ASCENT
Communication Technology

**ACT AD624T
10G XGS-PON
WIFI6 ONT**

**Quick Reference
Guide**

Revision B

ACT AD624T 10G XGS-PON WIFI6 ONT
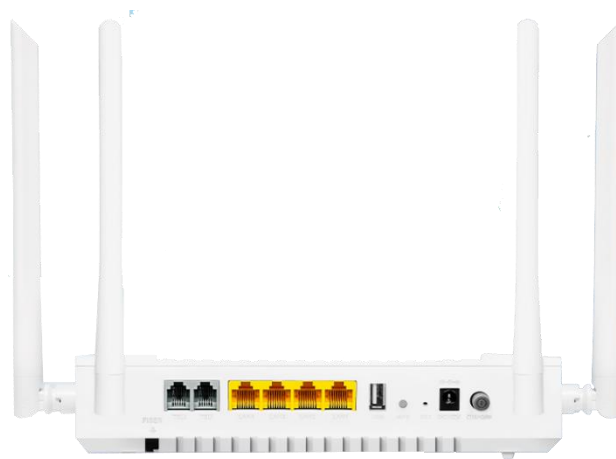
Quick Reference Guide

ACT Document Number: ACT AD624T-EU QRG

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This document is produced to assist professional and properly trained personnel with installation and maintenance issues for the product. The capabilities, system requirements and/or compatibility with third-party products described herein are subject to change without notice.

For more information, contact ACT: support@ascentcomtec.com

Revision History

Revision	Date	Reason for Change
A	08/05/2023	Initial release
B	07/11/2025	Update Format

Table of Contents

1 Overview

1.1 Summary

The AD624T is a high-performance WiFi 6 XGSPON VoIP Gateway ONT, engineered for next-generation fiber-to-the-home (FTTH) applications. It supports the IEEE 802.11a/b/g/n/ac/ax standards over both 2.4GHz and 5GHz bands, offering a combined wireless data rate of up to 3000Mbps.
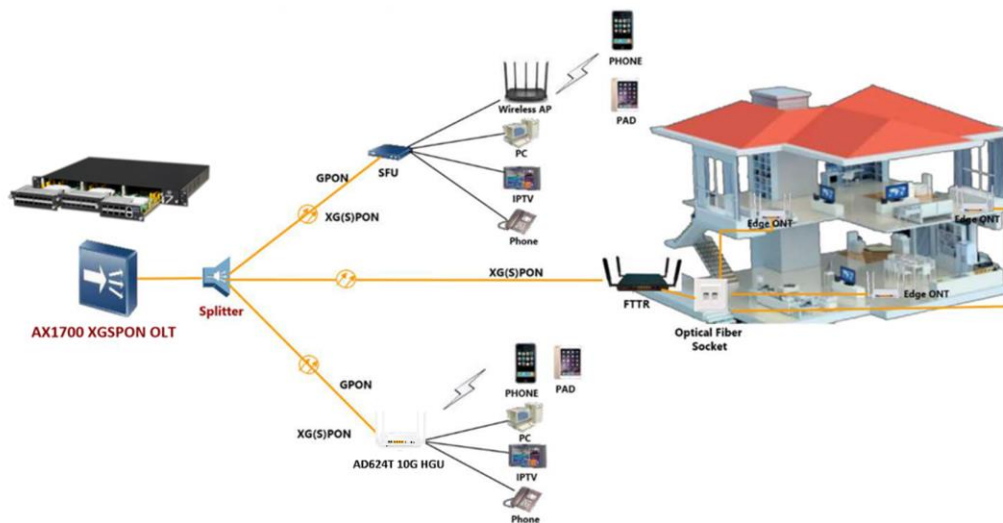
Designed to meet the demands of modern networking, the AD624T is compliant with ITU-T G.9807.1 standards and delivers 10Gbps symmetrical upstream and downstream bandwidth. It features 3 Gigabit Ethernet ports, 1 adaptive 2.5G LAN port, 2 FXS voice ports, and robust Layer 2/3 networking capabilities, including VLAN tagging, rate limiting, MAC address filtering, IGMP snooping, and AES encryption. This comprehensive feature set enables reliable triple-play service delivery and seamless voice, video, and internet integration.

The AD624T excels in reliability, flexibility, and manageability, offering remote software upgrades, SNMP-based EMS management, and support for multiple authentication methods. Its low power consumption, compact form factor, and enhanced Quality of Service (QoS) capabilities make it a cost-effective and scalable solution for broadband operators. Whether deployed in new rollouts or upgrades, the AD624T empowers service providers to deliver high-speed, secure, and future-ready fiber access.

