Huawei EchoLife HG8245Q2 Dual-Band ONT Interface Pinout Diagram - Official Technical Overview & Hardware Datasheet

EXECUTIVE SUMMARY

The Huawei EchoLife HG8245Q2 is a routing-type optical network terminal (ONT) engineered for GPON-based ultra-broadband access in FTTH deployments. It integrates 4 GE ports, 2 POTS ports, 1 USB port, and dual-band Wi-Fi (2.4 GHz and 5 GHz) into a single compact subscriber premises device. This document provides an authoritative technical overview of the HG8245Q2 interface architecture, port pinout configuration, and hardware specifications, serving as a definitive reference for carrier deployment, field engineering, and integration planning.



ARCHITECTURE & CHASSIS DESIGN

The HG8245Q2 adopts a compact desktop form factor optimized for residential and SOHO environments. The chassis integrates the GPON optical interface, user-facing Ethernet ports, voice interfaces, and wireless subsystems into a unified routing platform. The device operates as an intelligent routing-type ONT, supporting Layer 2 and Layer 3 forwarding functions including PPPoE, NAT/NAPT, DHCP, and IPv6/IPv4 dual-stack operation. The hardware architecture is built around a HiSilicon SD5116 CPU, complemented by dedicated Atheros AR9381 (2.4 GHz) and Qualcomm Atheros QCA9880 (5 GHz) wireless chipsets to deliver concurrent dual-band 3x3 MIMO connectivity.

HARDWARE FEATURES

The interface complement of the HG8245Q2 is engineered to support triple-play service delivery. The GPON interface utilizes an SC/APC connector with Class B+ optical module compliance, supporting upstream rates of 1 Gbit/s and downstream rates of 2 Gbit/s. The four GE ports are auto-sensing 10/100/1000 Base-T RJ45 interfaces capable of any-port-any-service configuration. Two POTS ports (RJ11) support VoIP services with SIP and H.248 auto-negotiation. A single USB 2.0 Type-A port enables storage sharing or

peripheral connectivity. The dual-band Wi-Fi subsystem provides 2.4 GHz coverage at up to 450 Mbit/s and 5 GHz coverage at up to 1300 Mbit/s under 802.11ac.

INTERFACE PINOUT REFERENCE

The HG8245Q2 interface pinout follows standard telecommunications and Ethernet conventions. The OPTICAL port employs an SC/APC connector with a ceramic ferrule; the APC (Angled Physical Contact) polish requires 8-degree angled end-face mating to minimize back reflection. The four LAN ports utilize standard RJ45 8P8C connectors wired per T568B convention, supporting auto-MDI/MDIX and auto-negotiation. The TEL1 and TEL2 ports use RJ11 6P4C connectors for analog telephone handset connectivity. The USB port is a standard USB 2.0 Type-A receptacle. The POWER port accepts a barrel connector with 12 VDC input (11–14 VDC range) and 2 A current capacity.

Parameter	Specification
Form Factor	Desktop ONT (265 mm x 176 mm x 82 mm)
Optical Interface	SC/APC (or SC/UPC variant), GPON Class B+
LAN Ports	4 x RJ45 10/100/1000 Base-T,

	auto-sensing, any-port-any-service
POTS Ports	2 x RJ11 (VoIP), SIP/H.248
USB Port	1 x USB 2.0 Type-A
Wi-Fi	Dual-band 2.4 GHz (3x3, up to 450 Mbit/s) + 5 GHz (3x3, up to 1300 Mbit/s)
Power Input	12 VDC, 2 A (system supply 11 – 14 VDC)
Max Power Consumption	20.5 W
Operating Temperature	0°C to 40°C
Operating Humidity	5% to 95% RH (non-condensing)
GPON Compliance	ITU-T G.984
Wireless Standards	IEEE 802.11a/b/g/n/ac

COMPLIANCE & STANDARDS

The HG8245Q2 complies with ITU-T G.984 GPON standards and IEEE 802.11a/b/g/n/ac wireless standards. It supports FCC certification (FCC ID: QISHG8245Q2) and carries RoHS environmental compliance. The device operates within a temperature range of 0°C to 40°C and humidity range of 5% to 95% RH (non-condensing).

ORDERING OPTIONS

Standard configuration: HG8245Q2 GPON ONT with 4 GE + 2 POTS + 1 USB + dual-band Wi-Fi (2.4 GHz/5 GHz). Regional variants may specify SC/UPC or SC/APC optical connector types. Power adapter options include 100–240 VAC input with 12 VDC output. Accessories include Ethernet cables, RJ11 telephone cords, and fiber patch cords as per carrier specification.

