



NanoSense GPS Kits

Datasheet

Kit with GPS module and antenna for NanoDock ADCS

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2 Overview

GomSpace offers GPS antenna kits designed for mounting on NanoDock DMC-3, NanoDock ADCS-3, NanoDock ADCS-6 and NanoDock ADCS-8. Each GPS kit contains a NovAtel GPS module and a GPS antenna.

The datasheet and manuals for the GPS module and antennas can be found here:

GPS:

http://docs.novatel.com/OEM7/Content/Technical_Specs_Receiver/OEM719_Specifications.htm

Antenna:

<https://www.tallysman.com/product/tw1322-embedded-single-band-gnss-antenna-pre-filtered/>

3 Main Features of GPS Module

- Precision, position: 1.5 m
- Precision, velocity: 0.03 m/s
- Power: 3.3 V and <400 mA
- COCOM limit removed
- Mass: 31 g
- Size: 46 x 72 x 11 mm
- Inrush current 1.71A less than 1.5ms (typical)

4 Kit Choices

Each kit includes:

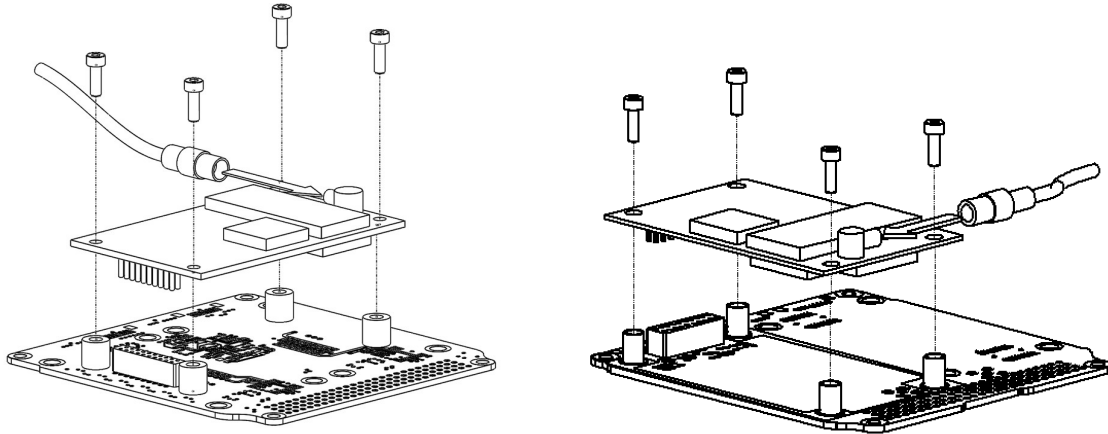
- A NovAtel OEM719 GPS module. The location of the connectors on the PCB depends on which NanoDock it is mounted on. If a NanoDock ADCS-6 or NanoDock ADCS-8 is used, the GPS module is mounted on a pair of rails.
- An antenna
 - Tallysman TW1322
 - Antenna cable length, Choice of 15, 25, 35 or 45 cm
 - Four holes for screws used for mounting
 - Collective mass: 54 – 57 g, including GPS module, dependent on antenna cable length
 - Power 2.5V to 16V and <10mA

5 Mounting

Mounting of the GPS module is different depending on the NanoDock. See the details below

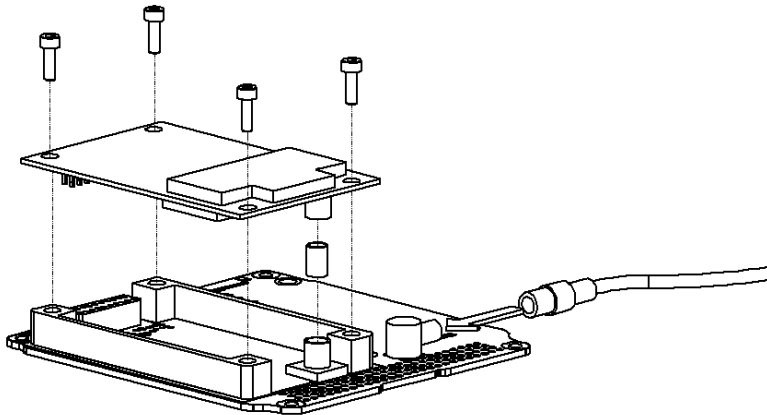
5.1 Mounting on a NanoDock DMC-3 or ADCS-3 (NovAtel OEM719A)

This kit is mounted on the bottom of the NanoDock DMC-3 (below left) or on the top of the NanoDock ADCS-3 (below right). Notice the antenna connector is on the top.



5.2 Mounting on a NanoDock ADCS-6 or ADCS-8 (NovAtel OEM719B)

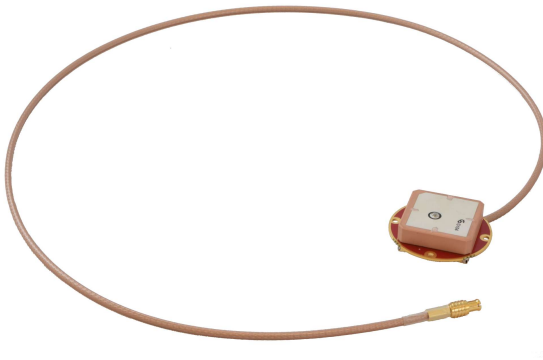
This kit is mounted on the top of the NanoDock ADCS-6 or NanoDock ADCS-8 with an RF barrel to connect it to the NanoDock. The antenna is connected to the antenna connector on the NanoDock.



6 Antenna

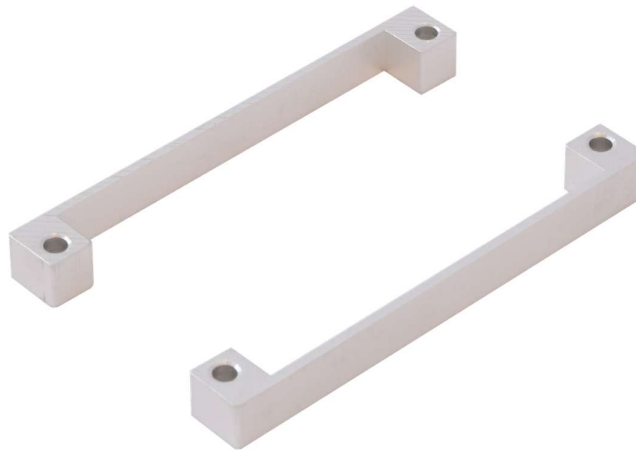
Below are shown photos of the antenna, the cable and connector.

Tallysman



7 Rails

The GPS module is mounted on the ADCS-6 or ADCS-8 with two rails, this is to improve the thermal and vibration performance of the module.



8 Disclaimer

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