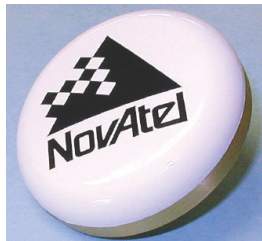


# ANT-26C1GA-TBW-N and ANT-26C1GA-TBW-AN Antennas

## USER GUIDE



The compact, lightweight ANT-26C1GA-TBW-N and ANT-26C1GA-TBW-AN model antennas are designed for use in any mobile application.

The ANT-26C1GA-TBW-N and ANT-26C1GA-TBW-AN are active GPS antennas designed to work at the L1 frequency (1575.42 ±12 MHz). These antennas include the following features:

- Lightning and rain protection
- Universal single hole mounting with a threaded connector and nut
- Internal 33 dB amplifier
- Designed for long cable remote installation
- Band pass filtering
- DC bias provided through the coaxial connector

NovAtel offers optional coaxial cables of various lengths and models for interconnecting between the ANT-26C1GA-TBW-N and ANT-26C1GA-TBW-AN, and our receivers.

### ADDITIONAL EQUIPMENT REQUIRED

- A device with an antenna input port that both receives the RF signal and provides 2.5 to 24.0 VDC to the antenna is required to set up the ANT-26C1GA-TBW-N and ANT-26C1GA-TBW-AN. (NovAtel GPS receivers provide the necessary power through their antenna RF connectors.)
- Coaxial cable with a male TNC connector

### INSTALLING THE ANTENNA

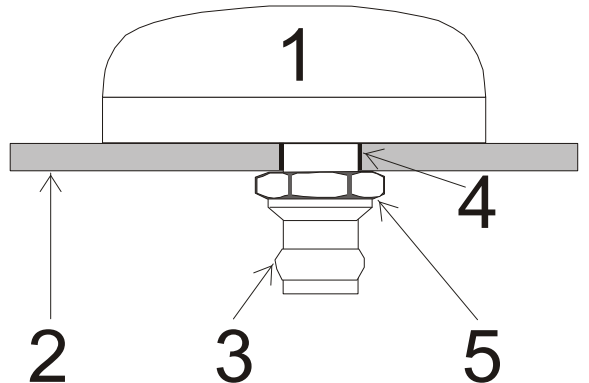
Both the input DC power and the output RF signal flow over a

single coaxial cable that is connected to the unit's TNC female connector.

The antenna can be attached to a surface by means of a single pre-drilled mounting hole.

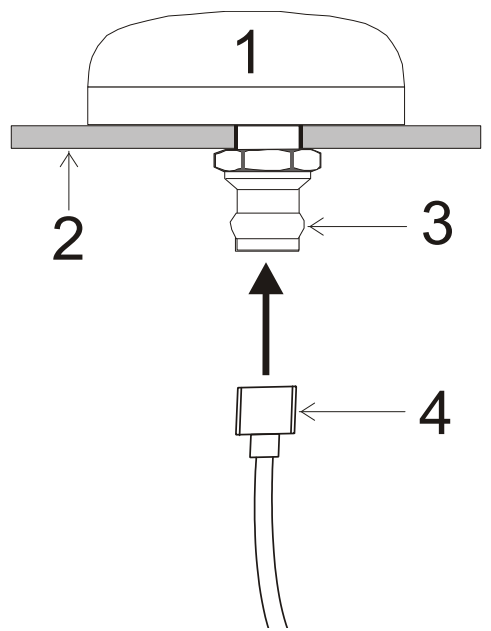
Install the antenna as follows:

1. Pre-drill the connector hole on the surface, see the *Mechanical Drawings* section of this guide for details on the connector size.
2. Put the antenna connector through the pre-drilled mounting hole of the surface.
3. Fasten the antenna tightly to the surface using the mounting hex nut and its lock washer.



Ref. #	Description	Ref.#	Description
1	Antenna	4	Pre-drilled mounting hole
2	Mounting surface	5	Mounting hex nut and lock washer (24mm nut in the case of the ANT-26C1GA-TBW-AN)
3	TNC connector		

4. Remove the dust cap from the antenna's TNC connector.
5. Attach the male TNC connector of the coaxial cable to the antenna's TNC connector (see the top graphic on the next panel).



Ref. #	Description	Ref. #	Description
1	Antenna in place	3	TNC connector
2	Surface	4	Coaxial cable

6. Attach the other end of the coaxial cable to the antenna input port of the receiving device, which must provide power as detailed in the *SPECIFICATIONS* section of this guide. All NovAtel GPS receivers provide the necessary power through their antenna RF connectors.



