

### REB-22R w/LNA and REB-21R Comparison

	REB-22R w/LNA	REB-21R
Type	GPS Engine Board	GPS Engine Board
Dimension	40.65 x 71.125 x 16mm	40.65 x 71.125 x 16mm
Power Consumption	<40mA @3.3V	180mA @ 3.3V
	<42mA @5V	180mA @ 5V
Connector type	MCX	MCX
Chip set	SiRF Star II, GSC2x	SiRF GSP 2e/LP, GRF2i/LP
I/O pinout	20pin I/O connector	20pin I/O connector
Firmware	Xtrac SiRF firmware	Standard SiRF firmware

### REB-22R

#### General Features

Frequency	L1,1,575.42 MHz
C/A Code	1,023 MHz
Channels	12 parallel

#### Acquisition Times (seconds)

Cold Start	48
Warm Start	38
Hot Start	8

#### Temperature

Operating	-40 ~ +85°C
Storage	-40 ~ +85°C

#### Dynamic Conditions

Altitude	18,000 meters max
Velocity	515 m/sec max

#### Performance

Position Accuracy	<25cm CEP
LNA	Gain 12dB
Velocity	0.1m/s

#### Protocol Supported

NMEA 0183 ver 3.0

#### Key Feature

- Pinout compatibility as REB-21R
- Much more power saving than REB-21R
- Higher sensitivity than REB-21R