HY-GLRCO4RT GPS L1/L2 and GLONASS G1/G2 Survey Antenna

HY-GLRC04RT is a light, compact, survey grade antenna receiving GPS L1/L2 and GLONASS G1/G2 frequencies, ideal for mapping, GIS, surveying, mining, engineering, and construction applications. With its multi-feed point design to ensure the superposition of phase center and geometric center, the HY-GLRC04RT antenna improves measurement accuracy. The HY-GLRC04RT antenna also integrates a low-noise amplifier and filter to block interference, providing reliable operation in harsh electromagnetic environments.



AntennaFrequency Range1572 to 1616MHz, 1217 to 1257MHzImpedanceS0 OhmPolarizationRight Hand Circular PolarizationAxial Ratio≤3dBAntenna BeamAzimuth: 0° ~ 360°; Pitch Angle: 5° ~ 90°Voltage Standing Wave Ratio≤2Gain of Antenna≥5dBiPhase Center Error≤2mmPhase Center HeightN/ALOW-noise AmplifierN/ALNA GainLF (G2+L2) 44 ± 1.5dB HF (G1+L1) 44 ± 1.5dBNoise Figure≤2dBOutput Standing Wave Ratio≤2Gain Flatness±1.5dBUNA Drain Voltage3.3-10 VDCLNA Current Consumption≤48mADelay<5nsMechanical50/5nsMechanical50/5nsMechanical50/5nsMechanical50/5nsMechanical5/5ns1/1/25 (screw-mounted)Weight50/5ngDimensions6/79×71.7mmConnectorTNC-C-KMounting Method5/8-11/H25 (screw-mounted)Waterproof GradeIP67Environment-40°C ~ +85°CStorage Temp-40°C ~ +85°C	Specifications	
Frequency Range1572 to 1616MHz, 1217 to 1257MHzImpedanceS0 OhmPolarizationRight Hand Circular PolarizationAxial Ratio<3dB	Antenna	
ImpedanceS0 OhmPolarizationRight Hand Circular PolarizationAxial Ratio<3dBAntenna BeamAzimuth: 0° ~ 360°; Pitch Angle: 5° ~ 90°Voltage Standing Wave Ratio<2Gain of Antenna>5dBiPhase Center Error<2mmPhase Center HeightN/ALOW-noise AmplifierLNA GainLF. (G2+L2) 44 ± 1.5dBNoise Figure<2dBOutput Standing Wave Ratio<2Gain flatness±1.5dBOutput Standing Wave Ratio<2Gain Flatness±1.5dBUNA Current Consumption<48mADelay<5nsMechanicalWeight506gDimensions\$179×71.7mmConnectorTNC-C-KMounting Method5/8-11/H25 (screw-mounted)Waterproof GradeIP67Environment-40°C ~+85°CStorage Temp-40°C ~+85°C	Frequency Range	1572 to 1616MHz, 1217 to 1257MHz
PolarizationRight Hand Circular PolarizationAxial Ratio≤3dBAntenna BeamAzimuth: 0° ~ 360°; Pitch Angle: 5° ~ 90°Voltage Standing Wave Ratio≤2Gain of Antenna≥5dBiPhase Center Error≤2mmPhase Center HeightN/ALOW-noise AmplifierIF (G2+12) 44 ± 1.5dBLNA GainLF (G2+12) 44 ± 1.5dBNoise Figure≤2dBOutput Standing Wave Ratio≤2Gain Flatness±1.5dBUtput Standing Wave Ratio≤2Gain Flatness±1.5dBOutput at P1dB Gain Compression Point≥0dBmLNA Current Consumption≤48mADelay<5nsMechanical¥19×71.7mmWeight506gDimensions\$19×71.7mmConnectorTNC-C-KMounting Method5/8-11/H25 (screw-mounted)Waterproof GradeIP67Environment-40°C ~+85°CStorage Temp-40°C ~+85°C	Impedance	50 Ohm
Axial Ratio≤3dBAntenna BeamAzimuth: 0° ~ 360°; Pitch Angle: 5° ~ 90°Voltage Standing Wave Ratio≤2Gain of Antenna≥5dBiPhase Center Error≤2mmPhase Center HeightN/ALow-noise AmplifierN/ALNA GainLF (G2+L2) 44±1.5dB HF (G1+L1) 41±1.5dBNoise Figure≤2dBOutput Standing Wave Ratio≤2Gain Flatness±1.5dBOutput at P1dB Gain Compression Point≥0dBmLNA Current Consumption≤48mADelay<5nsMechanical100 gWeight506gDimensions\$1.1/H25 (screw-mounted)Waterproof GradeIP67Environment-40°C ~ +85°CStorage Temp-40°C ~ +85°C	Polarization	Right Hand Circular Polarization
