

CMP4020

Hosted or Hostless Dual Band Wi-Fi + BT

Feature rich and high performance



Built for high performance and harsh environments, CEL's HOSTED or hostless IoT connectivity module is perfect for applications requiring multiple technologies for local+remote connectivity, a simple method for commissioning Wi-Fi, low power, processing at the edge, running a complete application, data/audio/video applications, and more. Below are some key highlights of this leading-edge solution.

WIRELESS FEATURES

- Dual-Band 802.11 a/b/g/n
 - Tx: +18dBm
 - Wi-Fi Direct & Soft AP
 - Wake on RF
- BLE 5.0 and BT Mesh
 - Tx: +4.5dBm
 - 2Mbit PHY
 - Co-existence Manager
- Low Power Consumption
- Long Range & Broad Coverage
- High Noise Immunity
- High Throughput

APPLICATION RESOURCES, SECURITY

- Dual-core 32-bit Arm Cortex-M33 & M23 compatible
- 16/8/2MB Flash, 4MB PSRAM, 512kB SRAM
- 35 GPIO, USB/UART/SPI/I2C
- RTC, I2S & Audio CODEC
- Trust Zone, WPA3

SOFTWARE DEVELOPMENT TOOLS

- AT Command Set
- RTOS Support: FreeRTOS, Arm Mbed
- Toolchain Support: IAR, GCC
- AWS/Google Cloud/Azure Certified Platform
- Alexa/Smart Assistant and Homekit Support
- CEL Software Repository

REFERENCE CODE AVAILABLE

- Wi-Fi Provisioning via BLE
- USB UVC Camera Interface @1280x720 30fps (~3.5MB/s)
- OTA FW Updates
- Remote Connectivity...AWS/GCP/Azure
- Fast Connect
- Low Power Modes

APPLICATIONS

- Connected Home...Lights, switches, outlets, circuit breakers, door cameras, wall displays, appliances, timers
- Safety...CO2, Smoke Detectors
- Residential HVAC...Thermostats, AC units, furnace, sensors
- Security...Locks, keypads, cameras
- C&I Lighting...control, sensors, switches
- Building Automation...HVAC controllers, VAVs, security devices, shade controls, lighting controls & sensors
- Smart Energy...generators, load switches, power modules