- Rogue ONU mitigation

### Ethernet interfaces

- One RJ45 100M/1G/2.5G/5G/10G Base-T with PoE support
- Ethernet port auto-negotiation or manual configuration
- MDI/MDIX automatically sense
- Hardware priority queues on the downstream
- Enhanced buffer management
- Ethernet loopback (RFC2544 testing)

### Ethernet service support

- 802.1q (2018) bridges and bridge networks
- 802.1ad VLAN Stacking (Q-in-Q) and VLAN translation
- 802.1p bit marking/remarking
- Class of Service based on VLAN-ID
- Eight Queues, Strict Priority, and/or Weighted Fair Queue Schedulers
- Configurable to EtherType and TPID for service flexibility
- VLAN IDs 0 – 4095; EVC configurable in the range of 2 – 4,094
- Supports 9k jumbo frame

### Operations, administration and management

- ITU-T G.988 OMCI embedded operations channel interface support
- Hardware-based Y.1731 PM
  - Continuity Check (CC)
  - Link Trace (LTM/LTR)
  - Loopback (LBM/LBR)
- TR-471 NPT speedtest support (roadmap)
- 15 min rolling counters
- Dying gasp alarm

### Physical

- Dimensions: 176.0 mm x 130.0 mm x 35.0 mm (D x W x H)
- Weight: 350g
- Mounting accessories: outdoor NID

### Electrical

- Power over Ethernet (PoE) powered device
  - IEEE 802.3af compliant
  - 44 to 57VDC injector capable
  - 15.4 W max
- Average power consumption: 5 W

### Environmental

- Operating temperature: -40° F to +149° F (-40° C to +65° C)
- Storage temperature: -40° F to +185° F (-40° C to +85° C)
- Relative humidity: 10 to 95%, non-condensing

### LEDs

- Power
- PON
- 10GE

### Video service support

- Mediaroom/Minerva video models
- IGMP v2/v3 snooping

### Regulatory standards

- Supported regions: US, Canada
- Electromagnetic compatibility
  - FCC Part 15 Class B
- Safety
  - UL/CUL 62368-1
- Environmental
  - ETS 300 019-2-3 Class 2.1 – Environmental conditions and test for telecommunications equipment
  - EN 300 019-1-2 Class 2.3 –Transportation
  - EN 300 019-1-1 Class 1.2 – Storage
  - K.21 Enhanced
- Laser approvals
  - IEC 60825-1:2014
  - Safety of Laser Products – Part 1: Equipment classification and requirements

## Ordering information

Equipment	Part No.
SDX 631fh	1287970F1
SDX 631fh + 10GbE PoE injector bundle	4287970F1
<b>Accessories</b>	
10GbE PoE injector	1287427F1
NID outdoor housing bracket	1287455F1
NID outdoor housing - Splice	1187770G1
NID outdoor housing - OptiTap	1187771G1

