

Customer Premises Equipment (CPE) – Technical Specification Document

This document outlines the technical specifications for the Customer Premises Equipment (CPE) to be deployed for broadband connectivity. The device is intended to support both wired and wireless connectivity with dual-stack IP (IPv4/IPv6) support and high-speed interfaces.



Table of Contents

1. WAN interface requirements	3
1.1. Connexion Type	3
1.2. MTU Configuration	3
1.3. IP Protocol Support	3
1.4. IPv6 Requirements	3
2. LAN interface requirements	4
2.1 IP Services	4
2.2 Physical Interface:	4
3. Wireless Interface Requirements	5
3.1 Standards Support	5
3.2 Wireless Features	5



1. WAN interface requirements

1.1. Connexion Type

- PPPoE (Point-to-Point Protocol over Ethernet)

1.2. MTU Configuration

- MTU size: 1500 bytes

1.3. IP Protocol Support

- Dual-stack operation: IPv4 and IPv6

1.4. IPv6 Requirements

- Support for IPv6 link-local network discovery
- DHCPv6 for:
 - Prefix delegation
 - DNSv6 configuration



2. LAN interface requirements

2.1 IP Services

- Network Address Translation (NAT) for IPv4
- DHCP server for automatic IPv4 address allocation
- DHCPv6 server for IPv6 address assignment and configuration
- IPv6 Router Advertisement (RA) support

2.2 Physical Interface:

- 1GbE/10GbE port for WAN and LAN connectivity(based on service type)



3. Wireless Interface Requirements

3.1 Standards Support

- Minimum: IEEE 802.11ac (Wi-Fi 5)
- Preferred: IEEE 802.11ax (Wi-Fi 6)

3.2 Wireless Features

- Dual-band operation (2.4 GHz and 5 GHz)
- WPA3 support preferred

