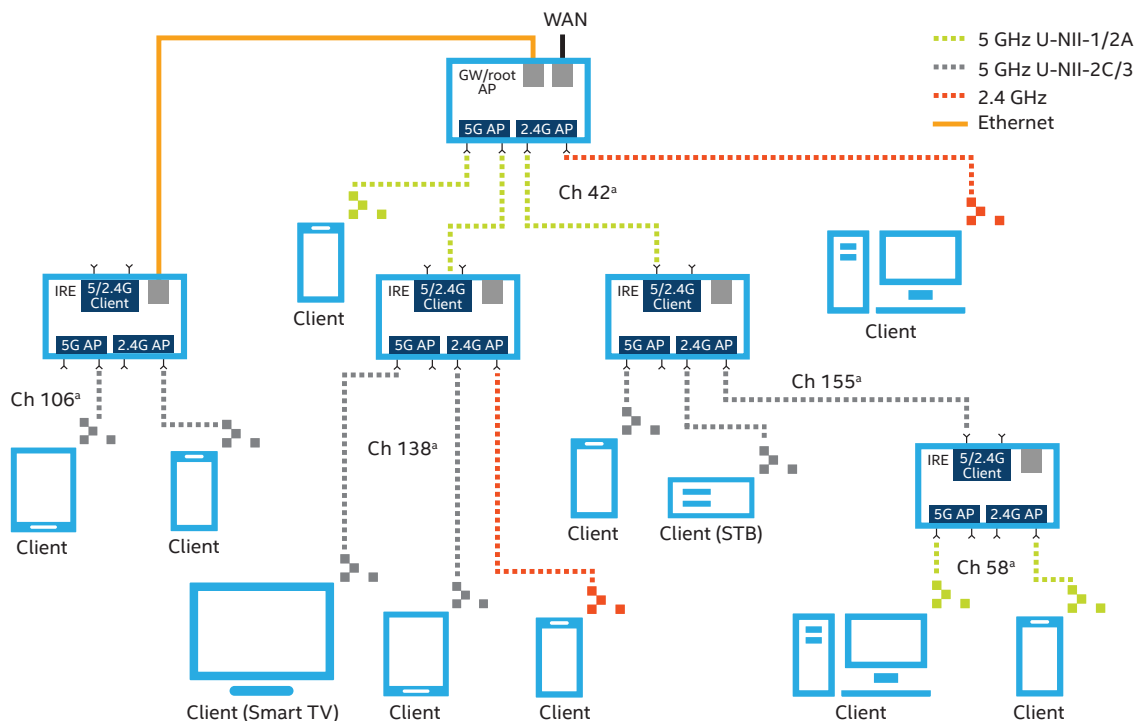(intel®)

Intel® Home Wi-Fi Development Kit

Jump-start development of an intelligent, context-aware home network infrastructure

