



L1/L2GHNRRKIT

L1/L2 GNSS Hangar Networked Re-Radiating Kit Technical Product Data



Features

- **Amplified L1/L2 GNSS Roof Antenna**
40 dB gain is typical
- **Re-Radiating Amplifier with Power Supply**
Typical gain 30dB
- **Optional Mounting Kit Hardware**
Roof Antenna Mount & Adjustable Re-Radiating Mount
- **Variable Gain Option**
Re-Radiating Amp Gain Varies from approx 0-23 dB gain
- **Variable Gain Option with LCD Display**
Push Button Control in 1dB Increments 0-30dB gain

Description

The GPS L1/L2 GNSS Hanger Re-Radiating Kit (L1/L2GHNRRKIT) is a complete re-radiating system that allows re-radiation of the GPS L1, L2, L5 signal as well as the other GNSS frequencies (including Galileo, GLONASS, Beidou and Omnistar indoors). The L1/L2GHNRRKIT consists of an active L1/L2 GNSS roof antenna, a re-radiating amplifier with a wall mount plug-in transformer that powers the entire system, and a passive L1/L2 GNSS re-radiating antenna. The GNSS signals from the roof antenna are amplified and radiated indoors. Thus, if a receiver has line of sight with the re-radiating antenna, it can receive the GNSS signal indoors up to 100 feet. A cable from the roof antenna to the re-radiating kit is required and can be purchased separately.

Roof Antenna Specifications, $T_A = 25^{\circ}\text{C}$

Parameter	Conditions	Min	Typ	Max	Units
Frequency	See Active Antenna Specifications page 5				GHz
Bandwidth					MHz
Out Imped. ⁽¹⁾			50		Ω
Pre-Amp Gain		35	40	45	dB
Noise Figure			3.0		dB
Output SWR				2.0:1	-
Filtering	See Active Antenna Specifications page 5				dB
					dB
Req. DC Input V.		2.5		12	Vdc
Current			37	<50	mA

RF Connector Options		
Connector Options	CONNECTOR STYLE	CHARGE
	Type N-female	NC

Re-Radiating Amplifier Electrical Specifications, $T_A = 25^{\circ}\text{C}$

Parameter	Conditions	Min	Typ	Max	Units
Freq. Range	Ant – J1	1.1		1.7	GHz
In/Out Imped.	Ant, J1		50		Ω
Gain ⁽¹⁾					dB
		29.	30	31	dB
Input SWR ⁽²⁾	J1 - 50 Ω			1.8:1	-
Output SWR	Ant - 50 Ω			1.8:1	-
Noise Figure	Ant – J1		3.3	3.5	dB
Current			33	40	mA
Gain Flatness	L1 – L2 ; Ant – J1		0.5	1	dB
Reverse Isolation	J1 – Ant	35			dB
Group delay Flatness	$\tau_{d,max} - \tau_{d,min}$: Ant – J1			1	ns

Re-Radiating Amp System Power Supply Options		
Source Voltage Options	VOLTAGE INPUT	STYLE
	110VAC	Transformer (Wall Mount)
	220 VAC	Transformer (Wall Mount)
	240 VAC (United Kingdom)	Transformer (Wall Mount)
	Customer Supplied DC 9-32 VDC	Military Style Connector
Re-Radiating Amp Gain Control Options		
Standard Gain	30 dB (Custom Gain between 0-30dB available upon request)	
Variable Gain	$-3 \leq \text{Gain} \leq 25$ dB	
Variable Gain with LCD Display	0-30dB gain range with push button control in 1dB increments	

Re-Radiating Antenna Electrical Specifications, $T_A = 25^{\circ}\text{C}$

Parameter	Conditions	Min	Typ	Max	Units
Frequency	See Passive Antenna Specifications page 6				GHz
Bandwidth					MHz
Impedance			50		Ω
Peak Gain			3		dBic
Output SWR				2.0:1	-
Polarization			RHCP		-

Part Number Configuration

HS E W VG L1L2GHNRRKIT N / 5 / 110

Options:

HS = Hermetically Sealed

E = EMI Shielding

W = Weatherproofing

Re-Radiating Kit Type:

