

ONU s Pon-type pigtail



Article Overview

ONU PON devices typically use a single-fiber bi-directional pigtail with integrated WDM for upstream and downstream transmission.

Most modern ONUs, including GPON, XGS-PON, and 25GS-PON, employ single-fiber pigtails that carry both upstream and downstream signals simultaneously using different wavelengths. For example, XGS-PON ONUs use a 1270 nm transmitter and 1577 nm receiver in a single fiber with integrated WDM filters for bi-directional operation, while GPON ONUs often use 1310 nm upstream and 1490 nm downstream on a single fiber pigtail. The pigtail is typically terminated with standard connectors such as SC or LC depending on the module design . Key characteristics of ONU pigtails:

- Single-fiber bi-directional design: Supports both upstream and downstream on one fiber.
- Wavelength division multiplexing (WDM): Separates transmit and receive wavelengths within the same fiber.
- Connector type: Commonly SC or LC connectors for easy integration into PON networks.
- Laser and receiver types: DFB lasers for transmission and APD or PIN photodiodes for reception.
- Application: Compatible with GPON, XGS-PON, and higher-speed PON standards like 25GS-PON . This design simplifies fiber deployment, reduces cabling complexity, and ensures compatibility with standard PON OLTs and splitters.

Article Content

Aug 23, 2025

Premium Bi-Directional Coaxial Bosa Pigtails for Gpon ONU Systems

Premium Bi-Directional Coaxial Bosa Pigtails for Gpon ONU Systems, Find Details and Price about Bosa Pigtail and Sm LC Pigtail

Mar 19, 2026

1.25T/2.5R GPON ONU SFF SC Pigtail Modul | AscentOptics

Mit optionalem SC/PC- oder SC/APC-Pigtail bietet es Flexibilität bei der Installation. Entspricht den Standards ITU-T G.984.5 Klasse

Jul 19, 2026

Recent progress in ITU-T PON standards

Optical splitter ONU ONU ONU FTTCcell (Mobile Backhaul/Fronthaul) Optical splitter ONU ONU OLT OLT Q2/15: Optical Access

May 22, 2026

Chapter 2 PON Architectures

There are three main types of PONs depending on the data multiplexing scheme. The currently deployed PON technology is time

Jun 10, 2026

G-Pon ONU Bosa Pigtail for Enhanced Fiber Optic Connectivity

G-Pon ONU Bosa Pigtail for Enhanced Fiber Optic Connectivity, Find Details and Price about Bosa Pigtail Sm LC Pigtail from G-Pon

Apr 14, 2026

Full Guide of PON: OLT, ONT, ONU, ODN and other basic components

PONs can use in university campuses and business environments. With the continuous evolution of PON technology,

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Decoding OLT, ONU, ONT, and ODN in PON Network

In the PON network, there is an OLT at the service provider's central office and a number of ONU devices or optical

Dec 29, 2025

Can I use the pigtail breaker in a plug on neutral panel?

However, in our plug-on-neutral (PON) panels, the design omits the pigtail and instead incorporates a metal contact that directly

Jun 06, 2026

10G XGS-PON ONU SC Pigtail BOSA for P2MP Application

XGSPON ONU BOSA is a bi-directional transceiver device with symmetric 9.953Gbps upstream and 9.953Gbps downstream. This

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What is a passive optical network (PON) and how does it work?

Learn what a passive optical network is, how it works, and the different types of PON systems and their benefits and

Dec 24, 2025

GPON SC APC Pigtail BOSA For GPON ONU Application

GPON ONU SC APC Pigtail BOSA is a bi-directional transceiver device suitable for GPON ONU application. This GPON ONU BOSA

Jan 12, 2026

XGSPON & GPON COMBO ONU SC/APC pigtail BOSA

Description 10G DFB 1270T/1.25G DFB 1310T/10G 1577R APD-TIA/2.5G 1490R APD-TIA COMBO PON ONU COMBO BOSA WB3

Aug 11, 2025

10G XGS-PON ONU SC Pigtail BOSA for P2MP Application

Features • Single fiber pigtail type bi-directional transmission design for 10G XGSPON ONU. • Symmetric 10GbpsTx and 10GbpsRx

Apr 15, 2026

PON Transceivers, GPON SFP, EPON SFP

FS offers full range of PON module, like GPON ONT SFP, GPON OLT SFP & GPON ONU SFP for your OLT/ONT and ONU

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Optical Network Unit (ONU): Definition, Working Principles, and Future ...

Explore Optical Network Units (ONU) in PON networks. Learn about ONU components, GPON/XGS-PON standards,

Jul 07, 2026

Fiber Optic Pigtailes in FTTH & ODN: Selection Guide

Fiber Optic Pigtail Types & Classifications To ensure compatibility with existing network equipment, pigtailes are

Dec 20, 2025

Understanding OLT, ONU, ONT and ODN in PON

In addition, the ODN is the very path essential to PON data transmission and its quality directly affects the

Oct 16, 2025

XGS-PON ONU BOSA (OC5280SX020) Databrief

Databrief Product Features Applications 1270 nm burst-mode transmitter with uncooled DFB-LD 1577 nm continuous-mode receiver

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What is PON Modules and Its Role in Modern Networking

Discover the types, features, and benefits of PON modules, including OLT, ONU, and ONT devices, transmission

Jun 28, 2026

Premium Plus Fiber Pigtailes | Leviton Network Solutions

Premium Plus Fiber Optic Pigtailes and Pigtail Kits are ideal for fusion splicing the required fiber connectivity for structured cabling

Aug 04, 2025

Cisco Catalyst PON Series Switches Data Sheet

Combining high performance, simple structure, and easy maintenance, Cisco Catalyst PON Series switches offer a

Jul 27, 2026

Passive optical network

A fiber optic cable assembly with SC APC connectors, as commonly used to link optical network terminals

Nov 27, 2025

ABC of PON: Understanding OLT, ONU, ONT and ODN

There are different types of OLT, ONU, ONT equipments for GPON, which are the new generation PON equipments

Nov 27, 2025

XGS-PON ONU SC/UPC Pigtail BOSA for Optical communication

Founded in 2011, SourceDoing Technology is mainly engaged in research and development, production and sales of various active

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Understanding the Magic Behind PON Modules

Types Form Factor: PON fiber optical modules include XFP, SFP, SFP+, SFP-DD, SFP28, and QSFP112, with PON

Jan 14, 2026

Defining ONU: Optical Network Unit

Optical Network Unit (ONU) explained: Understanding these key elements of fiber networks, their structure, and the mechanics of

Feb 01, 2026

What is GPON ONU(ONT) and GPON OLT?

Discover the roles of GPON ONU/ONT and OLT in networks. Learn their key features, differences, and how they work

Mar 15, 2026

1.25T/2.5R GPON ONU SFF SC Pigtail Module | AscentOptics

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PON Network Components Overview: OLT, ONU, ONT, and ODN

In addition, the ONU can send, aggregate, and reorganize various types of data from the user and transmit it to the

Contact Us

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