

**MM117BX**  
Dual-frequency RTK high-precision heading module



MM117BX is a dual-frequency RTK high-precision heading module. Built on proprietary high-precision chip technology, it seamlessly supports multi- constellation and muti -frequency including BDS, GPS, GLONASS, Galileo and QZSS. MM117BX features a compact, small-form-factor design, compatible with leading positioning and heading modules in the market. It supports RTK high-precision positioning and orientation, coupled with ultra-low power consumption, offering a high-performance solution for precision location and direction applications.

**Technical Features**

- Concurrent reception of multi-constellation muti-frequency
- Support Beidou-3 signals
- Smart suppress anti-jamming technology
- Mainstream package size 30x40mm
- Dual-frequency RTK positioning technology with 2°/1m heading accuracy

**Specifications**

|                             |                     |
|-----------------------------|---------------------|
| <b>Power Supply</b>         |                     |
| Voltage                     | 3.0V~ 3.6V          |
| <b>RF input</b>             |                     |
| Signal Tracking             | BDS B1I             |
|                             | GPS /QZSS L1C/A□L2C |
|                             | GLONASS L1□L2       |
|                             | GALILEO E1          |
| <b>Physical</b>             |                     |
| Package                     | 40x30x4mm           |
| <b>I/O Data Interface</b>   |                     |
| UART                        | Default 115200bps   |
| <b>GNSS Performance</b>     |                     |
| TTFF                        | Cold Starts: ≤30    |
|                             | Hot Starts: ≤2s     |
| RTK Initialization Time     | □10s                |
| Heading Initialization Time | □15s                |
| Position Accuracy           | PVT:1.5m            |
|                             | RTK:1cm+1ppm        |
| Heading Accuracy            | 0.2°/m              |
| Velocity Accuracy           | 0.05m/s             |

|                  |                            |
|------------------|----------------------------|
| Sensitivity      | Tracking: -158dBm          |
|                  | Acquisition: -146dBm       |
| Nav. Update Rate | 1(Default) / 5 / 10 / 20HZ |
| Nav. Data Format | NMEA 0183 V4.1             |
|                  | PTCM3.X                    |

## Application Fields



UAV



Smart driving



Intelligent agriculture



Construction equipment control