VG = Variable Gain knob control 0-23dB gain

VGLCD = Variable Gain with push button control in 1dB increments 0-30dB gain

L1L2GHNRRKIT = L1/L2 GNSS Hangar Networked Re-Radiating

Kit Connector Options (Type N-female Standard):

N = N-type, **S** = SMA, **T** = TNC, **B** = BNC

DC Output Voltage

5 = Amplifier Output Voltage (included antenna requires 4 - 24vdc-5vdc is default voltage)

Source Voltage (Power Supply Options)

110=110VAC, **220**=220VAC (2 prong Euro), **240**=240 (3 prong UK)

MC = Military DC Connector (User Supplies 9-32VDC)

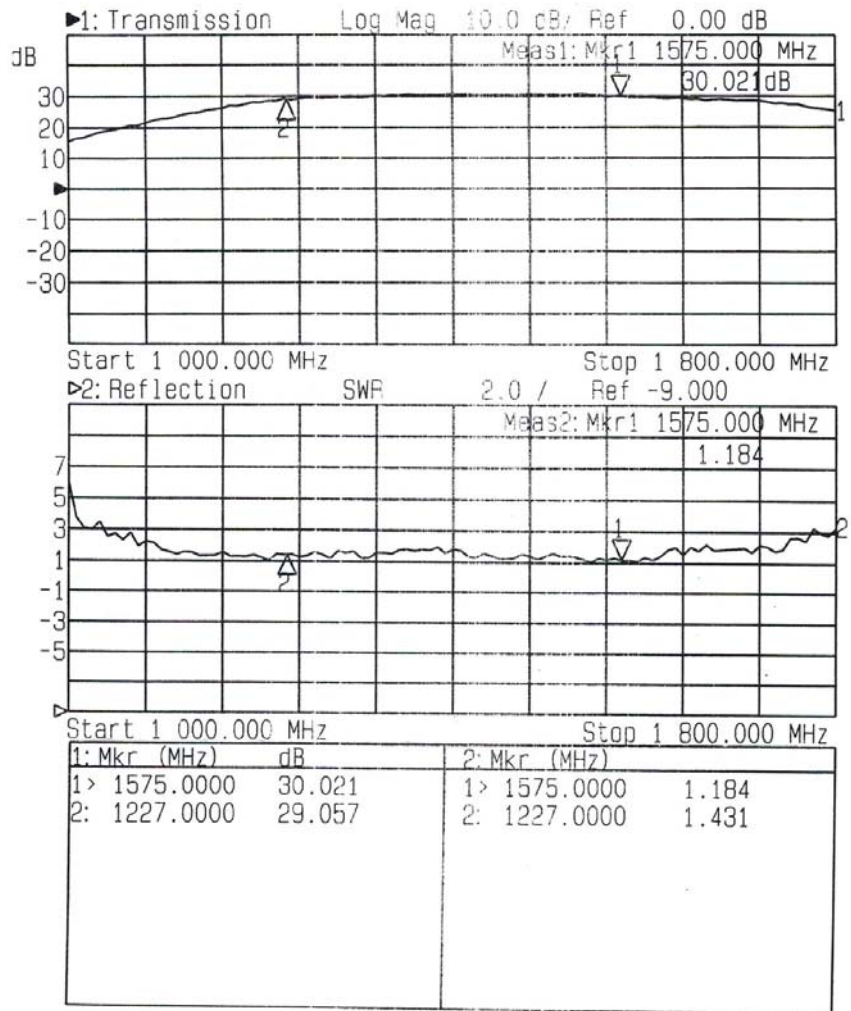
(Military DC Mating Connector is included standard with the MC power option)

Contact GPS Networking Technical Support at 719-595-9880 or salestech@gpsnetworking.com for any questions regarding non-standard configurations and corresponding part numbers)

Performance:

NRRKAMP (Re-Radiating Kit Amp Standard Gain)

Input SWR (Ant. Port) and Frequency Response: Ant. To J1) (Typical, type N connectors):



Specifications:

L1L2GGPSA (L1/L2 GNSS Active Antenna-Outdoor)

Includes all GNSS Frequencies

Antenna Dimensions: 4.13" D x 1.57" H (105.0 x 40.0 mm)

