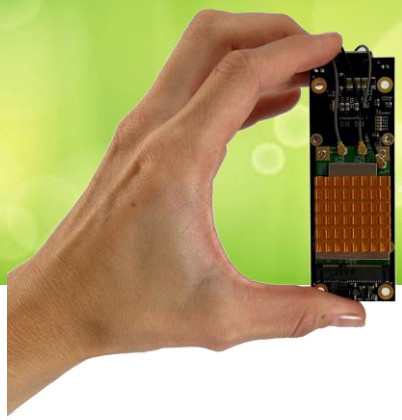
# nYOI-6e

New Generation YOI Router Board
Twice Smaller and More Powerful
With Only 6W Energy Consumption



Wi Fi 6e

≃ 6W

50 g

## 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).**

## nYOI-6e

nYOI-6e is an embedded Linux router equipped with Green Communications' software (GreenSoft). Each router comes with one tri-band Wi-Fi 6e 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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Green communications

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| | |
|---|---|
| **Ethernet** | ▪ 1 Ethernet port (10/100/1000 Mbit/s) |
| **Wi-Fi** | ▪ 1 tri-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 or 6 GHz bands. 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, 5 GHz, and 6 GHz |
| **Antenna** | ▪ 3 tri-band Wi-Fi (RP-SMA, 5 dBi max) |
| **Wireless rates** | ▪ Up to 2.4 Gbit/s |
| **Encryption** | ▪ WPA2/WPA3 (access) , SAE (backhaul) |
| **Operating system** | ▪ Custom Linux system (based on Buildroot) |
| **CPU** | ▪ i.MX8M Mini Quad Core 1.6GHz ARM® Cortex™-A53 |
| **RAM** | ▪ 1 GB |
| **Other Interfaces** | ▪ 1 USB OTG |
| **Environmental features** | ▪ -40ºC +85ºC |
| **Dimensions** | ▪ Approx. 35 × 100 × 21 mm (casing without antenna) |
| **Power supply** | ▪ Power through Ethernet (passive PoE) or JST-2Pin |
| **Voltage** | ▪ 8 to 60 V |
| **Power Consumption** | ▪ ≃ 6W |
| **Weight** | ▪ 50g (SBC, WiFi interfaces and 3 antennas) |
| **Software** | ▪ **Each YOI comes with a GreenSoft license** |

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