

YAT-GPS101

Global Positioning System

The YAT-GPS101 is designed to be reliable and to have high accurate positioning performance with high update rate and low cost. It provides position, velocity, acceleration and the satellite's number used by navigation. It can also provide any other data SUPERSTAR II provides. The cost effect, yet reliable design makes this system an ideal choice for high performance UAVs and general aviation aircraft.

Features

- Low Power Consumption
- Update rate (5Hz)
- Active antenna support
- 3.3V and 5V power input
- Operation temperature of -30°C to +75°C
- Very fast signal re-acquisition when signal masking occurs
- Serial communication - RS-232(115,200 bps) or RS-485(750,000 bps)
- Precise timing

Applications

- Autopilot Systems
- Unmanned Aircraft Systems
- Ultra-light and General Aviation Airplane

Architecture

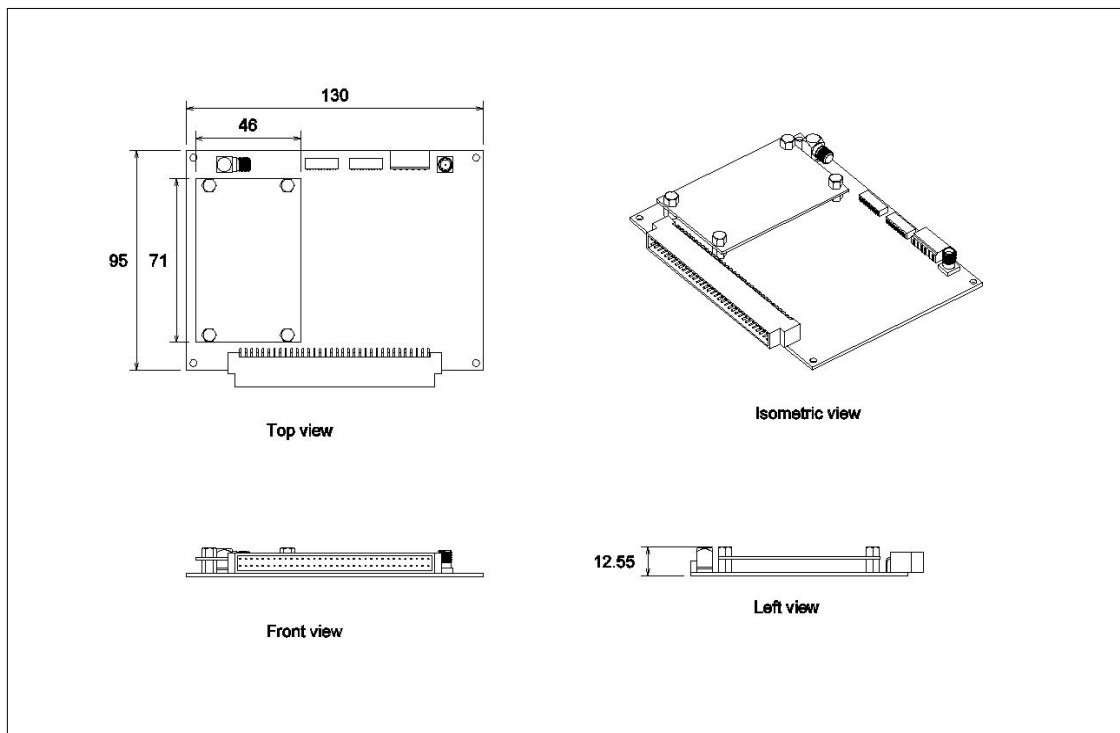
The YAT-GPS101 consists of a GPS Engine and a sensor/processing board. The processing board features a C8051 micro-processor and communication devices. The GPS Engine uses the SUPERSTAR II of NovAtel's company.



Specification

YAT - GPS101	
Performance	
Data Rate (Hz)	1 ~ 5, Programmable
Measurement Precision (cm)	75 (RMS)
Velocity Accuracy (m/s)	0.05 (RMS)
Position Accuracy (m/s)	< 5, single point (CEP)
Start-Up Time (sec)	1
Operating Temperature	-30°C ~ 75°C
Cold start (sec)	166s typical, with no almanac, no position and no time
Dynamic Limit	
Velocity (m/s)	514 (limited by US and Candian export laws)
Acceleration	4G (39.2m/s ²)
Jerk (m/s ³)	2
Altitude (km)	18 (60,000ft)
Physical	
PCB Size (mm)	130 × 12.55 × 95 [W × H × D]
PCB Weight (g)	96
GPS Size (mm)	46 × 1.3 × 71 [W × H × D]
GPS Weight (g)	22
Electrical	
Supply voltage (Vdc)	3.3 ~ 5
Consumption current (mA)	200 [@5Vdc]
Interface	RS-232, RS-485

GPS PCB



용비에이티(주)
Yongbee Aerospace Technologies Inc.

Block Diagram

