

# **SPECIFICATION**

Part No. : **AA.160.301111** 

Product Name : Magnet Mount GPS-GLONASS-GALILEO

Antenna

Feature : 1575MHz - 1609MHz

Magnetic Mount

Custom cables and connectors available

**RoHS Compliant** 





#### 1. Introduction

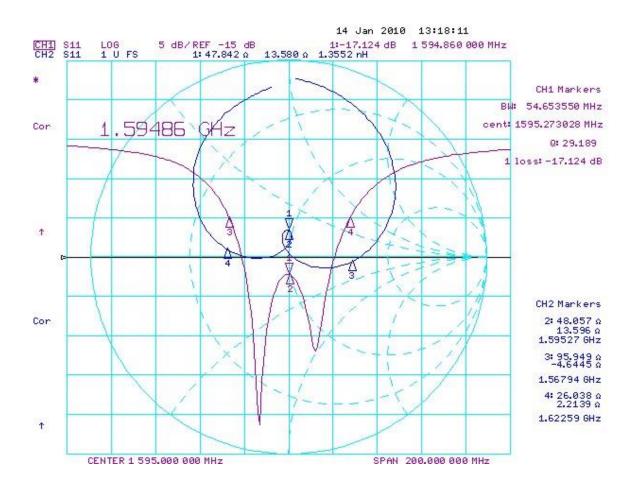
This antenna is designed for applications which require high positioning accuracy by combining signals from GPS, GALILEO and GLONASS systems. High gain wide-band patch antenna on a large integral ground delivers maximum performance.

