

Task 8 UniFi Design Center Guide

Use UniFi Design Center to create the visual evidence for your high value domestic network design.

What UniFi Design Center Is Used For

UniFi Design Center helps you plan a network before installation. For this task, use it to:

- import or recreate the floorplan
- place network devices
- plan wireless access point locations
- estimate wireless coverage
- show camera or outdoor coverage where relevant
- produce screenshots or exports for your submission

Step 1: Prepare The Floorplan

1. Select a house listing with a clear floorplan.
2. Save or screenshot the floorplan for classroom assessment use.
3. Record the listing URL and date accessed.
4. If the floorplan includes a scale or room dimensions, use them to estimate size.
5. If scale is unclear, state that your scale is approximate.

Step 2: Start The UniFi Project

6. Open UniFi Design Center.
7. Create a new project.
8. Import the floorplan image or recreate the property layout.
9. Set the scale as accurately as possible.
10. Add wall materials or wall assumptions where the tool allows.

Step 3: Place The Network Core

Choose a sensible network core location, such as:

- garage data cabinet
- utility room
- study cupboard
- central hallway cupboard
- communications cupboard

Place or label:

- modem or ONT
- gateway/router
- firewall function or security gateway
- switch or PoE switch
- internet/WAN entry point

Build in this order:

11. label the internet/WAN entry point
12. place the modem or ONT close to the WAN entry point
13. place the gateway/router/firewall after the modem or ONT
14. place the switch or PoE switch at the network core
15. add ethernet or PoE links from the switch

16. place access points to solve coverage needs
17. add fixed wired devices where appropriate
18. explain wireless networks or SSIDs such as family, guest, IoT, camera or home office

This order matters because the design needs to show the network structure, not just Wi-Fi coverage.

Item	What it is	Why it belongs in the design
Internet/WAN entry	The provider/internet side outside the home LAN.	Shows the difference between LAN and WAN.
Modem/ONT	Connects the home to the provider service.	Represents the physical internet connection before local routing.
Gateway/router	Routes traffic between LAN and WAN.	Lets local devices communicate with external networks.
Firewall function	Filters traffic according to rules.	Protects the home network and supports security decisions.
Switch or PoE switch	Central wired LAN device.	Forms the centre of the star topology and can power APs/cameras.
Ethernet/PoE links	Wired twisted pair links.	Gives reliable connections for APs and fixed high-demand devices.
Wireless access points	Provide Wi-Fi access to the wired LAN.	Supports mobile devices and whole-home coverage.
Network groups/SSIDs	Family, guest, IoT, camera or home office networks.	Shows authentication, encryption, firewall and isolation decisions.

Step 4: Place Access Points

Place wireless access points to support:

- living areas
- study or home office
- bedrooms
- outdoor entertaining areas where relevant
- high-use media or gaming spaces

Avoid placing every access point in one corner of the house. Use the floorplan and coverage evidence to justify placement.

For each access point, write a reason:

This access point is placed near _____ because _____.

Example:

This access point is placed near the upstairs bedrooms because the heatmap shows weak coverage from the ground-floor access point and students may use laptops or phones in those rooms.

Step 5: Plan Wired Links

Use wired ethernet for fixed or high-demand devices where suitable:

- access points
- cameras
- home office desk
- TV/media area
- gaming area
- NAS or home server
- printer

Label these as ethernet, twisted pair or PoE where relevant.

For each wired link, write a reason:

This device uses ethernet because _____.

Example:

The home office dock uses ethernet because video calls and file access need a stable connection and the device stays in one place.

Step 6: Screenshot Required Evidence

Your submission should include:

- source floorplan or property source record
- UniFi floorplan with devices placed
- Wi-Fi coverage or heatmap evidence
- device list or visible device labels
- any camera/outdoor coverage evidence if used
- logical topology section showing how the devices connect

Step 7: Check Before Submission

Before you submit, check:

- every major device shown in UniFi is explained in your written justification
- every major written recommendation appears in the design evidence
- access points are placed for coverage, not decoration
- wired links are used for fixed high-demand devices
- guest/IoT/private network separation is explained
- limitations are stated if scale or wall materials were estimated

Common UniFi Design Mistakes

Mistake	Fix
Using a floorplan screenshot without any network design evidence	Import or recreate the floorplan and add network devices.
Placing one router and no access points in a large house	Use multiple access points where coverage requires it.
Ignoring wall materials or house size	State assumptions and use coverage evidence to support placement.
Showing only Wi-Fi coverage and no logical topology	Add a topology section explaining WAN, LAN, switch, APs and clients.
Adding premium devices with no reason	Link every device to a floorplan need, user need, reliability need or security need.