Quectel Antenna Portfolio

Overview

February, 2020

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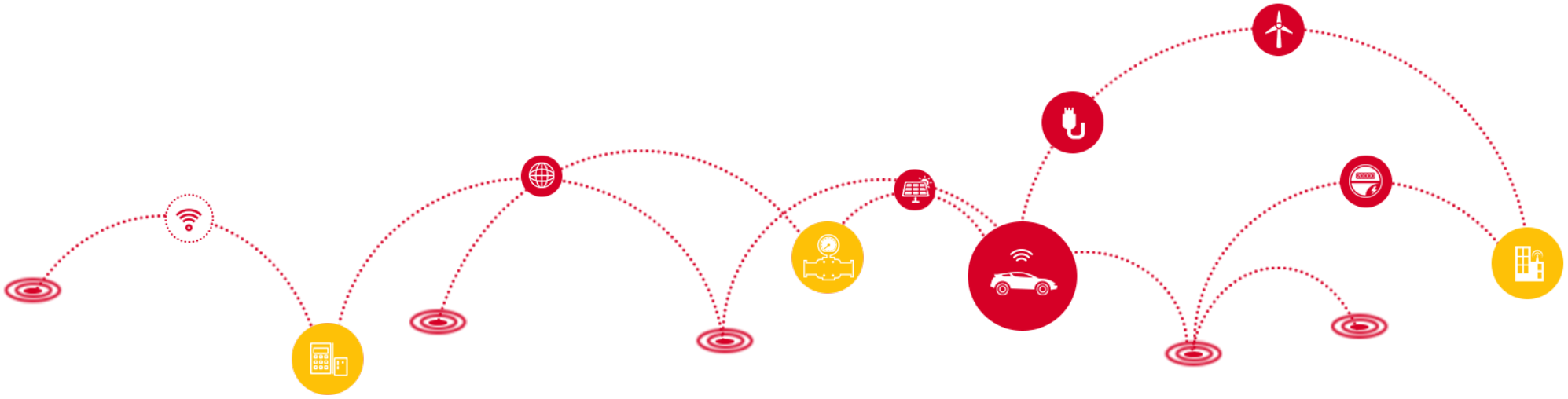
Preface

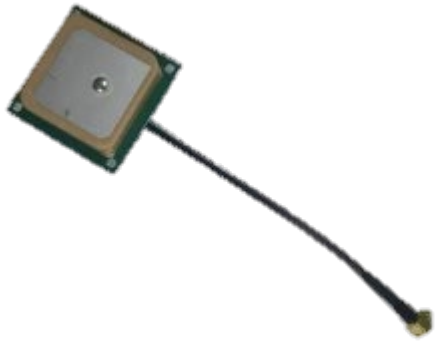
5G/4G/3G/2G Antenna

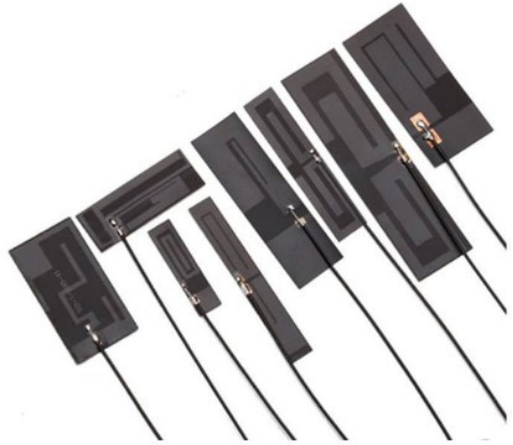
GNSS Antenna



Preface

To provide convenient and fast antenna service for customers, this overview presents the available antenna products offered by Quectel. The portfolio will be continuously updated with new requirements. Our goal is to provide customers with various antenna designs and services, including antenna customization, to address customer pain points and difficulties in terms of antenna.





