Product Description
The WE310K6 is a fully integrated dual band, dual stream (2x2) combo Wi-Fi (802.11 a/b/g/n/ac/ax) / Bluetooth® / Bluetooth® Low Energy 5.2 module, that provides an easy, cost-effective way for manufacturers to add wireless connectivity to their products.

The WE310K6 is an ideal solution for organizations with limited Wi-Fi/Bluetooth® Low Energy or RF expertise or for those seeking faster time to market, as it reduces RF design time and removes the burden of testing and certification.

The Module is IEEE 802.11 a/b/g/n/ac/ax & Bluetooth® certified and comply with Wi-Fi Alliance & BT SIG-v5.2 requirements. The WE310K6 module is easily designed into embedded systems, allowing customers to develop a broad array of devices and appliances that connect to other local devices or to the Internet over Wi-Fi.

Finally, the WE310K6-P is available in LGA package or on top of a M.2 Key E carrier board for an effortless integration.

Key Features
- Dual-band (2.4GHz/5GHz) Wi-Fi and Bluetooth®/Low Energy combo module, 2x2, MU-MIMO
- Dual-stream spatial multiplexing up to 1201 Mbps data rate
- Dual mode Bluetooth® & Bluetooth® Low Energy – Bluetooth®5.2
- Bluetooth® AUDIO Isochronous Channel (CIS) support
- Wi-Fi 802.11 e, h, k, i
- Advanced security features (including WPA3) with integrated crypto hardware
- Industrial grade temperature range (-40 °C to +85 °C)
- Certified Module
- Two Form Factor: LGA and M.2

Target Applications
Smart Home
- Home Automation
- Home Appliances
- Home Security and Alarm
- IP Cameras/Speakers
- Smart Lighting

Industrial and commercial
- Industrial Automation
- Energy Management
- Robotics
- Building Automation
- Smart City

Health Care & Medical
- Remote Patient Monitoring
- Healthcare Devices
- Wellness Devices
- Pet/Animal Trackers
- Medical Wearables

Others Applications
- Aftermarket OEM Telematics
- Fleet management
- Smart parking
- Printers
- Asset management
## WE310K6

### WLAN Specification
- Wi-Fi - 802.11 a/b/g/n/ac/ax (2.4GHz, 5GHz)
  - 20MHz, 40MHz, 80MHz

### Bluetooth® Specification
- SIG v5.2 Compliant
- Bluetooth® 2.1 + EDR, Bluetooth® Low Energy 5.2 (simultaneous dual mode)
- Bluetooth® Low Energy 2Mbps, LE LR
- Bluetooth® Low Energy Audio (CIS)

### Solution Architecture
- Linux Companion

### Host Interface
- Wi-Fi: PCIe 1.1
- Bluetooth®: HS-UART
- Bluetooth® Audio: PCM

### Wi-Fi Modes
- Wi-Fi AP (Access Point)
- STA (Client)
- Wi-Fi (AP + STA) Concurrent Mode

### Peripherals
- Bluetooth® Wake Host, Host Wake Bluetooth®
- Host Wake WL Disable Bluetooth®, Disable WL
- Status: Led Bluetooth®, Led WL

### Security Features
- WPA/WPA2 (personal)
- WPA3 (personal/enterprise)*

### Coexistence
- Inbuilt Wi-Fi Bluetooth® Low Energy

### Antenna
- 2 RF Pads

### Dimension
- LGA package, External antenna: 18 x 15 x 2.6 mm
- M.2 Key E: 22 x 30 x 3.4 mm

### Wi-Fi Tx output power
- 19 dBm @ 2.4 GHz (preliminary)
- 18 dBm @ 5 GHz (preliminary)

### BLE Tx output power
- 4 dBm (preliminary)

### Operating Temperature
- -40 °C to +85 °C (industrial grade)

### Operating Voltage
- 3.3 V Typ

### Compliance
- RED/FCC/ISED/UKCA
- Wi-Fi Alliance
- Bluetooth®-SIG

### Environmental Compliance
- RoHS, REACH