

GSUB-0002

[Ultra-Small, Low Power UWB+BLE SiP Module]

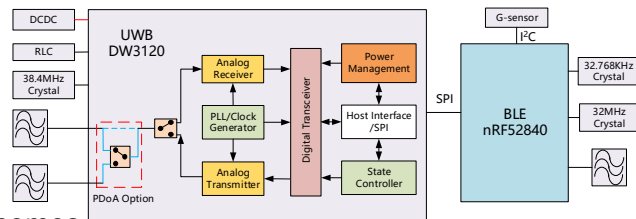
Fully Integrated UWB+BLE SiP Solution for Smart Factories, Wearables, Smart Retail and IoT

Goermicro GSUB-0002 module is based on System-in-Package (SiP) technology which consists of a NORDIC nRF52840 Bluetooth SoC, a QORVO DW3120 UWB transceiver, a 3-axis accelerometer, a 1.6V step-down switching voltage regulator and the matched passive components. All these components are integrated in a tiny 97-pins **10.5x8.3x1.2 mm³** LGA package with sputter technology to achieve EMI shielding. GSUB-0002 can be used to scheme location application for IoT devices.



Features

- UWB Transceiver: Qorvo DW3120
 - Supports channel 5&9(6489.6MHz&7987.2MHz)
 - Supports 2 Antennas
- BLE Transceiver: Nordic nRF52840
 - 2.4GHz BT5
 - 64MHz Cortex-M4
 - 1M Flash+256KB RAM
- Supports 2-way ranging, TDoA and PDoA location schemes
- High locating precision to 10cm
- Package Size : 97-pins 10.5 × 8.3 × 1.2 mm³
- Supply Voltage Range : VDD1/VDD2/VDDMCU: 2.5V ~ 3.6V



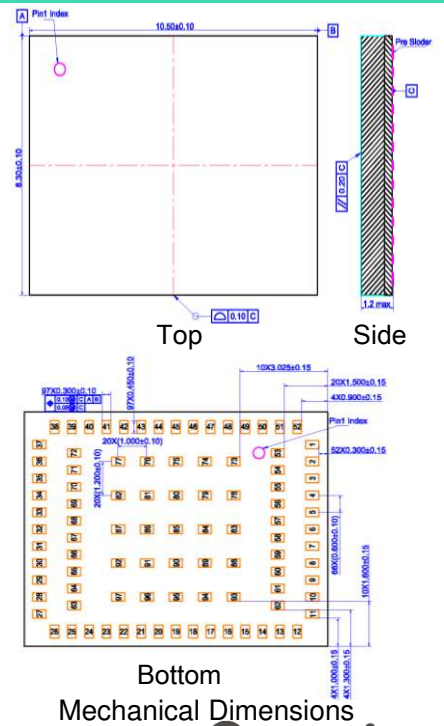
Block Diagram

Applications

- Smart factory
- Smart retail
- Smart home
- Smart transport
- Smart phone
- Tag

Descriptions

Items	Min	Typ	Max	Unit
Frequency Range	6240		8240	MHz
Center Frequency CH5		6489.6		MHz
Center Frequency CH9		7987.2		MHz
Channel Bandwidths		499.2		MHz
Output Power Spectral Density (programmable)			-41	dBm/MHz
Output Channel Power		-18		dBm
Minimum Input Level Sensitivity				
Data Rate 850 kbps (PER≤1%)		-96		dBm/500MHz
Data Rate 6.8 Mbps (PER≤1%)		-91		dBm/500MHz



Bottom Mechanical Dimensions