2 Features

- Support ONU auto-discovery/Link detection/remote upgrade of software
- Support SN and LOID+Password multiple registration methods
- Support port VLAN configuration
- Support port-based rate limitation and bandwidth control
- Support port flow-control
- Support MAC address learning
- Support MAC address learning account limit
- Support VLAN transparent/tag/translate/trunk
- Support broadcasting storm resistance function
- Support igmp transparent/snooping/proxy mode
- Support Dynamic Bandwidth Allocation (DBA)
- Support AES encryption and decryption
- EMS network management based on SNMP convenient for maintenance
- Support power-off alarm function ,easy for link problem detection
- Support Firewall
- Support MAC address/URL filter
- Support Remote WEB/Telnet access control

2.1 Application Diagram

2.2 Product Interface and LED

2.3 LED Definitions

Indicator		Description
PWR	Power Status	On: The ONT is power on Off: The ONT is Power off
XGSPON	ONT Register	On: Success to register to OLT Blinking: In process of registering to OLT Off: Failed to register to OLT or no normal optical signal input
LOS	PON Optical Signals	On: Optical power lower than receiver sensitivity Off: Optical in normal
LAN1-4	LAN Port Status	On: Ethernet connection is normal Blinking: Data is being transmitted through the Ethernet port Off: Ethernet connection is not set up
INT	Internet Status Indicator	On: The routed WAN Internet access service is normal Off: The routed WAN Internet access service is abnormal

Indicator		Description
TEL1-2	Telephone Port Status	On: The connection between the TEL port and the voice server has been set up Blinking: The voice service of the TEL port is established Off: The connection between the TEL port and the voice server is not set up
WIFI	WIFI	Blinking: Data is being transmitted On: WIFI function Opens
USB	USB Port Status	On: USB connection is normal Off: USB connection is not set up

3   Specifications

Parameter		Description
Hardware		
User Port (LAN)		RJ-45 connector
		3* 10/100/1000Mbps and 1*2.5G adaptive Ethernet port
		Full/Half Duplex
		Auto MDI/MDI-X
Indicators		PWR / PON / LOS / LAN1-4 / INT / TEL1-2 / WIFI /USB
PON Port	PON Mode	XGSPON: FSANG.9807.1standard
	Port Rate	XGSPON: 10Gbps/10Gbps downstream/upstream
	Wavelength	1270nm/1577nm
	Receiving Sensitivity	XGSPON: -28dBm
	Saturation Power	XGSPON: -9dBm
	Average Sending	XGSPON: +4 to +9dBm
Features		
WIFI		IEEE802.11b/g/n/ax(2.4G) IEEE802.11a/n/ac/ax(5G) 2.4G: 40Mhz bandwidth maximum rate 574Mbps 5G: 160Mhz bandwidth maximum rate 2402Mbps Total wireless rate is 3000Mbps 2.4G EIRP: 22dBm / 5 G EIRP:21dBm
User Port(POTS)		RJ-11 connector 2*accounts SIP protocol TDMF G711U/G711A/G729/G722 encoding and decoding
Power Supply		
Adapter		External 12VDC/1A power supply adapter
Power Consumption		<23.3W
Environment		
Working Temperature		0°C to 40°C
Operating Humidity		10 to 90% (Non-condensing)
Mechanics		
Dimensions		210mm(L) * 135mm(W) * 45mm(H)
Weight		228g

Ascent Communication Technology Ltd

AUSTRALIA
140 William Street, Melbourne
Victoria 3000, AUSTRALIA
Phone: +61-3-8691 2902

CHINA
Unit 1933, 600 Luban Road
200023, Shanghai, CHINA
Phone: +86-21-60232616

EUROPE
Pfarrer-Bensheimer-Strasse 7a
55129 Mainz, GERMANY
Phone: +49 (0) 6136 926 3246

Hong Kong SAR
Room 1210, 12th Floor, Wing Tuck Commercial Centre
181 Wing Lok Street, Sheung Wan , Hong Kong SAR
Phone: +852-2851 4722

USA
2710 Thomes Ave
Cheyenne, WY 82001, USA
Phone: +1 203 350 9822

VIETNAM
11th Floor, Hoa Binh Office Tower
106 Hoang Quoc Viet Street, Nghia Do Ward
Cau Giay District, Hanoi 10649, VIETNAM
Phone: +84-24-37955917

WEB: www.ascentcomtec.com　　　　　**EMAIL: sales@ascentcomtec.com**