



Cherry is an IPQ 5000 SoC based Wi-Fi 6 System-on-Module (SoM). It is a compact, integrated module that combines all the components required for building a complete system into a single form factor. Cherry is designed to simplify the process of designing and manufacturing embedded devices and wireless communication systems. With its high-performance processor, memory, storage, and networking capabilities, the Cherry SoM is well-suited for a wide range of applications, including IoT, networking, and wireless communications. By incorporating all the necessary components into a single module, the Cherry SoM reduces the time-to-market and overall cost of the end product, making it an attractive solution for many different types of embedded systems.

The module supports 2 spatial streams (2x2 MiMo) and is powered by a 64-bit dual-core ARM Cortex A53 processor with a 1 GHz clock speed. It is a surface mountable SoM and has a very small form factor (same as Lima). Cherry has external castellated pins that are pin to pin compatible with Lima castellated pins. For additional functions, Cherry has an additional line of inner LGA pins.

Quick specs

- Wi-Fi 6 (802.11b/g/n/ac/ax) 2.4 GHz with 2x2 MU-MIMO 1024 QAM (2SS), 20/40 MHz, 573.5 Mbps data-rate
- Based on IPQ-5000 SoC
- 22 dBm per chain RF output power
- Size – 30.5 by 19.4 mm
- Calculated maximum power consumption is 7 W
- Available interfaces – UART, 1 GbE PHY and SGMII+ or SGMII mode for 2.5/1 GbE PHY, 2x free SPI chip select pins, PCIe 2.0, 25xGPIO.