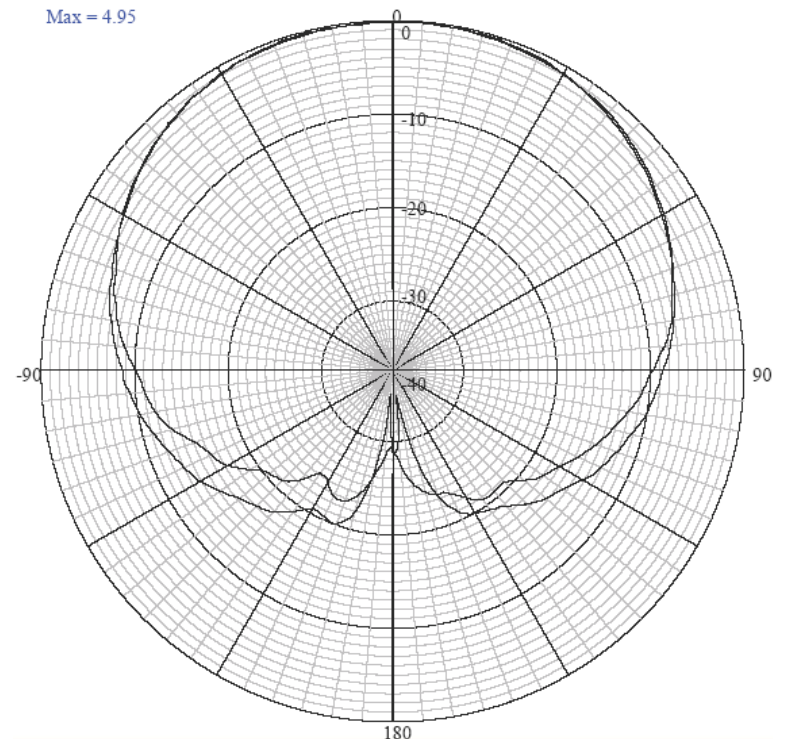
The above shows an example of where the ANT-26C1GA-TBW-N or ANT-26C1GA-TBW-AN antenna may be placed

on a vehicle (not to scale).

### ANTENNA CARE

The ANT-26C1GA-TBW-N and ANT-26C1GA-TBW-AN are designed to withstand the elements, including rain, snow, and dust. However, to ensure your antenna performs optimally, keep the radome clean and brush off any ice and snow. In addition, ensure the TNC connector remains clean and dry and replace the dust cap when a cable is not connected.

### L1 ELEVATION GAIN PATTERN

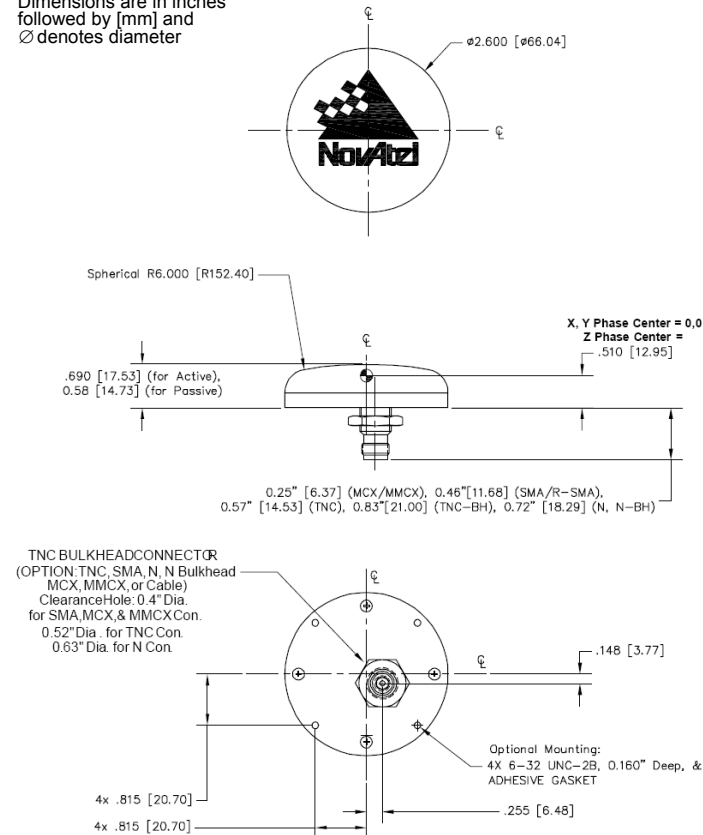


## SPECIFICATIONS

<b>RF</b>	
3 dB pass band (typical)	L1 (1575.42 ±12 MHz)
Antenna Gain (dBic) where G.P. = Ground Plane	Free Space
90° zenith	+5.0
10° elevation	-2.3
20° elevation	-0.9
30° elevation	+0.7
60°-90° elevation	>4.2
LNA gain	33 dB
Polarization	Right-hand circular
Noise figure (typical)	2.4 dB
Nominal impedance	50 Ω
VSWR	< 1.5 : 1
<b>POWER</b>	
Input voltage	2.5 - 24.0 VDC
Current (typical)	< 30 mA
<b>PHYSICAL</b>	
Radome Diameter x Height	6.60 cm (2.60") x 1.75 cm (0.690")
Weight	113 g (4.0 oz.)
<b>ENVIRONMENTAL</b>	
Maximum altitude	21336 m (70000 ft.)
Operating/Storage temperature	-55°C to +85°C (-67°F to +185°F)
Vibration	>30 G
Designed to meet these standards	FAA TSO-C144, DO-160D, DO-228, MIL-C-5541, MIL-E-5400, MIL-E-5400, MIL-I-45208A, MIL-STD-810 and SAE J1455

