

Antenna

YG0021AA Datasheet

Antenna Services

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About the Document

Revision History

Version	Date	Author	Note
1.0	2020-09-15	Kenny YIN	Initial
1.1	2020-12-21	Kenny YIN	Updated the antenna image in Chapter 2.
1.2	2021-08-18	Aria CHU	Added the weight information (Chapter 3).
1.3	2021-11-30	Aria CHU	Updated the product description in Chapter 1.

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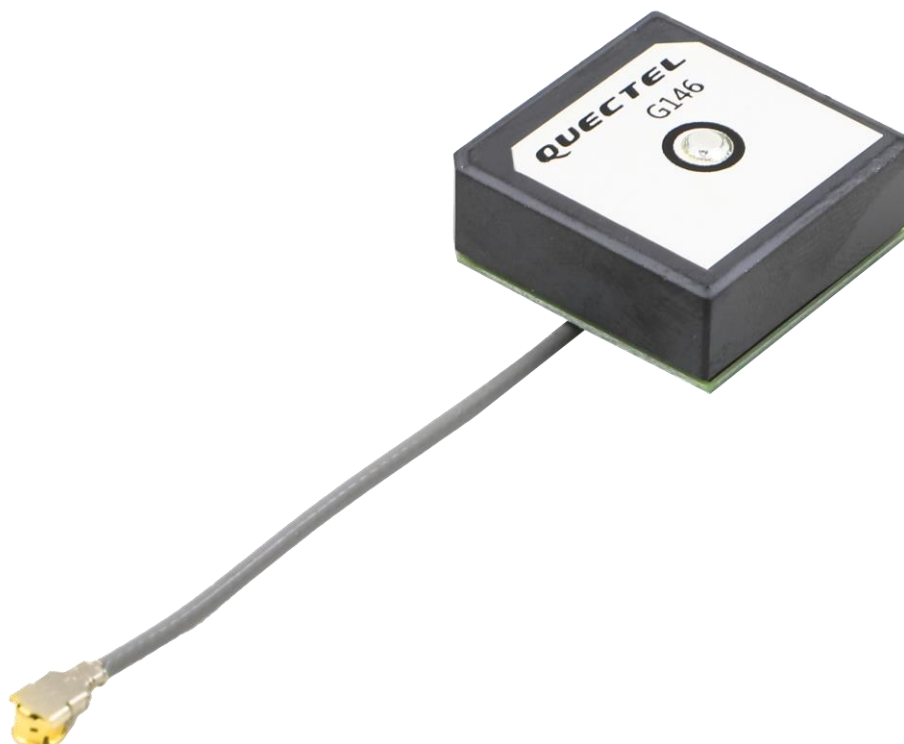
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1 Product Description

This Quectel GNSS antenna adopts a diversity of forms to guarantee the most suitable polarization type. Quectel's positioning products support single-band or multi-band operation modes to meet various high-precision positioning requirements of customers' products. Quectel also provides both passive and active antennas to satisfy the customer demand for high gain. Such antenna supports different installation or connection methods such as pin mount, surface mount, magnetic mount, internal cable, and external SMA. Customized connector type and cable length are provided according to requirements.

2 Product Features

- GNSS
- High efficiency
- Excellent performance



3 Product Specifications

Passive Electrical Specifications

Frequency Range	1560–1605 MHz (when covered with a radome on LNA ground plane)
Input Impedance	50
VSWR	-
Gain	Typ. 2.5 dBic
Polarization Type	R.H.C.P

LNA Electrical Properties

Frequency Range	1560–1605 MHz (when covered with a radome on LNA ground plane)
Gain	19 ±3 dB (DC = 3.0 V)
Noise Figure	2 dB typ. (DC = 3.0 V)
Output VSWR	2.0 max (DC = 3.0 V)
Passband Ripple	≤ 1 dB
Voltage	DC 3.0 ±0.1 V
Current	4.5 ±1.5 mA
Impedance	50 Ω

Mechanical Specifications

Antenna Size	18.4 mm × 18.4 mm × 8.86 mm
Casing	Ceramic
Radiator	Silver
Connector Type	IPEX I
Working Temperature	-40 °C to +85 °C
Weight	10.74 ±1 g

Notes:

- All value are defined at 25 ±15 °C, 65 ±20 % RH, power handling 1 μW, air pressure 960 ±100 hPa unless otherwise noted.
- Patch characteristics are measured with test ground plane in an anechoic chamber.

