

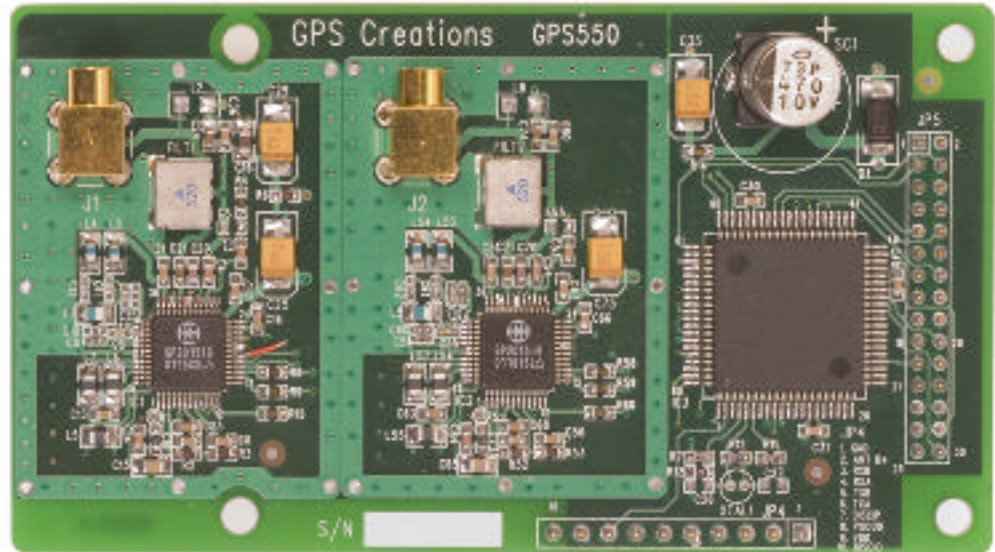
OpenSource GPS-550

GPS Receiver Dual Front-end for use with two antennas

*Introducing the GPS-550 dual RF front-end
for GPS receiver design, testing, R&D work and special applications.*

Key Features

- Use with Open Source, Plessey code or custom code
- 5 volt feed to GPS antenna LNA
- Connects using same pin-out as GPS500



Hardware Description

The GPS550 board plugs into the same socket connections as the GPS500 RF board found on other GPS Creation's boards.

The GPS550 has two GP2015 RF IC's connected to sign0 and mag0 and sign1 and mag1 inputs on the GP2021 correlator IC. The two RF downconverters are identical in design. This device may be used on the GPS1000, GPS1001, GPS1005 or PC/104GPS boards. It is available as a factory option when purchasing one of the above or as a field upgrade at a later time.

OpenSource Software

The GPS550 receiver front-end and correlator board is designed to work with GPS OpenSource code. The software displays all 12 satellite channels, SV number, reception status, lat/lon/elev, sub-frame number, C/N, etc. And if there is something you don't have displayed that you would like to see - just change it in the source code and recompile! You control the GPS solution - not some other GPS company that you have to deal with!

Applications

The OpenSource Receivers are ideal for a wide range of GPS applications including:

- Educational
- Engineering
- Scientific
- Research & Development



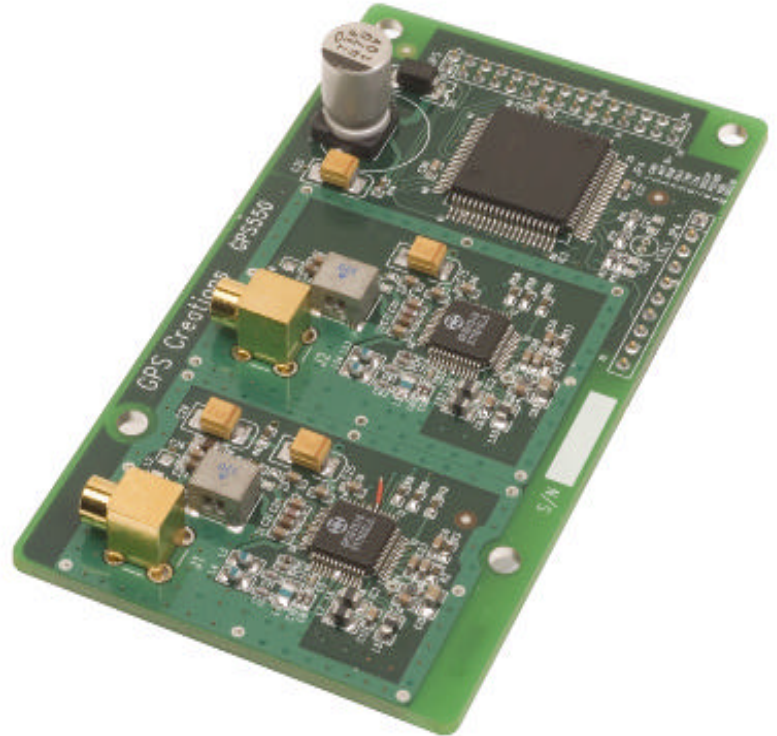
GPS Creations

GPS550

OpenSource GPS Receiver Dual RF Front-end and correlator

The GPS550 OpenSource Receiver dual RF front-end is for R&D work such as diversity reception or simultaneously examining effects of RHCP and LHCP antennas, examining effects of multipath, and/or other special applications. There are two GP2015 RF IC's on the board, each using the same TCXO so that there is identical down-conversion from both devices with their outputs feeding the GP2021 correlator IC. The 10 MHz. TCXO output can be disconnected and the mixing signal substituted using an external high-precision 10 MHz. signal if desired. (See the specs on the Rakon oscillator elsewhere on the GPS Creations web site). Each RF section has its own ceramic bandpass filter to improve selectivity. Selection of which RF IC is active is done through software on the GP2021 set-up. See the GP2021 data sheet for more information.

The antenna connectors are MCX female standard. Optional connectors such as SMA are available on special order. If the GPS550 board is to be used on an existing GPS Creations product, be sure to specify this in order to get the correct assembly with the dual antenna connectors.



STANDARD FEATURES

- PC based solution (Requires X486 or later, 100MHz)
- OpenSource or Plessey code
- 12 parallel channels
- L1 band (1575.42MHz) operation
- C/A code (1.023MHz chip rate)
- Plug-in board, 40 I/O pins total

PHYSICAL CHARACTERISTICS

Size:	51 x 92 mm (2.0 x 3.625 in.)
Weight:	47 g (1.5 oz.)
Power Consumption:	@ 5 volts 60 mA.
Operating Temperature:	0° to 55° C

TECHNICAL SPECIFICATIONS

- RF Sensitivity: -135dBm or better for tracking
- TTFF: <30 sec hot start (with current almanac, ephemeris, time and position)
- Antenna connectors: 2 EA - Female Type MCX
- GPS550 pin compatible with GPS500 board and consists of two Zarlink GP2015 RF IC's and one GP2021 correlator IC.
- Warranty: One year parts and labor FOB Germantown, TN USA (Condition must be as original and unmodified)

ORDERING INFORMATION

GPS Receiver Dual Front-End	Part Number - GPS550
GPS Antenna Kit (Each)	Part Number - GPS1010



Visit us on the web at gpscreations.com for more information

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