### 2. Specification

Frequency		CERAMIC PATCH					
VSWR         1.5:1           Peak Gain         4.0dBic (70*70mm Ground Plane)           Impedance         50 Ohm           Polarization         RHCP           LNA         RHCP           LNA         1.5dB Typ.           Output VSWR         <2.0 Max.	Frequency						
Peak Gain Impedance So Ohm Polarization RHCP  LNA  Noise Figure Output VSWR LNA Gain DC Power Input Impedance DC Current So Ohm Solve Termina Solve Triplate Antenna Antenna Dielectric Ceramics PCB FR4 Shielding Cable	Bandwidth	40MHz min.					
Impedance Polarization RHCP  LNA  Noise Figure Output VSWR LNA Gain DC Power Input DC Power Input DC Current  MECHANICAL  Dimensions Antenna Antenna Dielectric Ceramics PCB FR4 Shielding Tinplate Cable Cable Cable Connector SMA(M)  ENVIRONEMTNAL  Working Temp Vibration  Vibration  LNA  1.5dB Typ. 2.0 Max. 2.0 Max. 2.0 Max. 2.0 Max. 2.10 Max. 2.	VSWR	1.5:1					
Polarization  LNA  Noise Figure  1.5dB Typ. Output VSWR  2.0 Max. LNA Gain 32dB Typical (without cable)  DC Power Input 3-5V Impedance 50 Ohm DC Current 8.5mA @5.0V Typ.  MECHANICAL  Dimensions  36*36*6mm  Antenna Dielectric Ceramics PCB FR4 Shielding Tinplate Cable RG-174 Length = 3M Connector SMA(M)  ENVIRONEMTNAL  Working Temp -40°C~+85°C Storage Temp -40°C~+100°C Sine sweep 1g(0-p) 10~55~10Hz each axis	Peak Gain	4.0dBic (70*70mm Ground Plane)					
Noise Figure  1.5dB Typ. Output VSWR  <2.0 Max. LNA Gain 32dB Typical (without cable)  DC Power Input 3-5V Impedance 50 Ohm DC Current 8.5mA @5.0V Typ.  MECHANICAL  Dimensions 36*36*6mm  Antenna Dielectric Ceramics PCB FR4 Shielding Tinplate Cable RG-174 Length = 3M Connector SMA(M)  ENVIRONEMTNAL  Working Temp -40°C~+85°C Storage Temp -40°C~+100°C Sine sweep 1g(0-p) 10~55~10Hz each axis	Impedance	50 Ohm					
Noise Figure Output VSWR <	Polarization	RHCP					
Output VSWR  LNA Gain  32dB Typical (without cable)  DC Power Input  3-5V  Impedance  50 Ohm  DC Current  8.5mA @5.0V Typ.  MECHANICAL  Dimensions  36*36*6mm  Antenna  Dielectric Ceramics  PCB  FR4  Shielding  Tinplate  Cable  RG-174 Length = 3M  Connector  SMA(M)  ENVIRONEMTNAL  Working Temp  -40°C~+85°C  Storage Temp  -40°C~+100°C  Vibration  Vibration  Vibration  2-55~10Hz each axis	LNA						
LNA Gain  DC Power Input  3-5V  Impedance  50 Ohm  DC Current  8.5mA @5.0V Typ.  MECHANICAL  Dimensions  36*36*6mm  Antenna  Dielectric Ceramics  PCB  FR4  Shielding  Tinplate  Cable  RG-174 Length = 3M  Connector  SMA(M)  ENVIRONEMTNAL  Working Temp  -40°C~+85°C  Storage Temp  -40°C~+100°C  Vibration  Sine sweep 1g(0-p)  10~55~10Hz each axis	Noise Figure	1.5dB Typ.					
DC Power Input Impedance DC Current  8.5mA @5.0V Typ.  MECHANICAL  Dimensions  36*36*6mm  Antenna Dielectric Ceramics PCB FR4 Shielding Tinplate Cable RG-174 Length = 3M Connector SMA(M)  ENVIRONEMTNAL  Working Temp -40°C~+85°C Storage Temp -40°C~+100°C Vibration Sine sweep 1g(0-p) 10~55~10Hz each axis	·						
Impedance DC Current 8.5mA @5.0V Typ.  MECHANICAL  Dimensions 36*36*6mm  Antenna Dielectric Ceramics PCB FR4 Shielding Tinplate Cable RG-174 Length = 3M Connector SMA(M)  ENVIRONEMTNAL  Working Temp -40°C~+85°C Storage Temp Vibration Sine sweep 1g(0-p) 10~55~10Hz each axis	LNA Gain	* * * * * * * * * * * * * * * * * * * *					
DC Current  8.5mA @5.0V Typ.  MECHANICAL  Dimensions  36*36*6mm  Antenna Dielectric Ceramics  PCB FR4  Shielding Tinplate  Cable RG-174 Length = 3M Connector SMA(M)  ENVIRONEMTNAL  Working Temp -40°C~+85°C Storage Temp -40°C~+100°C  Vibration Sine sweep 1g(0-p) 10~55~10Hz each axis	DC Power Input						
MECHANICAL  Dimensions  36*36*6mm  Antenna Dielectric Ceramics  PCB FR4  Shielding Tinplate  Cable RG-174 Length = 3M Connector SMA(M)  ENVIRONEMTNAL  Working Temp -40°C~+85°C Storage Temp -40°C~+100°C Vibration Sine sweep 1g(0-p) 10~55~10Hz each axis	•	50 Ohm					
Dimensions  Antenna  Dielectric Ceramics  PCB  FR4  Shielding  Tinplate  Cable  RG-174 Length = 3M  Connector  SMA(M)  ENVIRONEMTNAL  Working Temp  -40°C~+85°C  Storage Temp  -40°C~+100°C  Vibration  Sine sweep 1g(0-p)  10~55~10Hz each axis	DC Current	, .					
Antenna Dielectric Ceramics  PCB FR4  Shielding Tinplate  Cable RG-174 Length = 3M  Connector SMA(M)  ENVIRONEMTNAL  Working Temp -40°C~+85°C  Storage Temp -40°C~+100°C  Vibration Sine sweep 1g(0-p)  10~55~10Hz each axis	MECHANICAL						
PCB FR4  Shielding Tinplate  Cable RG-174 Length = 3M  Connector SMA(M)  ENVIRONEMTNAL  Working Temp $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$ Storage Temp $-40^{\circ}\text{C} \sim +100^{\circ}\text{C}$ Vibration Sine sweep 1g(0-p) $10 \sim 55 \sim 10 \text{Hz}$ each axis		MECHANICAL					
Shielding Tinplate  Cable RG-174 Length = 3M  Connector SMA(M)  ENVIRONEMTNAL  Working Temp -40°C~+85°C  Storage Temp -40°C~+100°C  Vibration Sine sweep $1g(0-p)$ $10~55~10$ Hz each axis	Dimensions						
Cable RG-174 Length = 3M Connector SMA(M)  ENVIRONEMTNAL  Working Temp $-40^{\circ}\text{C}\sim+85^{\circ}\text{C}$ Storage Temp $-40^{\circ}\text{C}\sim+100^{\circ}\text{C}$ Vibration Sine sweep $1g(0\text{-p})$ $10\sim55\sim10\text{Hz}$ each axis		36*36*6mm					
Connector  SMA(M)  ENVIRONEMTNAL  Working Temp  -40°C~+85°C  Storage Temp  -40°C~+100°C  Sine sweep 1g(0-p)  10~55~10Hz each axis	Antenna	36*36*6mm  Dielectric Ceramics					
Working Temp $-40^{\circ}\text{C}\sim+85^{\circ}\text{C}$ Storage Temp $-40^{\circ}\text{C}\sim+100^{\circ}\text{C}$ Vibration Sine sweep $1g(0\text{-p})$ $10\sim55\sim10\text{Hz}$ each axis	Antenna PCB	36*36*6mm  Dielectric Ceramics  FR4					
Working Temp $-40^{\circ}\text{C}\sim+85^{\circ}\text{C}$ Storage Temp $-40^{\circ}\text{C}\sim+100^{\circ}\text{C}$ Vibration Sine sweep $1g(0\text{-p})$ $10\sim55\sim10\text{Hz}$ each axis	Antenna PCB Shielding	36*36*6mm  Dielectric Ceramics  FR4  Tinplate					
Storage Temp $-40^{\circ}\text{C}\sim+100^{\circ}\text{C}$ Vibration Sine sweep $1g(0\text{-p})$ $10\sim55\sim10\text{Hz}$ each axis	Antenna PCB Shielding Cable	36*36*6mm  Dielectric Ceramics  FR4  Tinplate  RG-174 Length = 3M					
Vibration Sine sweep $1g(0-p)$ $10\sim55\sim10$ Hz each axis	Antenna PCB Shielding Cable	36*36*6mm  Dielectric Ceramics  FR4  Tinplate  RG-174 Length = 3M  SMA(M)					
Vibration 10~55~10Hz each axis	Antenna PCB Shielding Cable Connector	36*36*6mm  Dielectric Ceramics  FR4  Tinplate  RG-174 Length = 3M  SMA(M)  ENVIRONEMTNAL					
DC Valtage	Antenna PCB Shielding Cable Connector Working Temp	36*36*6mm  Dielectric Ceramics  FR4  Tinplate  RG-174 Length = 3M  SMA(M)  ENVIRONEMTNAL  -40°C~+85°C					
DC Voltage DC=3-9V	Antenna PCB Shielding Cable Connector Working Temp Storage Temp	36*36*6mm  Dielectric Ceramics  FR4  Tinplate  RG-174 Length = 3M  SMA(M)  ENVIRONEMTNAL  -40°C~+85°C  -40°C~+100°C  Sine sweep 1g(0-p)					



