

Device	Sensor (What it measures)	Broker/Network (How data travels)	Subscriber (Who uses the data)	Actuator (What action it takes)
<i>Example: Nest Thermostat</i>	Temperature sensor	WiFi → Google Cloud	Nest app, Google Home	Heating/cooling system
1. Samsung Smart TV	Microphone (voice commands), usage/ activity tracking	WiFi-> ISP -> Samsung/ streaming cloud	User vi TV interface	Displays content, adjusts volume, powers on/ off
2. Ring Video Doorbell	Monitor sensor, camera, microphone	Wifi-> Ring cloud servers	Homeowner through the Ring app	Sends alerts, records video, activates chime
3. IRobot Roomba Vacuum	Dirt detection sensor, infrared sensors, camera (for mapping), cliff sensors	Wifi-> IRobot cloud servers	User through IRobot Home app	Moves, vacuums, changes cleaning modes, docks to recharge
4. Ford Vehicle App	GPS location, fuel level, engine diagnostics	Cellular connection -> Ford cloud servers	Vehicle owner via FordPass app	Remote start, lock/ unlock doors, horn/ lights activation
5. Playstation	User input (controller), microphone, usage data	Wifi/ Ethernet-> Sony Servers	User via Playstation Network account	Downloads updates, runs games, enables multiplayer sessions

IRobot Roomba Vacuum:

If an attacker gained access to my Roomba account, they would be able to access the mapping data of my home. Many Roomba models create detailed floor plans showing room layouts, dimensions, and furniture placement. That information could reveal entry points, room organization, and high-value areas inside the home. They could also remotely start or stop cleaning sessions, change schedules, or disable the device entirely. This can signal whether someone is home based on activity patterns. If an attacker monitors cleaning schedules, they might be able to infer when the house is typically empty. To continue, since the Roomba connects to the home Wifi network, compromising it could potentially allow lateral movement to other devices on the same network, increasing overall exposure. The worst-case scenario is the exposure of my home's layout, daily routines and potential entry into my border home network.