YOI-6

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

Wi Fi 6

≃ 6W

35mm
105mm
85mm

Use Cases:

- Industrial Internet of Things (IIoT)
- Internet of moving edges (e.g. robotics)
- Tactical/critical communications

Green Communications provides ready-to-use platforms for the easy setup of an edge-based solution with connectivity, edge cloud and services. Edge clouds operating at multiple locations can be connected and synchronized to create a large-scale Internet of Edges (IoE). The platforms of the Internet of Edges are tiny and low power routers called YOI (Your Own Internet device).

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

■ Plug & Play:

YOI routers are preconfigured. Within minutes, one can create a communication network with edge content, applications and services by simply turning YOI routers on.

■ Customizable:

YOI devices are open. The system administrators can use SSH or serial connections to access an interactive shell on their devices, and operate them like any regular Linux system. Our products also provide network administrators and application developers with the raw network data, using standard protocols, so they can personalize the platform or build new applications and services.

■ Autonomous:

Some networks need to stay offline (disconnected from the Internet) for privacy reasons or because the deployment area is isolated. YOI does not require Internet access. This kind of confined Internet still offers messaging, WebRTC media communications, XMPP, or sharing applications with no need for any external cloud server.

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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 ▪ Wi-Fi no.2: Access ▪ 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	▪ Cortex-A9 800 MHz Dual Core
RAM	▪ 512 MB
Other Interfaces	▪ 1 USB OTG, 1 Micro-HDMI
Environmental features	▪ -40ºC +85ºC
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	▪ ≃ 6W
Weight	▪ 280g (enclosure and antennas included)
Software	▪ **Each YOI comes with a GreenSoft license**

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