What Are Smart Home Protocols?
Smart home protocols connect all the devices in the home and is a set of communication rules which allows devices to exchange data such as commands and events.

Why Do We Need Another Protocol?
- Many smart home configurations require internet connections or cloud interaction for basic communication.
- Hubs such as Alexa or Google Home are required to translate protocols so that phone applications can be used to control devices which can be expensive.
- Due to the above reasons the complexity of connecting to a nearby device with a phone or laptop can be complicated.

Designer for a Smarter Home
- Make use of fast and continuously evolving WIFI networks for easy connection with cell phones and laptops.
- Enforce interfaces which developers can implemented for better compatibility between devices. Developers cannot simply add whatever functions they like.
- Users can query devices available on the home network and view the device’s available commands.
- Devices store all the information about themselves that is necessary to interact with them.
- Devices can be configured to call functions on other devices based on user configured events.

The Goal
- Ensure internet and cloud access is not required for basic smart home control.
- Create a system where smart home hubs are not required, and any device can directly communicate with other devices (even laptops and phones).
- Provide a good user experience with configurable events, commands, and provide easy access to all users in the household.

Results & Conclusion
- A direct connection can be made between devices on the network due to the use of WIFI.
- Since everything is stored on the devices there is no need for an internet connection or hubs.
- A list of mandatory functions called the device interface has been developed which makes sure that developers create devices which are compatible with each other.
- The final design allows users to save money as they will not need to purchase a hub.
- Users privacy can be maintained, and basic communication will not make any interactions with the cloud.