

# Venus638LPx GPS Module

## Data Sheet



10mmx 10mm

Venus638LPx-L / Venus638LPx-D

## FEATURES

- Maximum update rate 20Hz
- -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
- SBAS (WAAS / EGNOS) support
- 7-day extended ephemeris AGPS
- 60mW full power navigation
- Works directly with active or passive antenna
- Complete receiver in 10mm x 10mm x 1.3mm size
- Contains LNA, SAW Filter, TCXO, RTC Xtal, LDO
- Requires only antenna and power to work
- Pb-free RoHS compliant

The Venus638LPx is a high performance, low cost, single chip GPS module targeting camera, handset, MID, gaming, fitness, and asset tracking applications. It offers very low power consumption, high sensitivity, and best in class signal acquisition and time-to-first-fix performance.

Venus638LPx contains all the necessary components of a complete GPS receiver, includes GPS RF front-end, GPS baseband signal processor, 0.5ppm TCXO, 32.768kHz RTC crystal, RTC LDO regulator, and passive components. It takes up only 100mm<sup>2</sup> 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.

Venus638LPx is very easy to use, minimizes RF layout design issues and offers very fast time to market.

Product Series	Product Description
Venus638LPx-L	ROM version GPS receiver module (internal 1.2V LDO version) Suitable for lower cost application using internal 1.2V LDO regulator or for Venus634LPx direct drop-in replacement
Venus638LPx-D	ROM version GPS receiver module (external 1.2V version) Suitable for lower power application using external 1.2V supply