



Venus634LPx 65 Channel Ultra Low-Power GPS Receiver

FEATURES

- Complete GPS receiver module in 10 x 10 x 1.1 mm
- 51 channel acquisition, 14 channel tracking
- 8 million time-frequency hypothesis testing per sec
- Open Sky hot start 1 second, cold start 29 second
- Signal detection sensitivity -161dBm
- Multipath detection and suppression
- ~23mA in tracking and navigation mode
- Supports data-logging with external SPI Flash
- 0.8mm pitch LGA44 package, RoHS compliant

APPLICATIONS

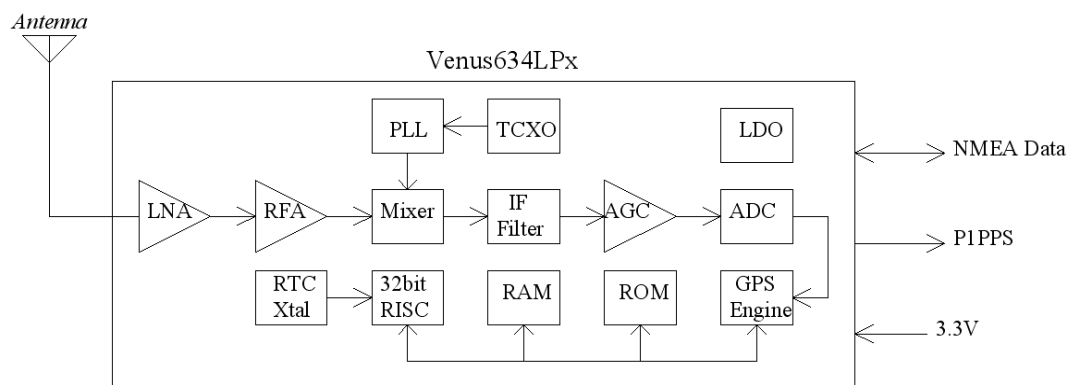
- DSC PND UMPC Mobile-Phone Navigation
- MP3/MP4-GPS GPS-Watch Tracker Locator

The Venus634LPx is a module-in-a-chip design targeting mobile consumer and cellular handset applications. It offers very low current consumption, high sensitivity, and best in class signal acquisition and time-to-first-fix performance.

The Venus634LPx contains all the necessary components of a complete GPS receiver module, includes GPS RF front-end, GPS baseband signal processor, 0.5ppm TCXO, 32.768kHz RTC crystal, RTC LDO regulator, and passive components. It requires very low external component count and takes up only 100mm² PCB footprint.

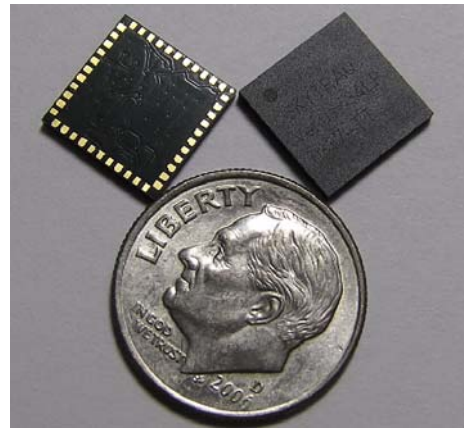
Dedicated massive-correlator signal parameter search engine within the baseband enables rapid search of all the available satellites and acquisition of very weak signal. An advanced track engine allows weak signal tracking and positioning in harsh environments such as urban canyons and under deep foliage.

With very fast signal acquisition speed, the Venus634LPx has very low average power consumption for locate on demand type of applications.



TECHNICAL SPECIFICATIONS

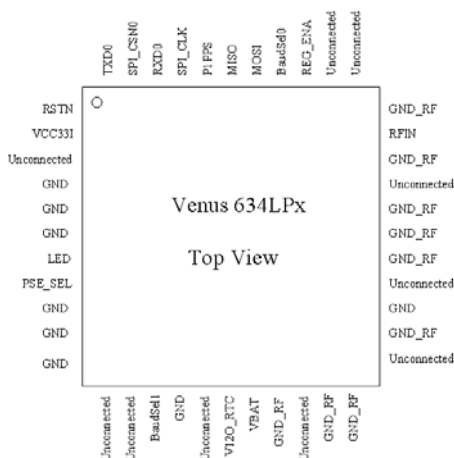
Receiver Type	L1 Frequency GPS C/A code, SBAS Capable 51 Channel Acquisitions 14 Channel Tracking
Accuracy	Position 2.5m CEP Velocity 0.1m/sec
Open Sky TTFF	hot start 1 second cold start 29 seconds average
Reacquisition	< 1s
Sensitivity ^{*1}	Tracking -161dBm Reacquisition -158dBm Cold Start -148dBm
AGPS	SkyTraq PromptFix [®] AGPS Average 3sec TTFF 7-day extended ephemeris
Update Rate	1Hz default 10Hz maximum
Dynamics	4G
Operational Limits	Altitude < 18,000m ^{*2} or Velocity < 515m/s ^{*2}
Serial Interface	LVTTTL level
Protocol	NMEA-0183 V3.01 SkyTraq Binary
Supply Voltage	2.7V ~ 3.3V
Current Consumption	23mA Tracking ^{*3}
Package	LGA44 10 x 10 x1.1 mm RoHS Compliant
Weight	0.3g



ORDERING INFORMATION

Part Number	Description
Venus634LPx	Single Chip GPS Module, ROM type
Venus634FLPx	Single Chip GPS Module, Flash type

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



*1: Flash version less 1dB

*2: COCOM limit, either may be exceeded but not both

*3: 23mA ROM type, 28mA Flash type

© 2008 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