

### KEY FEATURES

The Swegeo GD-MH board offers exceptional performance with its dual-antenna input, providing precise and reliable heading information combined with centimeter-level RTK positioning. This advanced board delivers accurate heading and pitch or heading and roll angles immediately at startup, facilitating rapid initialization of inertial sensors that rely on movement for attitude measurements. Designed for both static and dynamic applications, the Swegeo GD-MH ensures advanced automation and navigation capabilities while maintaining reduced power consumption. Its compact form factor and dual-antenna GNSS technology enable superior heading precision and navigation performance in a variety of use cases.



#### DUAL ANTENNA SUPPORT FOR SUB-DEGREE HEADING & PITCH OR HEADING & ROLL ANGLES

The board supports dual antennas to provide highly accurate heading and pitch or heading and roll angle measurements. This feature enables precise orientation and navigation by offering sub-degree accuracy, essential for applications requiring detailed directional information.

#### ALL-IN-VIEW SATELLITE TRACKING: MULTI-CONSTELLATION, MULTI-FREQUENCY

The board can track satellites from all available GNSS constellations (GPS, GLONASS, Galileo, BDS, QZSS) across multiple frequencies. This comprehensive tracking capability ensures reliable positioning data under various conditions and improves overall accuracy.

#### BEST-IN-CLASS RTK PERFORMANCE

The board delivers top-tier Real-Time Kinematic (RTK) positioning performance, providing centimeter-level accuracy in real-time. This makes it suitable for applications that require the highest precision in positioning data.

#### OSNMA SUPPORT

The board supports OSNMA (Open Service Navigation Message Authentication), a security feature that helps verify the authenticity of GNSS signals, enhancing the reliability and trustworthiness of the positioning data.

#### AIM+ INDUSTRY-LEADING ANTI-JAMMING, ANTI-SPOOFING TECHNOLOGY

Equipped with AIM+ technology, the board offers advanced anti-jamming and anti-spoofing capabilities. This technology helps protect against signal interference and spoofing attacks, ensuring accurate and reliable GNSS performance even in challenging environments.

#### LOWEST POWER CONSUMPTION ON THE MARKET

The board is designed to be highly energy-efficient, with the lowest power consumption among competing products. This feature is particularly beneficial for battery-operated and energy-sensitive applications, extending operational time and reducing power requirements.

#### STANDARD MOSAIC FOOTPRINT ENABLES SEVERAL APPLICATION-SPECIFIC SOLUTIONS

#### BASED ON A SINGLE DESIGN

The board's design features a standard mosaic footprint, allowing for versatile application-specific solutions. This standardization facilitates the development of various products and systems based on a single design platform, simplifying integration and reducing development costs.

| GENERAL                            |                                         |
|------------------------------------|-----------------------------------------|
| Channels                           | 448 channels                            |
| Signal Supported                   | GPS: L1, L2                             |
|                                    | Galileo: E1, E5b                        |
|                                    | GLONASS: L1, L2                         |
|                                    | Beidou: B1, B2, B3                      |
|                                    | QZSS: L1C/A, L1C/B, L2                  |
|                                    | SBAS: Egnos, WAAS, GAGAN, MSAS, SDCM L1 |
|                                    |                                         |
| Accuracy                           | RTK performance 2,3,4                   |
|                                    | Horizontal accuracy 0.6 cm + 0.5 ppm    |
|                                    | Vertical accuracy 1 cm + 1 ppm          |
|                                    | Other positioning modes accuracy 2,3    |
|                                    | Horizontal Vertical                     |
|                                    | Standalone 1.2 m 1.9 m                  |
|                                    | SBAS 0.6 m 0.8 m                        |
|                                    | DGNSS 0.4 m 0.7 m                       |
|                                    | Velocity accuracy 2,3 3 cm/s            |
|                                    | GNSS attitude accuracy 2,3              |
|                                    | Antenna separation Heading Pitch/Roll   |
|                                    | 1 m 0.15° 0.25° 5 m 0.03° 0.05°         |
| Data Update Rate                   | Measurements only 100 Hz                |
|                                    | Standalone, SBAS, DGPS + attitude 50 Hz |
|                                    | RTK + attitude 20 Hz                    |
| Initialization / Time to first fix | Cold start 7 < 45 s                     |
|                                    | Warm start 8 < 20 s                     |
|                                    | Re-acquisition 1 s                      |
| Sensitivity                        | Sensitivity Tracking & Nav. -167 dBm    |
|                                    | Cold starts -148 dBm                    |
|                                    | Hot starts -157 dBm                     |
|                                    | Reacquisition -160 dBm                  |
| RTK performance                    |                                         |
|                                    |                                         |
|                                    |                                         |

| PHYSICAL AND ELECTRICAL |                           |
|-------------------------|---------------------------|
| Dimensions              | 71.1 x 45.7 x 1.62 mm     |
| Weight                  | 644 g                     |
| Input voltage           | 3.3V DC                   |
| Connectors              | RS232 x 2, USB x 1        |
|                         | Bluetooth(Long Range SPP) |

| ENVIROMENTAL        |                            |
|---------------------|----------------------------|
| Storage Temperature | -55 to 85° C -67 to 185° F |
| Working Temperature | -40 to 85° C -40 to 185° F |
| Humidity            | 5% - 95% Non-condensing    |
| Vibration / Shock   | MIL-STD-810G               |

