PG32 GPS Engine

Data Sheet

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- High sensitivity
- Low power
- 20 channels
  based on the proven SiRF
- Star III technology

LAIPAC TECH

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High Sensitivity

Laipac PG32 enables the user to acquire and continue tracking GPS signals at far lower signal levels, It be used in environments previously deemed impossible such as severe urban canyons, dense foliage, deep inside parking garages, and in indoors tracking.

PG32 SPECIFICATIONS

Channels: 20 channel, L1 (1575.42 MHz) C/A code, autonomous GPS receiver

Acquisition Time:

Hot Start 1 seconds typical TTFF
Warm Start 38 seconds typical TTFF
Cold Start 42 seconds typical TTFF
Reacquisition Time 0.1 seconds average

Position Accuracy:

10 meters, 2D
Altitude < +/ 35 m vertical in term of 95%
Velocity 0.1 m/s
Time 1 us synchronized to GPS time
DGPS < 5m (50%)

Acquisition Sensitivity:

Hot 23 dB-Hz
Warm 15 dB-Hz,
Cold 30 dB-Hz,
Tracking Sensitivity 13 dB-Hz
Velocity 515 m/s (1,000 knots) Max
Acceleration 4g Max.
Altitude 18,000 m (60,000 ft) Max.
Jerk 20 m/s_3

Power supply:

Main power input 3.3±5%V DC input
Power consumption 70 mA @ 3.3V = 230 mW
Backup Power: 1.5±10%V DC input

Package

I/O 28 Pin SMD

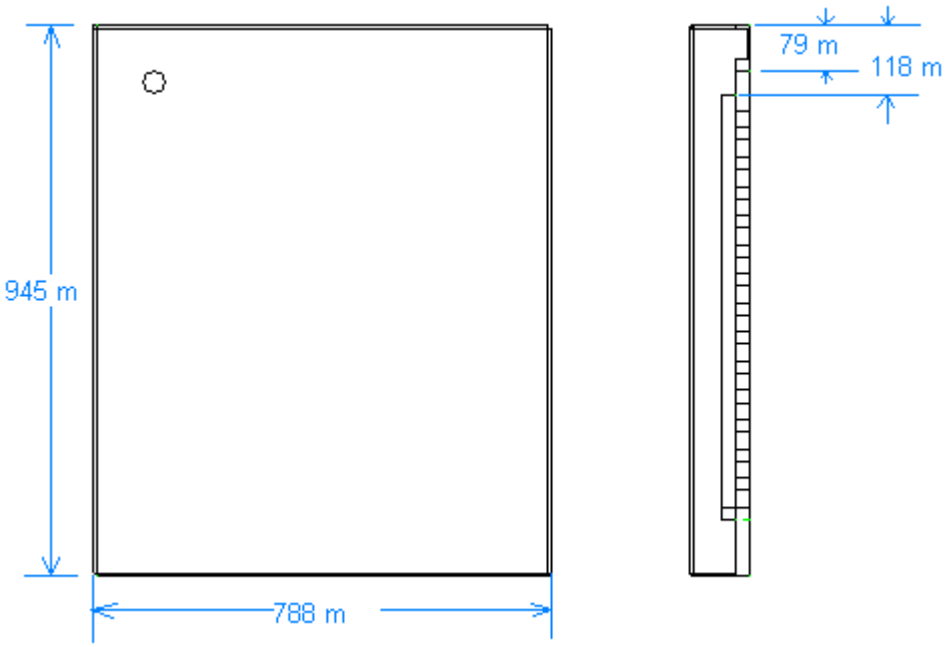
Interface

3.3V TTL level serial port for communications interface
Input/Output NMEA-0183/SiRF Binary Protocol
Baud Rate 4800 bps default (user configurable, from 4,800 to 38,400 bps)
Update Rate Programmable update rate (1 Hertz default)
Datum WGS 84 default (user configurable)
Antenna Active antenna

Pin Description

1: FREQ
2: NC
3: NC
4: RXB
5: RXA
6: TXA
7: IO5
8: IO9
9: NC
10: IO13
11: IO0
12: IO1
13: IO14
14: GND
15: VCC
16: BACKUP
17: BOOT
18: RST
19: IO15
20: GND
21: NC
22: NC
23: TXB
24: NC
25. ANTP
26. GND
27. RF_IN
28. GND

Mechanical Dimensions
Outline Drawing



PCB Layout
(Top view)