

# ADL450B



## DATASHEET

**Easy setup and configuration**  
via Bluetooth® connection  
to receivers.

**IP67 rating and mil spec design**  
ensure reliable operation in  
harsh conditions.

**Field configurable transmit power**  
use the output power needed to cover  
a work area and conserve power  
when applicable.

**In-field diagnostics**  
to troubleshoot signal strength  
issues, reducing downtimes.

### **Wireless communication, built to last**

The Spectra Geospatial® ADL450B radio is an advanced, high-speed, wireless UHF data radio designed to connect via Bluetooth to Spectra Geospatial GNSS receivers, reducing the complexity of field setup while still maintaining excellent over-the-air link rate and reliability in harsh conditions.

The full-function two level user interface streamlines field configuration and troubleshooting so you can maintain maximum productivity. Adapt as conditions require: for longer baselines you can dial up the power, and when the work area is smaller, a lower-power output extends battery life. The ADL450B radio provides access to diagnostic data in the field that solve signal strength challenges and make adjustments to stay more productive.

**GENERAL**

- Communication: 1 RS-232 port, 115.2 kbps maximum
- User Interface:
- 5 navigation buttons with 128x64 graphical OLED display, four status LEDs
  - English language support
- Bluetooth: Server and client mode supported, Class 2

**POWER**

- External:
- 9 to 11 V DC, maximum 5 W output
  - 11 to 30V DC, fully functional with all supported output power levels
- During RX
  - Typically 2.0 to 2.7 W without output DC load
  - Typically 58 to 59 W with max 4.0A output DC load
- During TX
  - No output DC load:
  - Typically 7 to 10 W, with 1 W output
  - Typically 14 to 18 W, with 5 W output
  - Typically 24 to 32 W, with 10 W output
  - Typically 55 to 72 W, with 25 W output
  - Typically 76 to 101 W, with 35 W output
- During TX
  - Max 4.0 A output DC load:
  - Typically 63 to 66 W, with 1 W output
  - Typically 70 to 75 W, with 5 W output
  - Typically 82 to 89 W, with 10 W output
  - Typically 113 to 130 W, with 25 W output
  - Typically 133 to 163 W, with 35 W output

**MODEM SPECIFICATIONS**

- Link Rate/Modulation:
  - 4FSK: 19200 bps (25 kHz), 9600 bps (12.5 kHz)
  - GMSK: 19200/16000/9600/4800 bps (25 kHz), 9600/8000/4800 bps (12.5 kHz)
- Link Protocols:
  - TrimTalk v1, PCC EOT (FEC/no FEC, Scrambling/no Scrambling), PCC FST (FEC/no FEC, Scrambling/no Scrambling), PCC EOT4 (FEC/no FEC, Scrambling/no Scrambling), SATEL (FEC/no FEC, Whitening/no Whitening, CRC16/no EC)

**RADIO SPECIFICATIONS**

- Frequency bands: 403 MHz to 473 MHz (depending on the region, some channels are not allowed)
- RF transmitter output: User selectable 1 W, 5 W, 10 W, 25 W and 35 W (where permitted)
- Sensitivity: Typically -120 dBm to -110 dBm (BER 10<sup>-2</sup>) depending on used modulation and channel width
- Type Certification: ADL450B is type approved and certified for operation in the U.S., Canada, EU and UK, Australia and New Zealand.

**ENVIRONMENTAL SPECIFICATIONS**

- Enclosure:
  - IP67 (Dustproof and watertight to depth of 1 m for 30 minutes)
  - Corrosion resistance: According to MILSTD-810H: Method 509.7
- Operating Temperature:
  - -20 °C to +55 °C: Functional (complies with standards)
  - -30 °C to +65 °C: Functional
- Storage Temperature: -40 °C to +85 °C
- Drop/Vibration/Shock: EN 60068-2-31:2008 / IEC 60068-2-64:2008 / EN 60068-2-27:2008

**MECHANICAL SPECIFICATION**

- Dimensions: 231.2 × 151.2 × 77.0 mm (L×W×H)
- Weight: 1.96 kg
- Data/Power Connector: 5-pin ODU/2-pin ODU
- RF Connector: 50 Ohm, TNC female



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Please visit [spectrageospatial.com](http://spectrageospatial.com) for the latest product information and to locate your nearest distributor. Specifications and descriptions are subject to change without notice.