Antenna BeamAzimuth: 0° ~ 360°; Pitch Angle: 5° ~ 90°Voltage Standing Wave Ratio≤2Gain of Antenna≥5dBiPhase Center Error≤2mmPhase Center HeightN/ALow-noise AmplifierN/ALNA GainLF (G2+L2) 44 ± 1.5dBNoise Figure≤2dBOutput Standing Wave Ratio≤2Gain Flatness≤11.5dBOutput Standing Wave Ratio≤2Gain Flatness±1.5dBUNA Current Consumption≥0dBmLNA Current Consumption≤48mADelay<5nsMechanical100°C × 485°CStorage Temp-40°C ~ 485°C	Axial Ratio	≤3dB
Voltage Standing Wave Ratio≤2Gain of Antenna≥5dBiPhase Center Error≤2mmPhase Center HeightN/ALow-noise AmplifierIf (G2+L2)44±1.5dBLNA GainIf (G2+L2)44±1.5dBNoise Figure≤2dBOutput Standing Wave Ratio≤2Gain Flatness±1.5dBOutput at P1dB Gain Compression Point≥0dBmLNA Current Consumption≤48mADelay<5nsMechanical\$000000000000000000000000000000000000	Antenna Beam	Azimuth: 0° ~ 360°; Pitch Angle: 5° ~ 90°
Gain of Antenna≥5dBiPhase Center Error≤2mmPhase Center HeightN/ALow-noise AmplifierIf (G2+L2)44±1.5dBLNA GainIf (G2+L2)44±1.5dBNoise Figure≤2dBOutput Standing Wave Ratio≤2Gain Flatness±1.5dBOutput at P1dB Gain Compression Point≥0dBmLNA Drain Voltage3.3·10 VDCLNA Current Consumption≤48mADelay<5ns	Voltage Standing Wave Ratio	≤2
Phase Center Error≤2mmPhase Center HeightN/ALow-noise AmplifierLNA GainLF (G2+L2) 44 ± 1.5dB HF (G1+L1) 41 ± 1.5dBNoise Figure≤2dBOutput Standing Wave Ratio≤2Gain Flatness±1.5dBOutput at P1dB Gain Compression Point≥0dBmLNA Drain Voltage3.3-10 VDCLNA Current Consumption≤48mADelay<5nsMechanicalWeight506gDimensions↓179×71.7mmConnectorTNC-C-KMounting Method5/8-11/H25 (screw-mounted)Waterproof GradeIP67Environment-40°C ~ +85°CStorage Temp-40°C ~ +85°C	Gain of Antenna	≥5dBi
Phase Center HeightN/ALow-noise AmplifierLNA GainIF (G2+L2) 44 ± 1.5dB HF (G1+L1) 41 ± 1.5dBNoise FigureS2dBOutput Standing Wave RatioS2Gain Flatness±1.5dBOutput at P1dB Gain Compression Point≥0dBmLNA Drain Voltage3.3-10 VDCLNA Current Consumption≤48mADelay<5ns	Phase Center Error	≤2mm
Low-noise AmplifierLNA GainLF (G2+L2) 44 ± 1.5dB HF (G1+L1) 41 ± 1.5dBNoise Figure≤2dBOutput Standing Wave Ratio≤2Input Standing Wave Ratio≤2Gain Flatness±1.5dBOutput at P1dB Gain Compression Point≥0dBmLNA Drain Voltage3.3·10 VDCLNA Current Consumption≤48mADelay<5nsMechanicalWeight506gDimensions\$/8-11/H25 (screw-mounted)Waterproof GradeIP67EnvironmentOperating Temp-40°C ~ +85°CStorage Temp-40°C ~ +85°C	Phase Center Height	N/A
LNA GainLF (G2+L2) 44 ± 1.5dB HF (G1+L1) 41 ± 1.5dBNoise Figure≤2dBOutput Standing Wave Ratio≤2Input Standing Wave Ratio≤2Gain Flatness±1.5dBOutput at P1dB Gain Compression Point≥0dBmLNA Drain Voltage3.3-10 VDCLNA Current Consumption≤48mADelay<5nsMechanicalWeight506gDimensionsQnectorTNC-C-KMounting Method5/8-11/H25 (screw-mounted)Waterproof GradeIP67Environment-40°C ~ +85°CStorage Temp-40°C ~ +85°C	Low-noise Amplifier	