Antenna Weight: 13.6 ounces

Connector: TNC Female

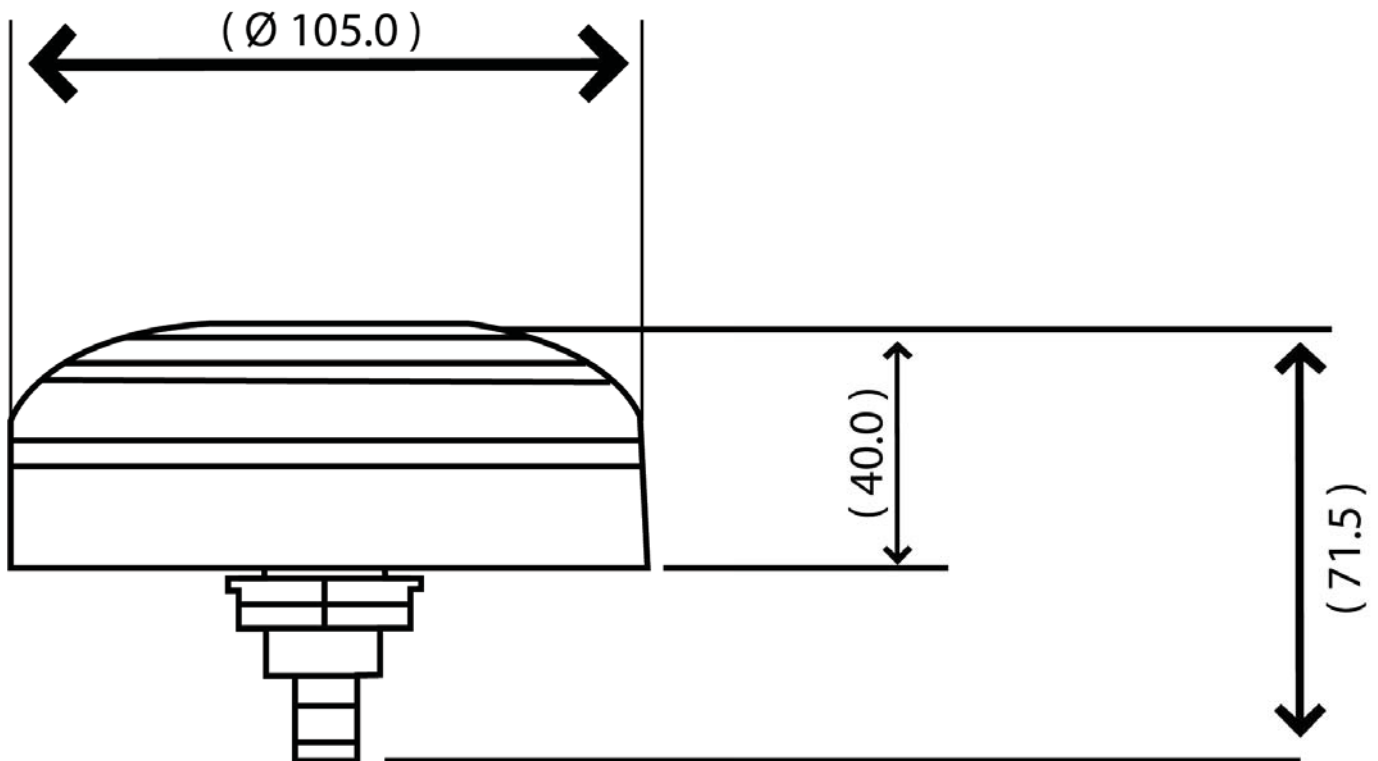
Mounting Method: 3/4" thru-hole or bracket

Color: White

IP Rating: IP67

Radome Seal: Gasket

Environmental Rating: AAR Compliant



Specifications:

L1L2GRRKPA-TNC (L1/L2 GNSS Passive retransmit antenna-indoor) Includes all GNSS Frequencies

Antenna Dimensions: 3.0" D x 1.4" H (76.2 x 35.3 mm)

Antenna Weight: 7.4 ounces

Connector: TNC Female

Mounting Method: 3/4" thru-hole or bracket

Color: White

IP Rating: IP67

Radome Seal: Gasket

Environmental Rating: AAR Compliant

