AyudaNet F900V

Dual-Band Wireless AC XPON ONU / ONT

Figure 1: Front Panel Profile & LED Matrix

Figure 2: Rear Hardware Interfaces & Ports

The **AyudaNet F900V** is a premium, high-performance Dual-Band XPON Optical Network Unit (ONU/ONT) engineered to meet the strict demands of modern Fiber-to-the-Home (FTTH) and high-density corporate broadband deployments. Featuring intelligent **XPON dual-mode auto-sensing**, the F900V seamlessly adapts to either GPON or EPON architecture based automatically on the service provider's OLT setup. Equipped with concurrent dual-band Wireless AC and full Gigabit Ethernet routing capabilities, it guarantees ultra-fast data throughput, minimized latency, and extended network longevity.

1. Physical Interfaces & Hardware Architecture

PON Interface	1 * SC/UPC (or SC/APC) multi-mode adaptive port
LAN Interfaces	4 * 10/100/1000 Mbps self-adaptive Gigabit Ethernet RJ45 ports (4GE Full Gigabit)
USB Storage	2 * USB 2.0 host interfaces (for local storage sharing, FTP services, or data backup)
Antenna Matrix	4 * High-gain external omnidirectional antennas (5 dBi operational gain)

2. Optical & Fiber Transmission Performance

- **GPON Mode Rates:** Upstream bandwidth line rate up to **1.244 Gbps** | Downstream line rate up to **2.488 Gbps**.
- **EPON Mode Rates:** Symmetrical Upstream and Downstream throughput data rate of **1.25 Gbps**.
- **Transmission Reach:** Supports reliable optical physical transmission distances up to 20 km.
- **Optical Sensitivity:** High-sensitivity receiver mechanism to ensure link stability under varying fiber signal attenuation profiles.

3. Wireless (Wi-Fi) Specifications

- **Wireless Standard:** Concurrent Dual-Band 802.11ac (Wireless AC).
- **Frequency Profiles:** Simultaneous 2.4 GHz (optimized for long-range wall penetration) and 5.8 GHz (optimized for high-throughput, interference-free traffic lanes).
- **Multi-Device Efficiency:** Built-in Multi-User MIMO (MU-MIMO) engine to reliably maintain multiple simultaneous connections without speed drop-offs.

4. Software, Routing & Network Management

- **Operational Modes:** Supports flexible deployment profiles including Full Route, Bridge, and Access Point (AP) topology.
- **IP Layering:** Native support for concurrent IPv4 and IPv6 dual-stack routing architectures.
- **Carrier Remote Management:** Fully compliant with industry-standard **OMCI** and **TR-069** / **ACS** protocols, facilitating zero-touch automated provisioning, remote troubleshooting diagnostics, and over-the-air firmware upgrades.
- **Security & Traffic Control:** Integrated stateful inspection hardware firewall, flexible VLAN tag/untag mapping rules, and advanced Quality of Service (QoS) engines for prioritization of high-priority corporate data flows.

5. Power, Physical & Environmental

Chassis Engineering	Industrial-grade airflow thermal enclosure with cross-ventilation grids for continuous 24/7 peak-load performance.
Power Architecture	External 12V DC, 1.5A power adapter input.
Power Consumption	Energy-optimized configuration; max operational draw less than 12 Watts.
Operating Limits	Temperature range: -10°C to 60°C | Humidity range: 5% to 95% (non-condensing conditions).

For more information, solutions, and documentation, visit: www.ayuda.info