

Technical Specification Sheet (OEM/ODM Specification)

1. Hardware & Physical Interfaces

- **CPU/Chipset:** MediaTek (e.g., MT7981) or Realtek Dual-Core ARM Cortex A53.
Note: Avoid low-end single-core chipsets to prevent overheating in Venezuelan tropical weather.
- **Memory:** 256MB RAM minimum / **(AVOID 128MB Flash).**
- **Ethernet Ports:** 4× 10/100/1000 Mbps RJ45 Ports.
 - *Mandatory Requirement: **WAN/LAN Auto-Sensing (Auto-Adaptive)**.* The user can plug the cable from Inter/Netuno into any port, and the router will automatically assign it as WAN. This reduces customer support calls by 40%.
- **Antennas:** 4× High-Gain External Antennas (5dBi to 7dBi) Omni-directional.
- **Power Input:** DC 12V / 1.0A or 1.5A.
 - *Surge Protection:* Motherboard must include surge protection up to **4KV** due to frequent voltage fluctuations. **(PLEASE TAKE INTO ACCOUNT RESISTANCE TO HIGH VOLTAGE SPIKES IN THE POWER ADAPTER (TRANSFORMER), AND AN INTERNAL POWER SUPPLY AS BACKUP)**

2. Wireless & Performance (Wi-Fi 6 AX3000 MINIMUM REFERENCE)

- **Standards:** IEEE 802.11ax/ac/n/g/b/a.
- **Signal Rate:** 2402 Mbps on 5 GHz (2x2 MU-MIMO) + 574 Mbps on 2.4 GHz (2x2 MU-MIMO).
- **Channel Bandwidth:** **160 MHz mandatory** on the 5 GHz band. With 80 MHz support for switching in the event of band saturation.
- **Advanced Features:** OFDMA, Beamforming, BSS Coloring, Target Wake Time (TWT).
- **Mesh Support:** **EasyMesh (Wi-Fi CERTIFIED EasyMesh™)** standard. This allows your brand to sell single units or "2-Pack / 3-Pack" Mesh kits under the same SKU.

3. Firmware & Software Features (Venezuelan Market Tailored)

- **WAN Connection Types:** Dynamic IP (DHCP), Static IP, PPPoE.
- **VLAN Tagging (802.1Q):** Must support WAN VLAN ID mapping (Required for premium ISPs and FTTH deployments in Venezuela that segregate Data/IPTV).
- **IP Protocol:** Dual-Stack **IPv4 / IPv6** (Native, DHCPv6, SLAAC, PPPoE).

- **Security:** WPA/WPA2/WPA3-PSK, SPI Firewall, MAC/IP Filtering, Guest Network.
- **Management Protocols: TR-069 / TR-181 / TR-369** (Crucial if you intend to pitch or sell large batches directly to ISPs like Inter, Netuno, or regional cable operators). Allow customization of the graphical user interface (GUI) with the project's branding, and enable the default **TR-069** provisioning process to be pre-configured at the factory so that the device automatically "calls" the operator's ACS server upon initial connection.