

***AeroAntenna Technology, Inc.***

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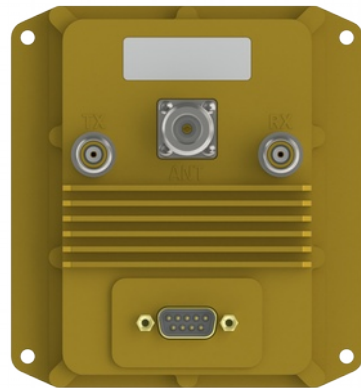
**AT1595-13  
BT1595-13  
Active Inmarsat  
Aviation Antenna System  
User Manual**

AT15951384-01 Rev 1

**AT1595-13  
Antenna**



**BT1595-13  
Bias Box/Amplifier**



**Industry Canada:**

This device complies with Industry Canada's licence-exempt RSSs. Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

**Industrie Canada:**

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

1 Introduction & Installation

The AT1595-13/BT1595-13 antenna system is designed to provide Internet connectivity for General Aviation and Business Aviation markets. The antenna system requires professional installation.

2 Safety Information Regarding Exposure to RF Signals



**WARNING**

To satisfy FCC RF exposure requirements for mobile transmitting devices, the minimum safety distance is 1.072 m (3.517 ft). This separation distance should be maintained between antenna and people during operation of the antenna. During normal operation, the radiation of the antenna is directed up towards the sky and only a person on the roof of the aircraft will be exposed to appreciable amounts of radiation.

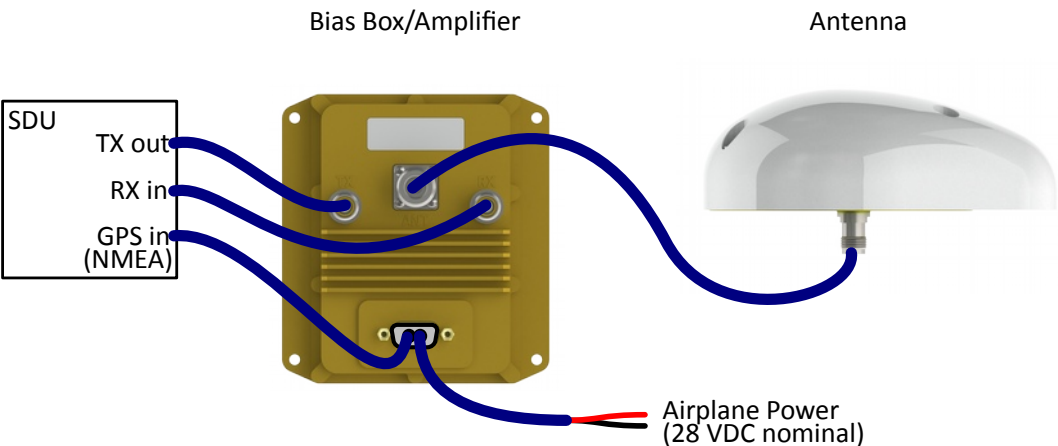
3 Cable Length Requirements

To meet Inmarsat performance requirements and comply with FCC regulations, care must be taken to use the appropriate total RF cable length. Your antenna distributor should provide the appropriate cables.

| Cable                           | Loss requirement        | Ref. Cable/Length |
|---------------------------------|-------------------------|-------------------|
| SDU* to Bias Box/Amplifier (TX) | 1.5 ± 0.2 dB @ 1650 MHz | 44 inches RG-316  |
| SDU* to Bias Box/Amplifier (RX) | 1.5 ± 0.2 dB @ 1650 MHz | 44 inches RG-316  |
| Bias Box/Amplifier to Antenna   | 4.7 ± 0.2 dB @ 1650 MHz | 290 inches RG-142 |

\* SDU = Satellite Data Unit

4 Connection Diagram



# 5 Specifications

|                                                                     |                                                                                                                                                                           |
|---------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>EQUIPMENT TYPE</b>                                               | Mobile or Fixed Base Station                                                                                                                                              |
| <b>INTEGRATED OPERATING ENVIRONMENT</b>                             | [ x ] Commercial<br>[ x ] Light Industry & Heavy Industry                                                                                                                 |
| <b>POWER SUPPLY REQUIREMENT</b>                                     | 16 to 40V DC, 120W maximum                                                                                                                                                |
| <b>RF INPUT POWER RATING (US &amp; CANADA)</b>                      | 20 dBm or 0.1 Watt peak (conducted)                                                                                                                                       |
| <b>EIRP</b>                                                         | 21.6 dBW Max                                                                                                                                                              |
| <b>DUTY CYCLE</b>                                                   | N/A                                                                                                                                                                       |
| <b>TX OPERATING FREQUENCY RANGE</b>                                 | 1626.5 – 1660.5 MHz                                                                                                                                                       |
| <b>RX OPERATING FREQUENCY RANGE</b>                                 | 1525.0 – 1559.0 MHz                                                                                                                                                       |
| <b>RF INPUT IMPEDANCE</b>                                           | 50 Ohms                                                                                                                                                                   |
| <b>MODULATION</b>                                                   | G1D, G1E, G1W                                                                                                                                                             |
| <b>EMISSION DESIGNATION</b>                                         | 1K69G1D, 1K69G1E, 1K69G1W                                                                                                                                                 |
| <b>ANTENNA TYPE</b>                                                 | Integral                                                                                                                                                                  |
| <b>ANTENNA CONNECTOR TYPE</b>                                       | Antenna: TNC (Female)<br>Bias Box/Amplifier <ul style="list-style-type: none"> <li>• ANT: Type N(Female)</li> <li>• TX: TNC(Female)</li> <li>• RX: TNC(Female)</li> </ul> |
| <b>TEMPERATURE RATING</b><br><b>STORAGE:</b><br><b>OPERATIONAL:</b> | -55°C to +85°C<br>-55°C to +70°C                                                                                                                                          |