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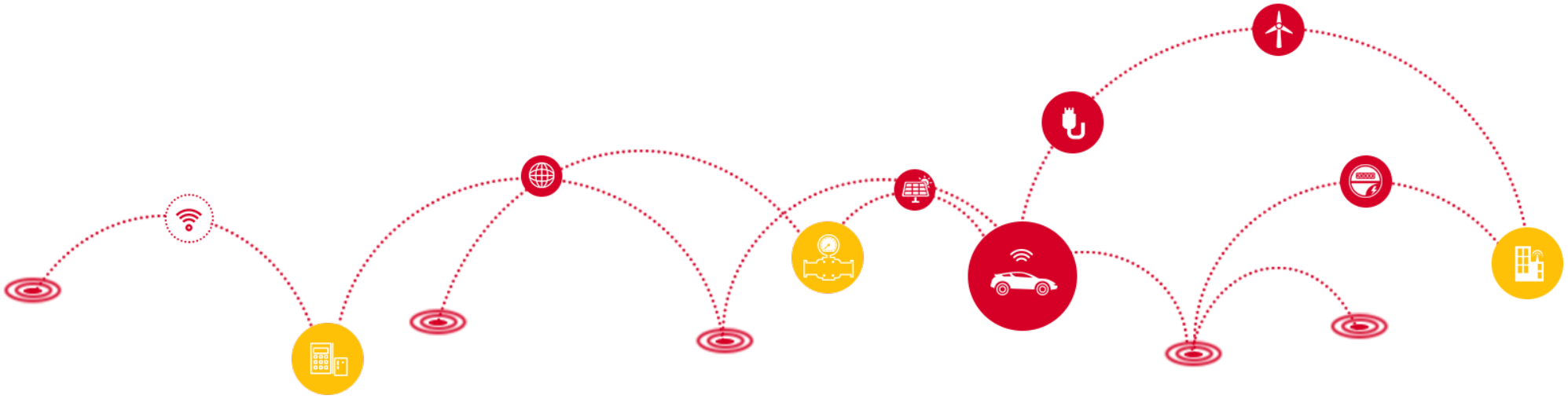
GNSS Antenna



5G/4G/3G/2G Antenna – Catalog (1)

Type	Model Number	Size (mm)	Frequency	VSWR	Average Efficiency	Gain (dBi)	Application	Quectel Module (e.g.)
Rubber Duck Antenna	YE001	222 x 27	699~6000 MHz	≤3.0	699~960 MHz: 50% 1710~2690 MHz: 50% 3000~5900 MHz: 50%	5.6 (Peak)	5G/4G/3G/2G	RG500Q/RM500Q/EM20
Rubber Duck Antenna	YE002	177 x 19	699~2690 MHz	≤2.9	699~960 MHz: 50% 1710~2690 MHz: 60%	3.7 (Peak)	4G/3G/2G	RG500Q/RM500Q/EM20
Rubber Duck Antenna	YE003	190 x 16	699~2690 MHz	≤4	699~960 MHz: 35% 1710~2690 MHz: 45%	3.2 (Peak)	4G/3G/2G	RG500Q/RM500Q/EM20
Rubber Duck Antenna	YE004	208 x 14	699~2690 MHz	≤4	699~960 MHz: 40% 1710~2690 MHz: 60%	4.9 (Peak)	4G/3G/2G	RG500Q/RM500Q/EM20
Rubber Duck Antenna	YE005	115 x 17.8	699~2690 MHz	≤4	699~960 MHz: 35% 1710~2690 MHz: 70%	5.9 (Peak)	4G/3G/2G	RG500Q/RM500Q/EM20

5G/4G/3G/2G Antenna – Catalog (2)

Type		Model Number	Size (mm)	Frequency	VSWR	Average Efficiency	Gain (dBi)	Application	Quectel Module (e.g.)
PCB Antenna		YP001	108 x 16	600~5000 MHz	≤4	699-960 MHz: 40% 1700-5000MHz: 50%	3.9 (Peak)	5G/4G/3G/2G	RG500Q/RM500Q/EM20
PCB Antenna		YP002	95 x 16	1100~5000 MHz	≤4	1100-5000MHz: 50%	4.5 (Peak)	5G, GNSS	RG500Q/RM500Q/EM20
FPC Antenna		YF001	83.94 x 50.98	LTE: 824~2690 MHz WIFI: 2412~2484 MHz; 5150~5850 MHz	≤6.1	800-960 MHz: 21% 1700-2700 MHz: 55% 2400-2500 MHz: 45% 5000-6000 MHz: 42%	5.1 (Peak)	4G/3G/2G; 2.4G/5.8G WIFI	SC60
FPC Antenna	700-6G-1	YF002	60.10 x 12.25	0.7~6 GHz	≥1.4	0.7-6GH: 35%	2.7 (Peak)	5G/4G/3G/2G	RG500Q/RM500Q (Customized)
	700-6G-2		50.25 x 20.10	0.7~6 GHz	≥1.0	0.7-6GH: 30%	4.2 (Peak)		
	1700-6G-1		41.25 x 10.25	1.7~6 GHz	≥1.0	1700-6GHz: 30%	2 (Peak)		
	1700-6G-2		37.35 x 9.75	1.7~6 GHz	≥1.26	1700-6GHz: 35%	3.7 (Peak)		

