

- Remote e-Antenna Extension: Engineer Survey Parameter Unit

## Main Features

- The Antenna Engineering Parameter Measurement Unit module can be used to measure geographical position and azimuth
- Measure longitude, latitude, altitude, azimuth, mechanical tilt
- Integrates dual GPS chips for geo-location measurement
- Integrated three-axis acceleration sensor for mechanical tilt measurement
- Temperature drift compensation algorithm for high precision measurement
- Compatible with AISG ES-RAE v2.2.0 standard



## Measurement Accuracy

|                      |                                                                                                   |
|----------------------|---------------------------------------------------------------------------------------------------|
| Longitude & Latitude | <6 m                                                                                              |
| Altitude             | <6 m                                                                                              |
| Azimuth              | ±3.5°                                                                                             |
| Tilt                 | ±1°                                                                                               |
| AISG Device Type     | RAE(0x31)                                                                                         |
| IOT                  | Support Huawei、ZTE、Nokia、Ericsson                                                                 |
| Note                 | Performance may be affected by GNSS signals' multipath, satellite number and satellite visibility |

## Electrical Data

|                                      |                                                                       |
|--------------------------------------|-----------------------------------------------------------------------|
| Protocol                             | Compact 3GPP /AISG2.0/AISG ES-RAE V2.2.0                              |
| GPS Antenna Gain                     | 31±1 dB @ +25 °C (typical)   31±4 dB @ -40 °C to +70 °C (typical)     |
| GPS Frequency Band                   | 1575.42 ±5 MHz (L1: GPS, BDS, Galileo, GLONASS, QZSS)                 |
| GPS Input Voltage                    | 3.8-5.5 Vdc                                                           |
| GPS LNA Output 1dB Compression Point | ≥0 dBm                                                                |
| GPS Current                          | ≤ 30 mA (typical)                                                     |
| GPS Noise Figure                     | 1.9 dB typical   2.5 dB maximum                                       |
| GPS Out of Band Rejection            | >35 dB @ 1575 ±50 MHz   >50 dB @ 1575 ±100 MHz                        |
| GPS Passband Ripple                  | ≤1 dB @ 1575.42 ±1.023 MHz, typical   ≤2 dB @ 1575.42 ±5 MHz, typical |
| Input Voltage                        | DC 10-30V                                                             |
| Power Rated                          | <3 W                                                                  |
| Connector                            | 8-pin DIN Male, IEC601309-9<br>SMA Female                             |
| Interface Specification              | RS 485A/B (Pin5, Pin3); DC(Pin6); DC Return (Pin7)                    |

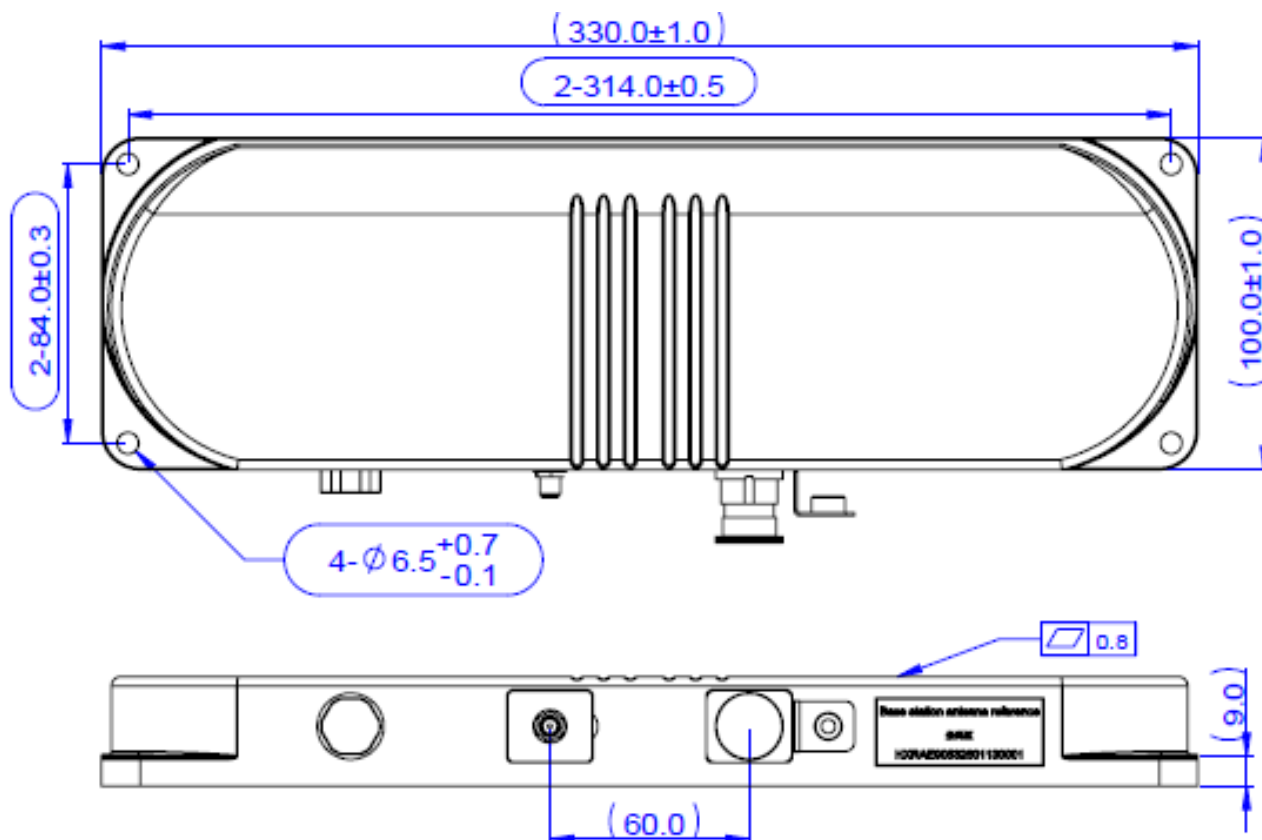
## Environmental Data

|                       |                                                   |
|-----------------------|---------------------------------------------------|
| Operating Temperature | -40°C to 75°C                                     |
| Relative Humidity     | 5% to 95%                                         |
| Ingress Protection    | IP65                                              |
| Lightning Protection  | Compact IEC 61000-4-5:2005 IEC 5KA (8/20 $\mu$ s) |
| MTBF                  | $\geq 50000$ H                                    |
| ROHS                  | ROHS 2.0 Compliance                               |

## Mechanical Data

|                        |                      |
|------------------------|----------------------|
| Dimensions (W x D x H) | 330mm x 100mm x 33mm |
| Weight                 | $\leq 720$ g         |
| Cover Material Type    | PP+GF                |

## Overall Dimensions



## Application scenarios

EPU connected to RRU directly



Connect EPU to RET, and then connect RET to RRU



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