4 Overall Performance

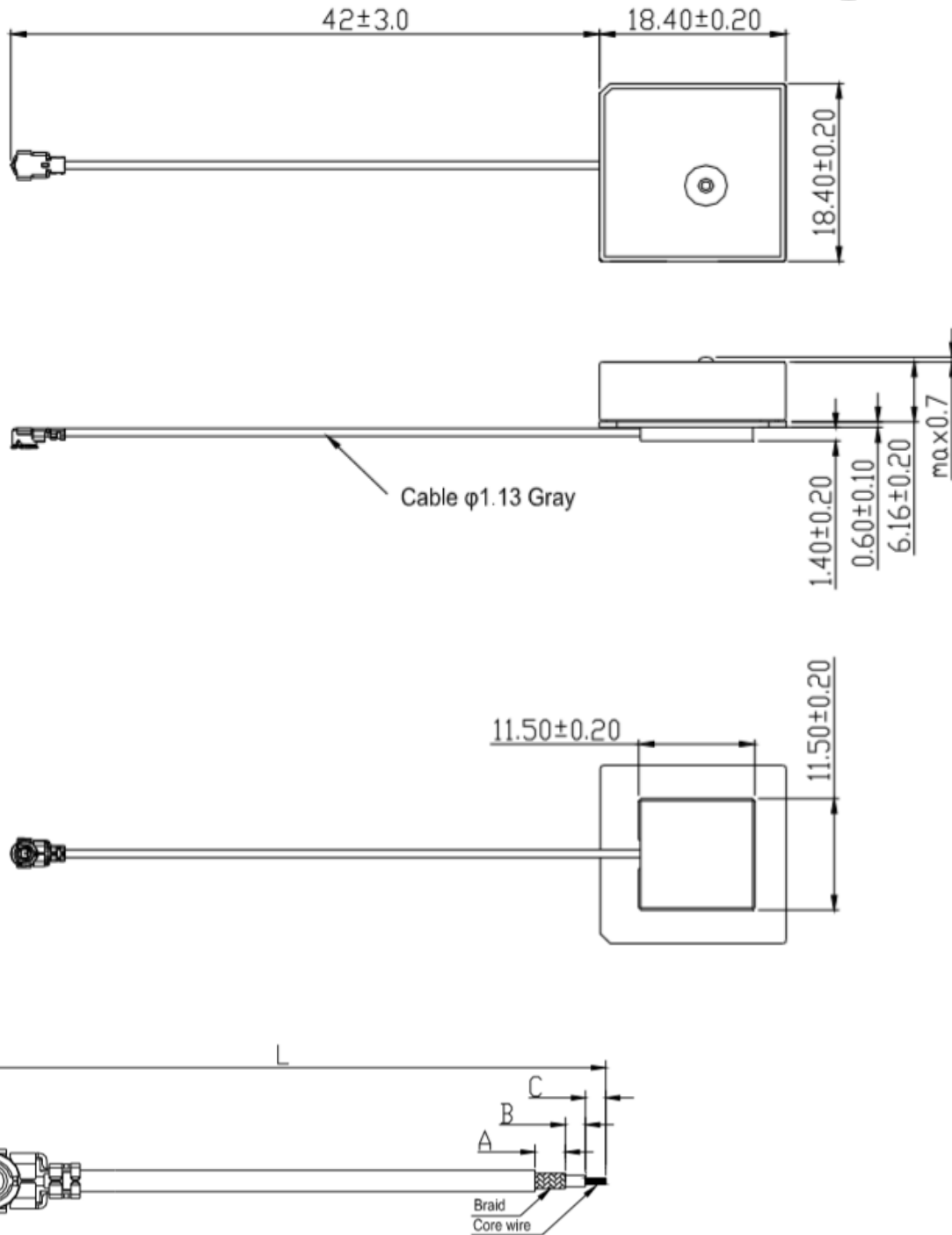
4.1. Test Environment

- KEYSIGHT VNA Network Analyzer E5063A 100 kHz – 8.5 GHz.
- RayZone® 2800 Chamber 5G (FR1) SISO/MIMO, 400 MHz – 8.0 GHz.



5 Product Size

ROHS



Connector : IPEX I 20670-001R-13 ; **Cable :** RF Cable $\phi 1.13$ (Gray)
 L : 50 ± 3 mm A : 1.5 ± 0.5 mm B : 1 ± 0.5 mm C : 1 ± 0.5 mm