

## CMP4020

### HOSTED OR HOSTLESS DUAL BAND WI-FI + BLE

# **FEATURE RICH & HIGH PERFORMANCE**

BUILT FOR HIGH PERFORMANCE AND HARSH **ENVIRONMENTS, CEL'S HOSTED OR HOSTLESS** IOT CONNECTIVITY MODULE IS PERFECT FOR APPLICATIONS REOUIRING 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 Cortex M4 & M0
- 16Mb Flash, 4Mb PSRAM, 512kB SRAM

PRELIMINARY SPECIFICATION. This document is subject to change without notice.

- 35 GPIO, USB/UART/SPI/I2C
- RTC, I2S & Audio CODEC
- Trust Zone, WPA3

## 2.4/5GHZ



Surface-mount PCB Trace Antenna Antenna Connector Castellation Edge 16.7 x 26.3mm

### Interchangeable with CMP4010

- Pin-Pin & Footprint
- Software, Tools
- AT Command or RTOS

### 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

#### **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