

# GSUB-0001

## [ Ultra-Small, Low Power UWB SiP Module ]

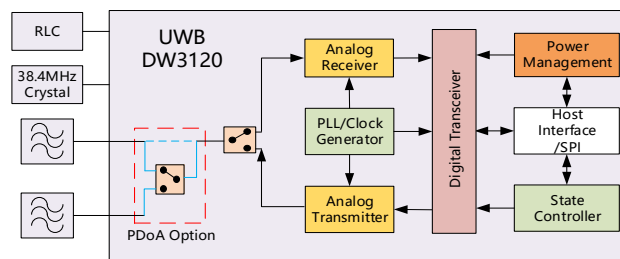
### Fully Integrated UWB SiP Solution for Smart Factories, Wearables, Smart Retail and IoT

Goermicro GSUB-0001 module is based on System-in-Package (SiP) technology which consists of a Qorvo DW3120 UWB transceiver, a crystal oscillator, two filters. All these components are integrated in a tiny package via 46-pins **6.2x5.8x1.2 mm<sup>3</sup>** LGA with sputter technology to achieve EMI shielding. GSUB-0001 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
  - Integrated 2 BPFs
- Supports 2-way ranging, TDoA and PDoA location schemes
- High locating precision to 10cm
- Data rates up to 27Mbps
- Up to 40MHz SPI interface to host MCU
- Package Size : 46-pins 6.2 × 5.8 × 1.2 mm<sup>3</sup>
- Supply Voltage Range : VDD1/VDD3: 1.5V ~ 3.6V, VDD2: 2.4V~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
<b>Minimum Input Level Sensitivity</b>				
Data Rate 850 kbps (PER≤1%)		-96		dBm/500MHz
Data Rate 6.8 Mbps (PER≤1%)		-91		dBm/500MHz

