



Venus828F 7mm x 7mm GNSS Receiver Module

FEATURES

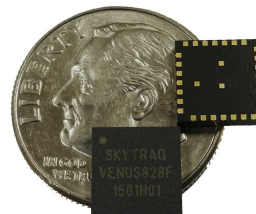
- Support GPS / Beidou / QZSS / SBAS signals
- Maximum 20Hz update rate
- -148dBm cold start sensitivity
- -165dBm tracking sensitivity
- 29 second cold start TTFF
- 3.5 second TTFF with AGPS
- 1 second hot start
- 2.5m accuracy
- Multipath detection and suppression
- Jamming detection and mitigation
- 3-day self-aided ephemeris estimation
- Supports external SPI flash memory data logging
- Complete GPS/Beidou module in 7mm x 7mm size
- Minimally requires only antenna and power to work
- Pb-free RoHS compliant

The Venus828F is a high performance, low cost, single chip GNSS receiver module targeting mobile consumer and industrial applications. It offers low power consumption, high sensitivity, and best in class signal acquisition and time-to-first-fix performance.

Venus828F contains all the necessary components of a complete GNSS receiver, including GNSS RF front-end, GNSS baseband signal processor, 0.5ppm TCXO, LDO regulator, DC/DC switching regulator and passive components. It takes up only 49mm² PCB footprint.

Dedicated massive-correlator signal parameter search engine within the baseband enables rapid search of all the available satellites and acquisition of very weak signal. An advanced track engine allows weak signal tracking and positioning in harsh environments such as urban canyons and under deep foliage.

Venus828F is very easy to use and offers very fast time to market.



TECHNICAL SPECIFICATIONS

| | |
|--------------------|---|
| Receiver Type | L1/B1 frequency GPS, Beidou, QZSS, SBAS 167-channel architecture 16-million time-freq search / sec |
| Accuracy | Position 2.5m CEP Velocity 0.1m/sec Time 10nsec |
| Open Sky TTFF | 29 second cold start 3.5 second with AGPS 1 second hot start |
| Reacquisition | < 1s |
| Sensitivity | -165dBm tracking -148dBm cold start |
| AGPS | 3-day ephemeris estimation |
| Update Rate | 1 / 2 / 4 / 5 / 8 / 10 / 20 Hz Default 1Hz |
| Dynamics | 4G |
| Operational Limits | Altitude < 18,000m ^{*1} Velocity < 515m/s ^{*1} |
| Serial Interface | LVTTTL level |
| Protocol | NMEA-0183 V3.01 SkyTraq Binary |
| Package | LGA31 7 x 7 x1.4 mm |
| Compliance | RoHS |
| Weight | 0.2g |

*1: COCOM limit

ORDERING INFORMATION

| Part Number | Description |
|-------------|----------------------------------|
| Venus828F | Single Chip GNSS Receiver Module |

SkyTraq Technology, Inc.
4F, No.26, Minsiang Street, Hsinchu, Taiwan, 300
Phone: +886 3 5678650
Fax: +886 3 5678680
Email: info@skytraq.com.tw

© 2015 SkyTraq Technology Inc. All rights reserved.
Not to be reproduced in whole or part for any purpose without written permission of SkyTraq Technology Inc ("SkyTraq"). Information provided by SkyTraq is believed to be accurate and reliable. These materials are provided by SkyTraq as a service to its customers and may be used for informational purposes only. SkyTraq assumes no responsibility for errors or omissions in these materials, nor for its use. SkyTraq reserves the right to change specification at any time without notice.

These materials are provided "as is" without warranty of any kind, either expressed or implied, relating to sale and/or use of SkyTraq products including liability or warranties relating to fitness for a particular purpose, consequential or incidental damages, merchantability, or infringement of any patent, copyright or other intellectual property right. SkyTraq further does not warrant the accuracy or completeness of the information, text, graphics or other items contained within these materials. SkyTraq shall not be liable for any special, indirect, incidental, or consequential damages, including without limitation, lost revenues or lost profits, which may result from the use of these materials.

SkyTraq products are not intended for use in medical, life-support devices, or applications involving potential risk of death, personal injury, or severe property damage in case of failure of the product