5G/4G/3G/2G Antenna – Rubber Duck Antenna

Model Number: YE001	
Frequency (MHz)	699~6000
Peak Gain (dBi)	5.6
VSWR	≤ 3.0
Average Efficiency (%)	699~960MHz: 50%; 1710~2690MHz: 50%; 3000~5800MHz: 50%
Antenna Shape	Straight
Application	5G/4G/3G/2G
Impendence (Ω)	50
Size (mm)	222 x 27
Quectel Module	RG500Q/RM500Q/EM20

Model Number: YE002	
Frequency (MHz)	699~2690
Peak Gain (dBi)	3.7
VSWR	≤ 2.9
Average Efficiency (%)	699~960 MHz: 50%; 1710~2690MHz: 60%
Antenna Shape	Straight
Application	4G/3G/2G
Impendence (Ω)	50
Size (mm)	177 x 19
Quectel Module	RG500Q/RM500Q/EM20

5G/4G/3G/2G Antenna – Rubber Duck Antenna

Model Number: YE003	
Frequency (MHz)	699~2690
Peak Gain (dBi)	3.2
VSWR	≤ 4.0
Average Efficiency (%)	699~960 MHz: 35%; 1710~2690 MHz: 45%
Antenna Shape	Straight or bent
Application	4G/3G/2G
Impendence (Ω)	50
Size (mm)	190 x 16
Quectel Module	RG500Q/RM500Q/EM20

Model Number: YE004	
Frequency (MHz)	699~2690
Peak Gain (dBi)	4.9
VSWR	≤ 4.0
Average Efficiency (%)	699~960 MHz: 40%; 1710~2690 MHz: 60%
Antenna Shape	Straight or bent
Application	4G/3G/2G
Impendence (Ω)	50
Size (mm)	208 x 14
Quectel Module	RG500Q/RM500Q/EM20

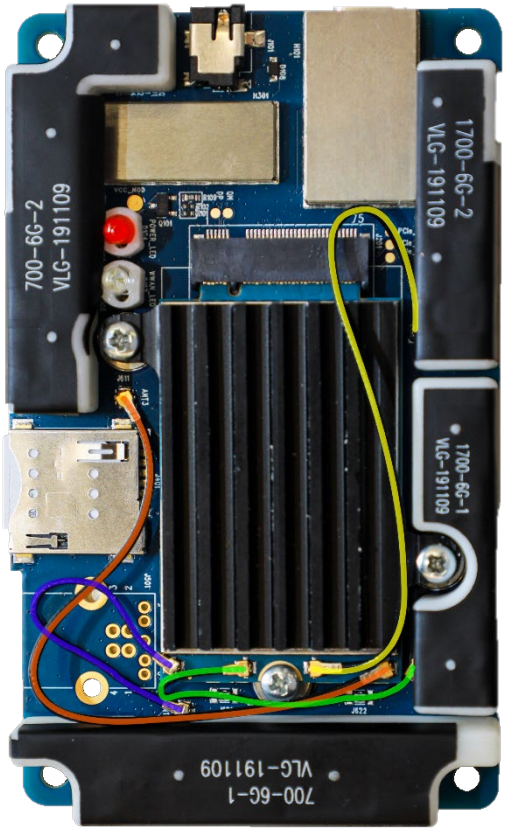
5G/4G/3G/2G Antenna – Rubber Duck Antenna

Model Number: YE005	
Frequency (MHz)	699~2690
Peak Gain (dBi)	5.9
VSWR	≤ 4.0
Average Efficiency (%)	699-960 MHz: 35%; 1710-2690 MHz: 70%
Antenna Shape	Bent in fixed right-angle
Application	4G/3G/2G
Impendence (Ω)	50
Size (mm)	115 x 17.8
Quectel Module	RG500Q/RM500Q/EM20

5G/4G/3G/2G Antenna – FPC Antenna

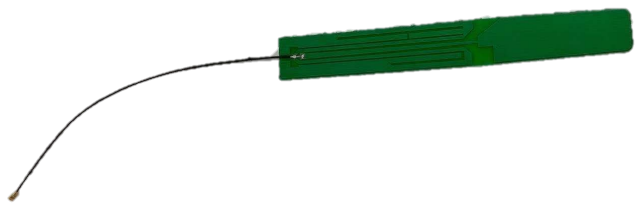
Model Number: YF001	
Frequency (MHz)	LTE: 824~2690; WIFI: 2412~2484, 5150~5850
Peak Gain (dBi)	5.1
VSWR	≤ 4.0
Average Efficiency (%)	800~960 MHz: 21%; 1700~2700 MHz: 55%; 2400~2500 MHz: 45%; 5000~6000 MHz: 42%
Application	4G/3G/2G; 2.4G/5.8G WIFI
Impendence (Ω)	50
Size (mm)	83.94 x 50.98
Quectel Module	SC60