Noise Figure≤2dBOutput Standing Wave Ratio≤2Input Standing Wave Ratio≤2Gain Flatness±1.5dBOutput at P1dB Gain Compression Point≥0dBmLNA Drain Voltage3.3-10 VDCLNA Current Consumption≤48mADelay<5nsMechanicalWeight506gDimensionsConnectorTNC-C-KMounting Method5/8-11/H25 (screw-mounted)Waterproof GradeIP67Environment-40°C ~+85°CStorage Temp-40°C ~+85°C	LNA Gain	LF (G2+L2) 44 ± 1.5dB HF (G1+L1) 41 ± 1.5dB
Output Standing Wave Ratio≤2Input Standing Wave Ratio≤2Gain Flatness±1.5dBOutput at P1dB Gain Compression Point≥0dBmLNA Drain Voltage3.3-10 VDCLNA Current Consumption≤48mADelay<5nsMechanicalWeight506gDimensions↓179×71.7mmConnectorTNC-C-KMounting Method5/8-11/H25 (screw-mounted)Waterproof GradeIP67Environment-40°C ~+85°CStorage Temp-40°C ~+85°C	Noise Figure	≤2dB
Input Standing Wave Ratio≤2Gain Flatness±1.5dBOutput at P1dB Gain Compression Point≥0dBmLNA Drain Voltage3.3-10 VDCLNA Current Consumption≤48mADelay<5nsMechanicalWeight506gDimensionsConnectorTNC-C-KMounting Method5/8-11/H25 (screw-mounted)Waterproof GradeIP67EnvironmentOperating Temp-40°C ~+85°CStorage Temp-40°C ~+85°C	Output Standing Wave Ratio	≤2
Gain Flatness±1.5dBOutput at P1dB Gain Compression Point≥0dBmLNA Drain Voltage3.3-10 VDCLNA Current Consumption≤48mADelay<5nsMechanicalWeight506gDimensions\$179×71.7mmConnectorTNC-C-KMounting Method5/8-11/H25 (screw-mounted)Waterproof GradeIP67Environment-40°C ~+85°CStorage Temp-40°C ~+85°C	Input Standing Wave Ratio	≤2
Output at P1dB Gain Compression Point≥0dBmLNA Drain Voltage3.3-10 VDCLNA Current Consumption≤48mADelay<5ns	Gain Flatness	±1.5dB
LNA Drain Voltage3.3-10 VDCLNA Current Consumption≤48mADelay<5ns	Output at P1dB Gain Compression Point	≥0dBm
LNA Current Consumption≤48mADelay<5ns	LNA Drain Voltage	3.3-10 VDC
Delay<5ns	LNA Current Consumption	≤48mA
MechanicalWeight506gDimensions\$\$079×71.7mmConnectorTNC-C-KMounting Method\$5/8-11/H25 (screw-mounted)Waterproof GradeIP67Environment\$\$00000000000000000000000000000000000	Delay	<5ns
Weight506gDimensionsφ179×71.7mmConnectorTNC-C-KMounting Method5/8-11/H25 (screw-mounted)Waterproof GradeIP67Environment-40°C ~ +85°COperating Temp-40°C ~ +85°CStorage Temp-40°C ~ +85°C	Mechanical	
Dimensionsφ179×71.7mmConnectorTNC-C-KMounting Method5/8-11/H25 (screw-mounted)Waterproof GradeIP67Environment-40°C ~ +85°COperating Temp-40°C ~ +85°CStorage Temp-40°C ~ +85°C	Weight	506g
ConnectorTNC-C-KMounting Method5/8-11/H25 (screw-mounted)Waterproof GradeIP67Environment-40°C ~ +85°COperating Temp-40°C ~ +85°CStorage Temp-40°C ~ +85°C	Dimensions	φ179×71.7mm
Mounting Method5/8-11/H25 (screw-mounted)Waterproof GradeIP67Environment-40°C ~ +85°COperating Temp-40°C ~ +85°CStorage Temp-40°C ~ +85°C	Connector	TNC-C-K
Waterproof GradeIP67EnvironmentOperating Temp-40°C ~ +85°CStorage Temp-40°C ~ +85°C	Mounting Method	5/8-11/H25 (screw-mounted)
Environment Operating Temp -40°C ~ +85°C Storage Temp -40°C ~ +85°C	Waterproof Grade	IP67
Operating Temp -40°C ~ +85°C Storage Temp -40°C ~ +85°C	Environment	
Storage Temp -40°C ~ +85°C	Operating Temp	-40°C ~ +85°C
	Storage Temp	-40°C ~ +85°C

Dimensions (mm)



Antenna Reference Point (ARP) and Antenna Phase Center (APC) Numbers



* Specifications subject to change without notice.



Humidity

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40% ~ 95%