

IoT: Client Devices

What are they?

Typical Clients

Cameras

Cloud connected cameras with streaming video, programmable

Smart Plugs

Programmable schedules, monitor power usage, from smart phone

Thermostats

Learns usage, can tell when people are home, access from phone

Hardware

Nest

Lithium Ion Battery, ARM Cortex A8, 38 MB memory

Nest Dropcam

Ambarella A5s SoC using ARM A11

Overall

Low processing power, small space, low power requirements

Software

Das U-Boot

Free bootloader, open source, multi-stage, prepares and loads OS

Linux

Open source operating system, frequently used with Busybox in IoT

Applications

Vendors can run applications and services on the booted linux image

Communication

Wifi

2.4 GHz common, sometimes 5 GHz

Zigbee

Low power, personal area networks (PAN), low data rate

6LoWPAN

IP6 over low power PAN