5G/4G/3G/2G Antenna – FPC Antenna

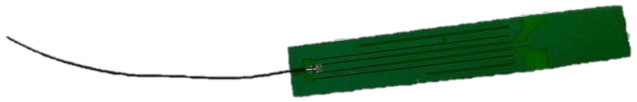


Model Number: YF002	
Frequency (GHz)	**700-6G-1 / 700-6G-2:** 0.7~6 **1700-6G-1 / 1700-6G-2:** 1.7~6
Peak Gain (dBi)	**700-6G-1:** 2.7 **700-6G-2:** 4.2 **1700-6G-1:** 2 **1700-6G-1:** 3.7
VSWR	**700-6G-1:** ≥1.4 **700-6G-2:** ≥1.0 **1700-6G-1:** ≥1.0 **1700-6G-1:** ≥1.2
Average Efficiency (%)	800~960 MHz: 21%; 1700~2700 MHz: 55%; 2400~2500 MHz: 45%; 5000~6000 MHz: 42%
Application	4G/3G/2G; 2.4G/5.8G WIFI
Impendence (Ω)	50
Size	**700-6G-1:** 60.10 x 12.25 **700-6G-2:** 50.25 x 20.10 **1700-6G-1:** 41.25 x 10.25 **1700-6G-2:** 37.35 x 9.75
Quectel Module	RG500Q/RM500Q Customized

5G/4G/3G/2G Antenna – PCB Antenna



Model Number: YP001	
Frequency (MHz)	600~5000
Peak Gain (dBi)	3.9
VSWR	≤4.0
Average Efficiency (%)	699~960 MHz: 40%; 1700-5000 MHz: 50%
Application	5G/4G/3G/2G
Impendence (Ω)	50
Size (mm)	108 x 16
Quectel Module	RG500Q/RM500Q/EM20

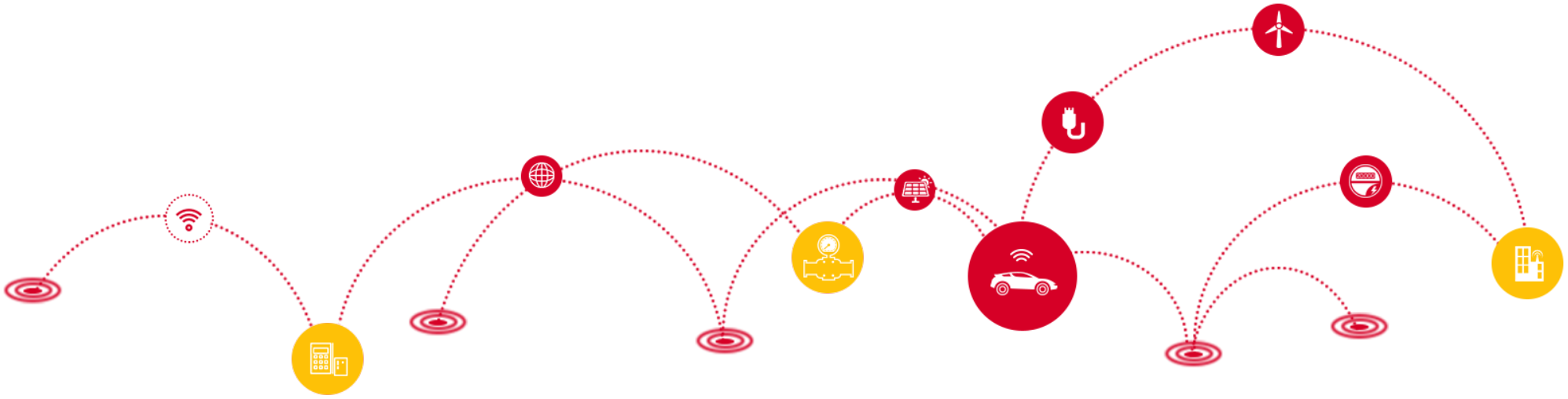


Model Number: YP002	
Frequency (MHz)	1100~5000
Peak Gain (dBi)	4.5
VSWR	≤4.0
Average Efficiency (%)	1100-5000 MHz: 50%
Application	5G; GNSS
Impendence (Ω)	50
Size (mm)	95 x 16
Quectel Module	RG500Q/RM500Q/EM20

