

# Innovative L1-Band GPS Re-radiator Kits

## MODEL: RA-200

L1-Signal GPS reradiator kit designed for receiving GPS signals indoor



- Fully waterproof at IP66 rating
- Cable length as long as 40m RF cable
- Re-radiating range as long as 20-30m

**RA-200**, enhanced version of our best-selling RA-200 with a wider re-radiating range of 20~30 meters, is an excellent GPS L1 band signal re-radiator featuring dual antennas to re-transmit real-time GPS satellite outdoor receptions to an indoor environment. Designed to operate as a whole, the system kits are composed of a highly-sensitive external GPS antenna, precisely calibrated amplifier circuit with Helix type indoor re-radiator antenna and a built-in power supply regulator. The Helix type indoor antenna system allows multiple GPS receiver users to perform on-the-fly normal receiver operation within a closed environment, while the main GPS antenna is installed on an unmanned location outdoor.

The GPS L1 signal is a 1575.42 MHz frequency; along with a 1.023 Mbps Bi-Phase shift Keying (BPSK) modulated spreading code. The input signal power at the receive **RA-200 Antenna** is approximately -130 dBm (spread over 2 MHz). In addition, the unit is designed as plug-n-play hardware and it can be installed either permanently to a secured location or quickly at users' convenience by using either screw mounting or glass suction cup, respectively, for the indoor re-radiator helix antenna.

### Features :

#### ● Excellent Signal Reception:

Re-radiating distance is around **20~30 meters** from the re-radiating antenna. In addition, full receiver visibility of GPS satellites outdoor comes along with an amplified re-radiated signal indoor.

#### ● Highly Integrated System:

Designed to operate as a whole, the system kits are composed of a high-gain external GPS antenna, a precisely calibrated amplifier circuit with a Helix type indoor re-radiating antenna and a built-in power supply regulator that provides systems with power. The unit is designed as plug-n-play hardware and it can be installed either permanently to a secured location or quickly at users'

convenience by using either screw mounting or glass suction cup, respectively, for the indoor re-radiator helix antenna.

- **Efficiency & Convenience:**

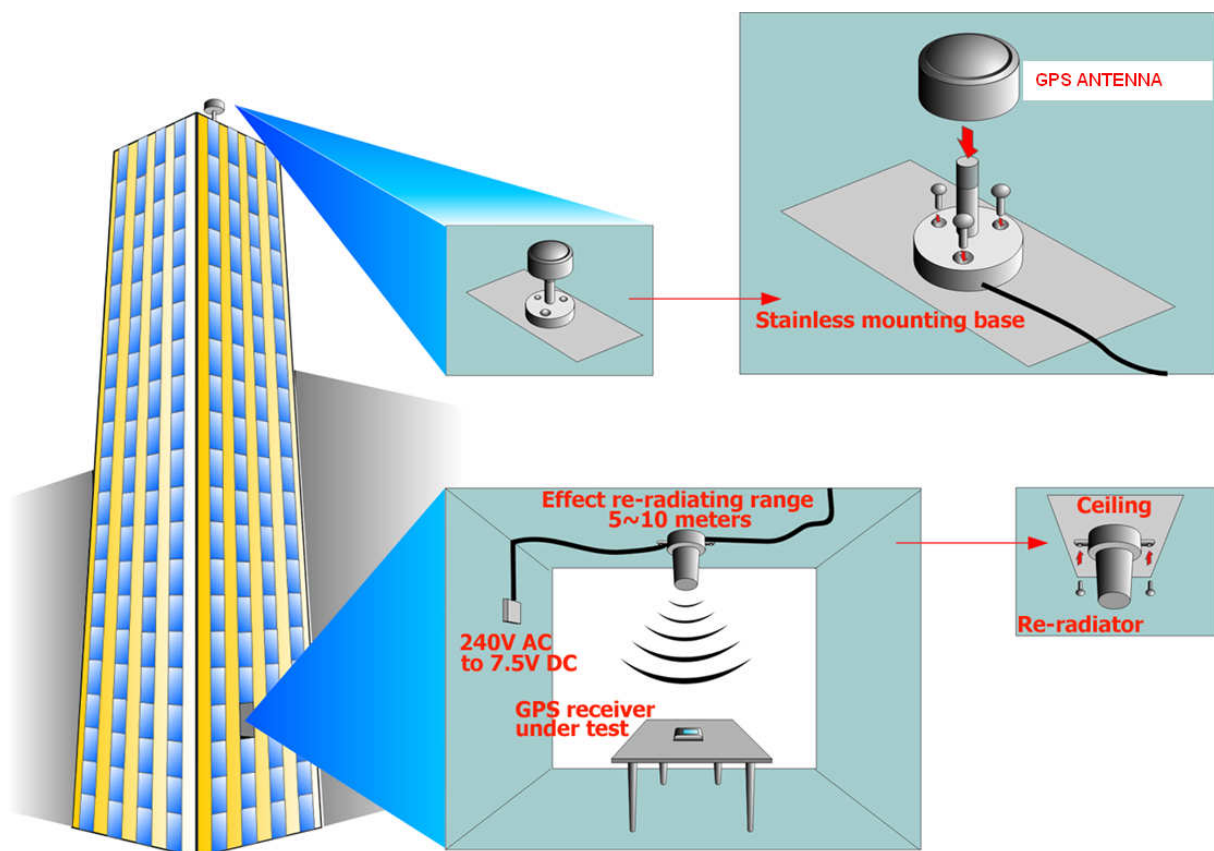
The re-radiator transmits real time data throughout the vehicle directly to an unlimited number of users. Multiple GPS receivers or hand-helds can share just one re-radiator to receive timely data.

- **Power Saving:**

Thanks to its GPS Power Saver design, the system uses an independent power supply source, saving users from the need of other power source for their GPS unit.

- **Easy-to-Setup:**

No additional cables are required and no external GPS antennas are needed to be plugged and unplugged when using a GPS receiver inside the vehicle.



**RA-200 Interconnection Diagram**

### **Applications :**

- LABORATORY
- OFFICES
- VARIOUS KINDS OF TRANSPORTATION MEANS, SUCH AS TRUCKS, TRAINS, SHIPS, SAILING BOATS & BUSES

## SPECIFICATIONS:

Specifications					
<b>External Antenna Electrical Specifications, TA=25°C (Cable=40m)</b>					
Description	Parameter	Min	Typ	Max	Units
Frequency	L1 band		1.575		GHz
Bandwidth			50		MHz
Amp Gain			--		dB
Noise Figure			1.3		dB
Output SWR			2.0:1		ratio
DC Input		4.5		5.5	Vdc
<b>Re-Radiating Antenna System Electrical Specification, TA=25°C</b>					
Description	Parameter	Min	Typ	Max	Units
Frequency	L1 band		1.575		GHz
Bandwidth			20		MHz
Impedance			50		ohm
Gain			--		dB
Noise Figure			2.0		dB
Output SWR			1.6:1		ratio
Element	Helix type				
Polarization	RHCP				
RF Out	at 1dB gain compression		-2.0		dBm
DC Input		+6		+30	Vdc
Consumption			55		mA
<b>Re-radiating Distance: around 20~30 meters from the re-radiating antenna</b>					

\* This specification is subject to change without prior notice