The PX1122R is a cost-effective dual-frequency RTK GNSS receiver delivering centimeter-level position accuracy for precision guidance applications. When configured in moving-base mode, it provides high precision heading information even in static.

The PX1122R can receives RTCM 3.x data from a base station, or another PX1122R receiver in base mode outputing SkyTraq raw measurement or RTCM data, to perform carrier phase RTK processing, achieving centimeter-level accurate relative positioning.

The PX1122R has size of 12mm x 16mm. This very small size makes it easy to integrate into applications requiring high precision RTK positioning. The receiver is optimized for mass market applications requiring centimeter-level accuracy, low power, small size, and lower cost.

FEATURES

- GPS/Beidou/Galileo/GLONASS/QZSS Capable
- cm-Level Accuracy Dual-Frequency RTK
- Supports Moving-Base RTK
- Base or Rover Mode Configurable
- 12mm x 16mm Small Size
- Weighs 1.7 gram
**Technical Specifications**

**Receiver Type**
- 230 Channel
- GPS/QZSS L1/L2C, Beidou B1/B2I, Galileo E1/E5b, GLONASS L1/L2 Capable

**Performance Spec**
- Hot/Warm/Cold Start: 1 / 28 / 29 sec
- Reacquisition: 1 sec
- Velocity Accuracy: 0.05m/sec
- Timing Accuracy: 12nsec

**Sensitivity**
- Cold Start: -148dBm
- Tracking: -160dBm

**Position Accuracy**
- Autonomous: 2.0m CEP
- RTK: 1cm + 1ppm

**Heading Accuracy**
- 50cm baseline: 0.27 degree 1-σ

**Communication**
- 3.3V UART serial
- 115200 baud, 8, N, 1

**Supported Protocol**
- **Rover Mode**
  - NMEA-0183 V4.1
  - RTCM-SC104 3.x
- **Base Mode**
  - SkyTraq Raw Data
  - RTCM-SC104 3.2

**Physiological Characteristics**
- **Size**
  - 12mm x 16mm
- **Weight**
  - 1.7g

**Electrical Characteristics**
- **Voltage**
  - 3.3V +/- 5%
- **Current**
  - 50mA

**Environmental Characteristics**
- **Working temperature**
  - -40°C ~ +85°C
- **Storage temperature**
  - -55°C ~ +100°C
- **Humidity**
  - 5% ~ 95%

**Ordering Information**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
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<tbody>
<tr>
<td>PX1122R</td>
<td>Dual Frequency RTK Receiver Module</td>
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