Preface

5G/4G/3G/2G Antenna

GNSS Antenna

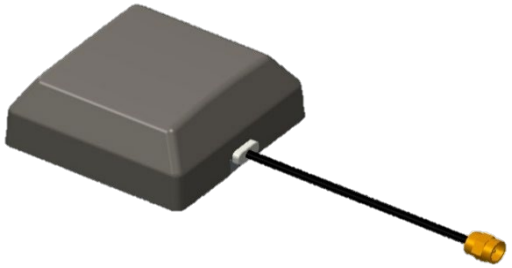


GNSS Antenna – Catalog

Model No.	Dimension (mm)	Center Frequency (MHz)	Max Antenna Peak Gain (dBic Typ.)	Polarization	Max Zenith Axial Ratio (dB)	LNA Gain (dBi)	Max Overall Gain (dBi)	Operation Voltage (V)	Current (mA)	Application	Quectel Module
YG001	51.7 x 52.4 x 16.91	1582, 1253	1.1	R.H.C.P	3	27	28.1	3~5	29±3	GPS L1/L2/L6	TBD
YG002	65 x 65 x 27.7	1581.5, 1200	3.2	R.H.C.P	4	27	30.2	3~5	29±3	GPSL1/L2/L5	TBD
YG003	65 x 65 x 27.7	1565.5, 1223	2.8	R.H.C.P	3	27	29.8	3~5	29±3	GPSL1/L2	TBD
YG004	65 x 65 x 27.7	1565.5, 1223	3	R.H.C.P	4	32	31	2.7~5.5	31±3	GPSL/L1/L2	TBD

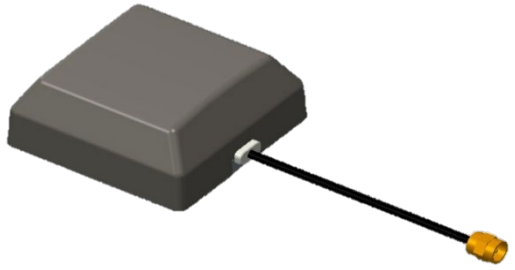
GNSS Antenna

Model Number: YG001	
Center Frequency (MHz)	1582, 1253
Size (mm)	51.7 x 52.4 x 16.91
Max Peak Gain (dBic Typ.)	1.1
Polarization	R.H.C.P
Max Zenith Axial Ratio (dB)	3
LNA Gain (dBi)	27
Max Overall Gain (dBi)	28.1
Operation Voltage (V)	3~5
Application	GPS L1/L2/L6

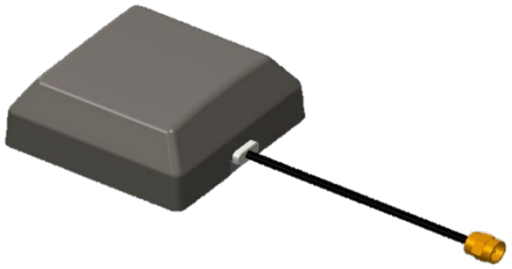


Model Number: YG002	
Center Frequency (MHz)	1581.5, 1200
Size (mm)	65 x 65 x 27.7
Max Peak Gain (dBic Typ.)	3.2
Polarization	R.H.C.P
Max Zenith Axial Ratio (dB)	4
LNA Gain (dBi)	27
Max Overall Gain (dBi)	30.2
Operation Voltage (V)	3~5
Application	GPS L1/L2/L5

GNSS Antenna



Model Number: YG003	
Center Frequency (MHz)	1565.5, 1223
Size (mm)	65 x 65 x 27.7
Max Peak Gain (dBic Typ.)	2.8
Polarization	R.H.C.P
Max Zenith Axial Ratio (dB)	3
LNA Gain (dBi)	27
Max Overall Gain (dBi)	29.8
Operation Voltage (V)	3~5
Application	GPS L1/L2



Model Number: YG004	
Center Frequency (MHz)	1565.5, 1223
Size (mm)	65 x 65 x 27.7
Max Peak Gain (dBic Typ.)	3
Polarization	R.H.C.P
Max Zenith Axial Ratio (dB)	4
LNA Gain (dBi)	32
Max Overall Gain (dBi)	31
Operation Voltage (V)	2.7~5.5
Application	GPS L/L1/L2

Thank you!

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