

Wi-Fi Access Points for IoT Device Testing

DT Workshop Equipment Reference — D&T / STEM resource for school workshops | Network & Infrastructure



Photo: Rodrigo C?sar — Public domain — via Wikimedia Commons (Access-point-wireless.jpg)

Wi-Fi access points extend the wireless network for IoT device testing, teacher hotspots and guest access, supporting many devices with separate SSIDs and security. They are the radio layer that ESP32 and phone projects connect to.

Key Features

- Dual-band 2.4/5 GHz
- 802.11ac/ax standards
- Multiple SSIDs and VLANs
- PoE power options
- Client limits and band steering

Typical Uses in the Workshop

- Cover IoT test zones with Wi-Fi
- Create isolated SSIDs for experiments
- Connect phones and tablets for demos
- Support many student devices

Safe Operation

1. Mount at ceiling height centrally
2. Connect the data and PoE
3. Create the SSIDs and passwords
4. Set the isolation for IoT test nets
5. Monitor the client load

SAFETY NOTES

- Secure the AP mounting bracket
- Keep the AP out of reach
- Use WPA2/WPA3 security
- Do not broadcast open SSIDs
- Keep the antennas clear

Maintenance & Consumables

- Update the AP firmware
- Check the client capacity
- Reboot band steering as needed
- Monitor the throughput
- Document the SSIDs

Specification & Buying Notes

Enterprise-class access points with PoE and multiple SSIDs let schools isolate IoT dev traffic safely. Consumer routers lack the controls. Check the client count per AP.