The Intel® Home Wi-Fi Development Kit offers a starting point to accelerate development of an intelligent network of gateways and range extenders, and evaluate designs. Intelligent range extenders can be used to provide consistent throughput and enhance Wi-Fi connectivity throughout the home. The development kit is based on the Intel® Home Wi-Fi SoC IRX200 and Intel® Home Wi-Fi Chipset WAV500 Series to offer a high level of performance for 4x4 backhaul designs. The Wi-Fi operates in Tri-Band concurrent (TBC) with two radios dedicated to service and one dedicated to backhaul to offer a high level of performance for designs that support 4x4 backhaul.
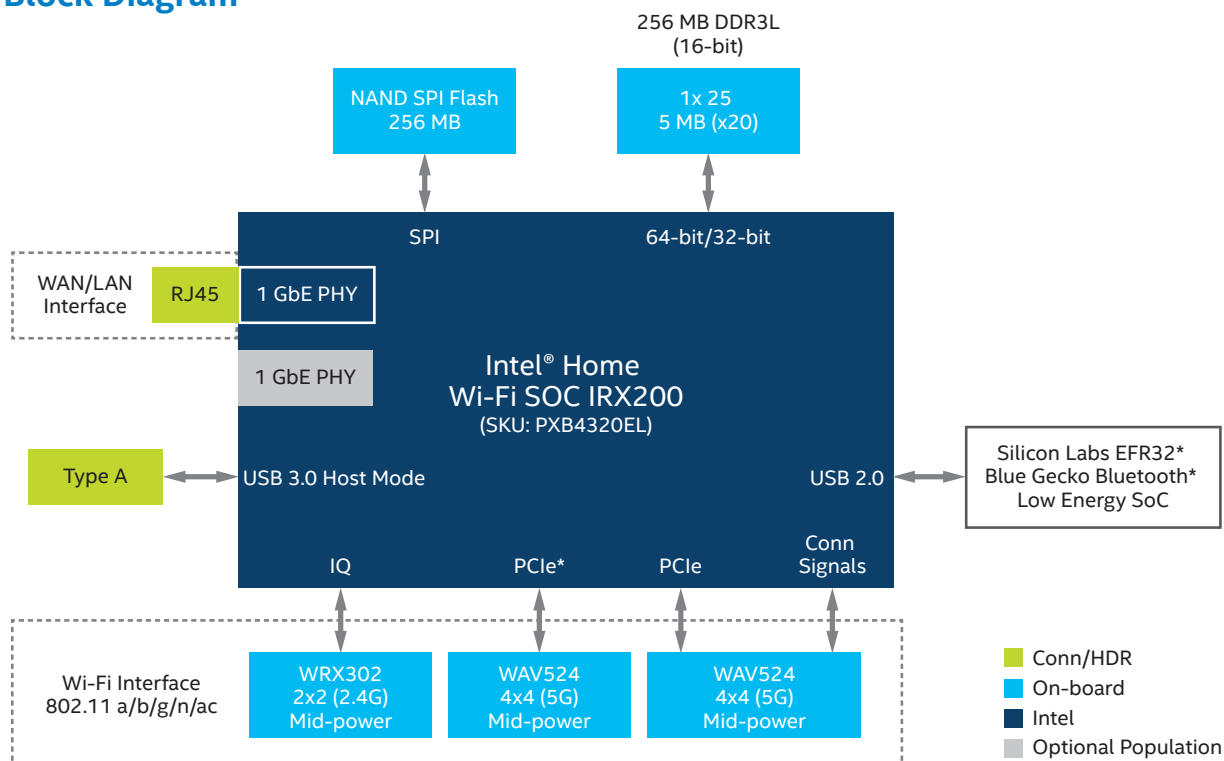
Solutions based on the Intel Home Wi-Fi Development Kit are designed for use with gateways based on Intel® AnyWAN™ SoCs and Intel® Puma™ 6 and 7 Families to provide an advanced networking experience at home.

Network Topology

Legend:
- 5 GHz U-NII-1/2A
- 5 GHz U-NII-2C/3
- 2.4 GHz
- Ethernet

ªChannel assignments illustrate one specific example, not fixed settings.

Block Diagram

256 MB DDR3L
(16-bit)

| NAND SPI Flash 256 MB | 1x 25 5 MB (x20) |

SPI — 64-bit/32-bit

Intel® Home Wi-Fi SOC IRX200
(SKU: PXB4320EL)

WAN/LAN Interface — RJ45 — 1 GbE PHY

1 GbE PHY

Type A — USB 3.0 Host Mode

USB 2.0 — Silicon Labs EFR32* Blue Gecko Bluetooth* Low Energy SoC

IQ — PCIe* — PCIe — Conn Signals

Wi-Fi Interface 802.11 a/b/g/n/ac

| WRX302 2x2 (2.4G) Mid-power | WAV524 4x4 (5G) Mid-power | WAV524 4x4 (5G) Mid-power |

- Conn/HDR
- On-board
- Intel
- Optional Population

Intel® Home Wi-Fi Development Kit Features

Wi-Fi Range	• 1700 square feet: one gateway based on Intel® AnyWAN™ SoC GRX350 and one Intel® technology-based range extender • 2700 square feet: one gateway based on Intel AnyWAN SoC GRX350 and two Intel technology-based range extenders
Tool Package	• Reference board • Reference casing • Cables and power supply • Schematics and layout, BOM • Ready-to-use software image • Calibration tool (under Linux*) • Intel's Universal Gateway Software Development Kit

Features	• Gigabit Ethernet port that automatically detects WAN/LAN
	• USB 3.0 port
	• Wi-Fi radios
	  – WRX303 (2.4 GHz, 2x2 11n)
	  – Intel® Home Wi-Fi Chipset WAV524 (5 GHz, 4x4 802.11ac)
	• Bluetooth* Low Energy (BLE)
	  - Silicon Labs EFR32* Blue Gecko BLE SoC

For more information on Intel® products for the connected home, visit **intel.com/connectedhome.**

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