# 3.S11 Performance Comparison (Passive Patch – separated from the LNA)



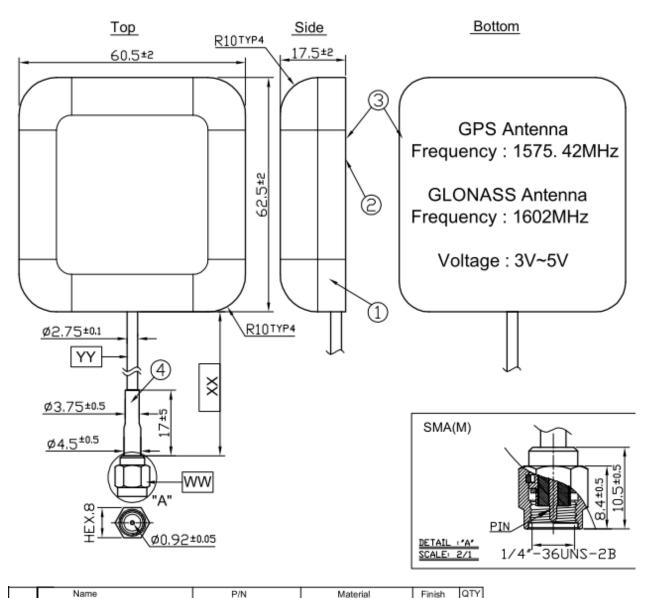


## 4.S21/S22 Performance Comparison (LNA)

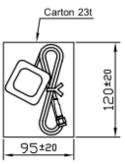




### 5. Drawing



Name		P/N	Material	Finish	GELL
AA.160 Antenna Housing Top		000112A000028A	ABS+PC	Black	1
2 AA.160 Antenna Housing Bottom		000112A010028A	ABS+PC	Black	1
AA.160 Sticker		001012A010028A	Terylene	Silver	1
Heat Shrink Tube		001311F0000XXA	PE	Black	1
Name	P/N		Spec	Finish	QTY
Connector Type	SMA.M.ST.PLUG.D.WS		SMA(M)	Gold	1
Cable Length			3000±30mm		1
Cable Type	301311F0000XXA		RG174	Black	1
	AA.160 Antenna Housing To AA.160 Antenna Housing Bo AA.160 Sticker Heat Shrink Tube Name Connector Type	AA.160 Antenna Housing Top  AA.160 Antenna Housing Bottom  AA.160 Sticker  Heat Shrink Tube  Name  Connector Type  SMA  Cable Length	AA.160 Antenna Housing Top 000112A000028A  AA.160 Antenna Housing Bottom 000112A010028A  AA.160 Sticker 001012A010028A  Heat Shrink Tube 001311F0000XXA  Name P/N  Connector Type SMA.M.ST.PLUG.D.WS  Cable Length	AA.160 Antenna Housing Top         000112A000028A         ABS+PC           AA.160 Antenna Housing Bottom         000112A010028A         ABS+PC           AA.160 Sticker         001012A010028A         Terylene           Heat Shrink Tube         001311F0000XXA         PE           Name         P/N         Spec           Connector Type         SMA.M.ST.PLUG.D.WS         SMA(M)           Cable Length         3000±30mm	AA.160 Antenna Housing Top         000112A000028A         ABS+PC         Black           AA.160 Antenna Housing Bottom         000112A010028A         ABS+PC         Black           AA.160 Sticker         001012A010028A         Terylene         Silver           Heat Shrink Tube         001311F0000XXA         PE         Black           Name         P/N         Spec         Finish           Connector Type         SMA.M.ST.PLUG.D.WS         SMA(M)         Gold           Cable Length         3000±30mm         Terylene         SMA(M)         Terylene





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