

GPS/GLONASS Indoor Signal Amplifier Antenna Kit

MODEL: RA-650

Use GPS/GLONASS Indoor production line & Project research and development test----



- Fully waterproof at IPX8 rating
- Cable length as long as 30m RF cable
- Re-radiating range as long as 3-5m

Features :

- **Excellent Signal Reception:** Re-radiating distance is around 3-5 meters from the Reradiator. In addition, full receiver visibility of GPS/GLONASS 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/GLONASS antenna, a precisely calibrated amplifier circuit with a Patch type indoor Reradiator 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 reradiating active patch antenna.
- **Efficiency & Convenience:** The Reradiator transmits real time data throughout the vehicle directly to an unlimited number of users. Multiple GPS/GLONASS receivers or hand-helds can share just one reradiating to receive timely data.
- **Power Saving:** Thanks to its GPS/GLONASS Power Saver design, the system uses an independent power supply source, saving users from the need of other power source for their GPS/GLONASS unit.
- **Easy-to-Setup:** No additional cables are required and no external GPS/GLONASS antennas are needed to be plugged and unplugged when using a GPS/GLONASS receiver inside the vehicle.

Applications :

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

Features:

1. Extra-high Gain and Low Noise
2. All Voltage (3.0V~5.5 V) can be available in one.
3. Extra-low current consumption in low voltage.

6. Various accessories are available.

Configuration:

1. Two Ports : RF Input Port and DC Input Port. RF Input is connected to the Active GPS+GLONASS antenna. DC Input is fed by DC voltage (typical is 5 voltage).
2. RF Input is amplified by at least 28 dB gain and then, the amplified signal is radiated from Patch antenna. The Patch antenna is dual-band antenna for GPS plus GLONASS systems.

Specifications: OUTDOOR Antenna MA700G

| PHYSICAL CONDITION | |
|--|---|
| Constructions: | Polycarbonate radome, detachable cable/connector for easy mount, rubber-O-ring between top radome and screw base for waterproof |
| Dimensions: | 90.5mm(Dia.) × 108.5mm(H) |
| Weight: | 150grams (w/o cable & connector). |
| Color: | Standard in ivory white, other colours available upon request. |
| Base mounting | FB1 1"-14 UNS |
| Cable & Connector | |
| RF cable: | CFD200-45CM |
| Pulling strength: | 6 Kg @ 5sec. molded plastic on connector end for strain relief. |
| Connector | N(F) |
| Antenna Element | |
| Center Frequency: | 1575Mhz & 1596-1610 MHz |
| Polarization: | R.H.C.P. (Right Handed Circular Polarization). |
| Bandwidth | 10 MHz min. @S11≤-10 dB, 24MHz typ. @S11<-8dB |
| Gain @ 10° Elevation: | 2 dBi typical. |
| Axial Ratio: | 3 dB max. |
| Output VSWR: | 1.5 max |
| Output Impedance: | 50 ohm |
| Low Noise Amplifier | |
| Power Gain: | 1570 Mhz : 29db typ 1610 Mhz : 29db typ |
| Bandwidth: | 50 MHz min. |
| Noise Figure: | 1.5 typ |
| Outer Band Attenuation: | 20 dB min. @ Fo +/-50 Mhz. |
| Supply Voltages: | 2.3~5.5V DC. |
| Current Consumption: | 2.5V : 6.6mA Typ. 3V: 8.6mA Typ. 4V: 12.6mA Typ. 5V: 16.6mA Typ. |
| Output Impedance: | 50W ohm |
| Overall Performance: (antenna element, LNA & coax cable) | |
| Center Frequency: | 1570 ~1610 Mhz. |
| Gain: | At 90° vertical to sky 30 ± 4.5dBi (cable loss) Note:1 Mounted on the 60mm x 60mm square ground plane |

| | |
|------------------------|---------------------|
| Noise Figure: | 2.0 max. |
| Axial Ratio: | 3 dB max. |
| Bandwidth: | 10MHz min. |
| VSWR: | 2.0 max. |
| Output Impedance: | 50W ohm |
| Environmental | |
| Operating Temperature: | -40°C~ +85°C. |
| Storage Temperature: | -40°C~ +90°C. |
| Relative Humidity: | 95% non-condensing. |
| Water Resistance: | 100% waterproof. |

Re-radiating antenna Specification: INDOOR Antenna

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|------------------------------|---|
| PHYSICAL CONDITION | |
| Constructions: | Polycarbonate radome, detachable cable/connector for easy mount, rubber-O-ring between top radome and screw base for waterproof |
| Dimensions: | 60mm(Dia.) x 95mm(H) |
| Weight: | 200grams (w/o cable & connector). |
| Color: | Standard in ivory white, other colours available upon request. |
| Mounting: | Bulkhead mount with 0.8 inch threaded wing nut (standard accessory). |
| Mounting Adapters | Pole mount to 1"-14 UNS threaded mast |
| Base mounting | FB1 1"-14 UNS |
| Cable & Connector | |
| RF cable: | RG174-30CM & UL1185-1M |
| Pulling strength: | 6 Kg @ 5sec. molded plastic on connector end for strain relief. |
| Connector | SMA(F) & USB(M) |
| Antenna Element | |
| Center Frequency: | 1575-1580Mhz & 1595-1620 MHz |
| Polarization: | R.H.C.P. (Right Handed Circular Polarization). |
| Bandwidth | 10 MHz min. @S11≤-10 dB, 24MHz typ. @S11<-8dB |
| Gain @ 10° Elevation: | 2 dBi typical. |
| Axial Ratio: | 3 dB max. |
| Output VSWR: | 1.5 max |
| Output Impedance: | 50 ohm |
| Low Noise Amplifier | |
| Power Gain: | 1570 Mhz : 29db typ 1615 Mhz : 29db typ |
| Bandwidth: | 50 MHz min. |
| Noise Figure: | 1.5 typ |
| Filter | SAW Filter Att 35 dB min @ f < 1.5 GHz Att 40 dB min @ f > 1.7 GHz * f: frequency |
| Supply Voltages: | 2.3~5.5V DC. |

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|---|---|
| Current Consumption: | 2.5V : 6.6mA Typ. 3V: 8.6mA Typ. 4V: 12.6mA Typ. 5V: 16.6mA Typ. |
| Output Impedance: | 50W ohm |
| Overall Performance: (antenna element, LNA & coax cable) | |
| Center Frequency: | 1570 ~1620 Mhz. |
| Gain: | At 90° vertical to sky 30 ± 4.5dBi (cable loss) Note:1 Mounted on the 60mm x 60mm square ground plane |
| Noise Figure: | 2.0 max. |
| Axial Ratio: | 3 dB max. |
| Bandwidth: | 10MHz min. |
| VSWR: | 2.0 max. |
| Output Impedance: | 50W ohm |
| Environmental | |
| Operating Temperature: | -40°C~ +85°C. |
| Storage Temperature: | -40°C~ +90°C. |
| Relative Humidity: | 95% non-condensing. |
| Water Resistance: | 100% waterproof. |
| accessories | AC-DC 100-240 TO 5V USB(F) ADAPTOR N(M)-CFD200-30M-SMA(M) |

* This specification is subject to change without prior notice

