# YOI-6

## Low Power Wi-Fi 6 Router Providing High-Throughput Edge Services Over Mesh Network




Wi Fi 6

≃ 6W

The **Internet of Edges (IoE)** is a disruptive digital infrastructure created by a network of interconnected edge devices that share resources to deliver high-performing, locally hosted digital services. Autonomous and interoperable, it serves as both an alternative and a complement to centralized global systems. IoE combines cutting-edge technologies in direct communications networking, edge computing, and distributed systems through GreenSoft, designed to integrate custom edge devices. We also offer ready-to-use edge devices called **YOI (Your Own Internet of Edges device)** with GreenSoft integrated.

## YOI-6

YOI-6 is an embedded Linux device equipped with Green Communications' software (GreenSoft). Each device comes with one dual-band Wi-Fi 6 interface (2.4 and 5 GHz) that creates a wireless backhaul network with other YOIs, and provides an access point to smartphones, tablets, laptops, or any other Wi-Fi device. YOI-6 features a web server offering edge content, services, and applications to users. One may also configure YOI-6 as a gateway. In this case, the edge traffic stays local and global traffic is sent across the gateways to other networks.

### Turn It On, It Works

Anyone can create a stand-alone digital infrastructure simply by switching on a group of YOI devices. They integrate everything needed to provide connectivity and digital services autonomously, without the need for Internet access or external infrastructure.

### Mobility

The Internet of Edges supports the mobility of YOI devices, servers and users. Embedded YOI devices collectively form a dynamic, self- configuring wireless network. Users can seamlessly handover from one device to another while maintaining continuity of service.

### Performance

Technological advances in the Internet of Edges (IoE) offer robustness, energy efficiency, and scalability, making it an alternative and interoperable solution to traditional centralized digital infrastructures. IoE is capable of efficiently handling communications at various scales, whether on a site, city, or regional level

### Openness

YOI devices provide tools, raw data and support open standards, allowing you to create new edge services, integrate third-party ones, and operate YOI devices like any ordinary Linux system.

E-mail: contact@green-communications.fr - Web: www.green-communications.fr

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|---|---|
| **Ethernet** | ▪ 1 Ethernet port (10/100/1000 Mbit/s) |
| **Wi-Fi** | ▪ 1 dual-band Wi-Fi card (a, b, g, n, ac, ax), providing 2 Wi-Fi interfaces to the system, one assigned to the 2.4 GHz band and one assigned to the 5 GHz band. Each interface can operate simultaneously to the other on its dedicated band |
| **Suggested operation** | ▪ Wi-Fi no.1: Backhaul<br>▪ Wi-Fi no.2: Access<br>▪ Ethernet: Internet when available |
| **Frequency** | ▪ 2.4 GHz and 5 GHz |
| **Antenna** | ▪ 2 dual-band Wi-Fi (RP-SMA, 5 dBi max) |
| **Wireless rates** | ▪ Up to 1.2 Gbit/s |
| **Encryption** | ▪ WPA2/WPA3 (access), SAE (backhaul) |
| **Operating system** | ▪ Custom Linux system (based on Buildroot) |
| **CPU** | ▪ i.MX6 Dual Core 800MHz ARM® Cortex™-A9 |
| **RAM** | ▪ 512 MB |
| **Other Interfaces** | ▪ 1 USB OTG, 1 Micro-HDMI |
| **Environmental features** | ▪ -40 °C +85 °C |
| **Dimensions** | ▪ Approx. 85 × 105 × 35 mm (casing without antenna) |
| **Power supply** | ▪ Power through Ethernet (passive PoE) or Barrel Jack DC from 8 to 60 V (AC adapter included) |
| **Power Consumption** | ▪ ≃ 6 W |
| **Weight** | ▪ 280 g (enclosure and antennas included) |
| **Software** | ▪ **Each YOI comes with a GreenSoft license** |

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