## MECHANICAL DRAWINGS

Dimensions are in inches followed by [mm] and ∅ denotes diameter



## WARRANTY POLICY

NovAtel Inc. warrants that its Global Positioning System (GPS) products are free from defects in materials and workmanship, subject to the conditions set forth below, for the following periods of time:

GNSS Antenna Modules: One (1) Year from date of sale  
Cables and Accessories: Ninety (90) Days from date of sale

Date of sale shall mean the date of the invoice to the original customer for the product. NovAtel's responsibility respecting this warranty is limited solely to product repair at an authorized NovAtel location only. Determination of repair will be made by NovAtel personnel or by technical personnel expressly authorized by NovAtel for this purpose.

The foregoing warranties do not extend to

(i) nonconformities, defects or errors in the products due to accident, abuse, misuse or negligent use of the products or use in other than a normal and customary manner, environmental conditions not conforming to NovAtel's specifications, or failure to follow prescribed installation, operating and maintenance procedures, (ii) defects, errors or nonconformities in the products due to modifications, alterations, additions or changes not made in accordance with NovAtel's specifications or authorized by NovAtel, (iii) normal wear and tear, (iv) damage cause by force of nature or act of any third person, (v) shipping damage; or (vi) service or repair of product by the dealer without prior written consent from NovAtel.

In addition, the foregoing warranties shall not apply to products designated by NovAtel as beta site test samples, experimental, developmental, preproduction, sample, incomplete or out of specification products or to returned products if the original identification marks have been removed or altered.

The warranties and remedies are exclusive and all other warranties, express or implied, written or oral, including the implied warranties of merchantability or fitness for any particular purpose are excluded.

NovAtel shall not be liable for any loss, damage or expense arising directly or indirectly out of the purchase, installation, operation, use or licensing or products or services. In no event shall NovAtel be liable for special, indirect, incidental or consequential damages of any kind or nature due to any cause.

There are no user-serviceable parts in the ANT-26C1GA-TBW-N or ANT-26C1GA-TBW-AN and no maintenance is required. If the unit is faulty, replace with another unit and return the faulty unit to NovAtel Inc. You must obtain a RETURN MATERIAL AUTHORIZATION (RMA) number by calling NovAtel Customer Service at 1-800-NOVATEL (U.S. and Canada only) or 403-295-4900 before shipping any product to NovAtel or a dealer. Once you have obtained an RMA number, you will be advised of proper shipping procedures to return any defective product. When returning any product to NovAtel, please return the defective product in the original packaging to avoid damage.

✉ Before shipping any material to NovAtel or our Dealer, please obtain a Return Material Authorization (RMA) number from the point of purchase. You may also visit our website (<http://www.novatel.com>) and proceed to Registered Services from our Home page.

## WEEE NOTICE

If you purchased your ANT-26C1GA-TBW-N or ANT-26C1GA-TBW-AN in Europe, please return it to your dealer or supplier at the end of its life. The objectives of the European Community's environment policy are, in particular, to preserve, protect and improve the quality of the environment, protect human health and utilise natural resources prudently and rationally. Sustainable development advocates the reduction of wasteful consumption of natural resources and the prevention of pollution. Waste electrical and electronic equipment (WEEE) is a regulated area. Where the generation of waste cannot be avoided, it should be reused or recovered for its material or energy. WEEE products may be recognised by their wheeled bin label.

## RoHS NOTICE

The ANT-26C1GA-TBW-N and ANT-26C1GA-TBW-AN are compliant with the European Union (EU) Restriction of Hazardous Substances (RoHS) Directive 2002/95/EC.

## QUESTIONS OR COMMENTS

If you have any questions or comments regarding your ANT-26C1GA-TBW-N or ANT-26C1GA-TBW-AN antenna, please contact NovAtel Customer Service using one of methods provided below.

Email: [support@novatel.com](mailto:support@novatel.com)

Web: [www.novatel.com](http://www.novatel.com)

Phone: 1-800-NOVATEL (U.S. & Canada)

403-295-4900 (International)

Fax: 403-295-4901



© Copyright 2006-2009 NovAtel Inc. All rights reserved. Unpublished rights reserved under international copyright laws. Recyclable.

OM-20000114

Rev 3

August 26, 2009