RTK RADIO MODULE FOR SMART6-L ANTENNAS

EASY INTEGRATION
NovAtel's SMART6-L™ attaches to the Relay RTK radio module to create a single unit for easy system integration. Connection to the Relay can be made using the existing/pre-installed SMART6-L interface cables.

MULTIPLE RADIO OPTIONS
Radio options include HSPA (3G) cellular and UHF (400 MHz licensed or 900 MHz unlicensed).

400 MHZ OR 900 MHZ BASE STATION
Relay can broadcast local RTK corrections from an internal 1 W 400 MHz licensed or 1 W 900 MHz unlicensed radio. Base station configuration can be managed through the integrated web-server and the Wi-Fi access point using the web browser of any compatible personal computer, tablet or smartphone.

CELLULAR, 400 MHZ OR 900 MHZ ROVER
With the cellular radio option, NTRIP and RTK corrections can be received over the cellular network. With the 400 MHz or 900 MHz radio options, RTK corrections are received from a compatible base station.

FLEXIBLE MOUNTING OPTIONS
Relay can be mounted to a vehicle using integrated magnets or by screw mount.

BENEFITS
+ Radio connectivity for SMART6-L to support RTK and NTRIP corrections
+ No need for separate radio wiring harness

FEATURES
+ Can be used as an RTK base station with 400 MHz licensed or 900 MHz unlicensed UHF radio
+ Can be used as an RTK rover with HSPA, 400 MHz or 900 MHz UHF radio options
+ Integrated Wi-Fi access point and web-server for easy base station setup using a smartphone or computer
+ Integrated NTRIP Client
+ 400 MHz option compatible with Satel, Pac Crest and TrimTalk base stations or rovers
+ 900 MHz option compatible with Freewave base stations or rovers

For more information about our SMART antenna products, visit www.novatel.com/smart-antennas
### PERFORMANCE

**Radio Options**
- HSPA Cellular
- 400 MHz Licensed
- 900 MHz Unlicensed

### RADIO SPECIFICATIONS

#### HSPA Model
- **Data support**: GSM/GPRS/EDGE/HSPA+
- **Frequency bands**: 850, 900, 1800, 1900, AWS 1700, 2100 MHz
- **Sensitivity**: UMTS: -108 dBm, GSM 850/900 MHz: -107 dBm, DCS 1800/PCS 1900 MHz: -106 dBm

#### 400 MHz Model
- **Frequency band**: 403 to 473 MHz
- **Transmit power**: 1 W
- **Rx sensitivity**: -113 dBm @ 25 kHz, -116 dBm @ 12.5 kHz
- **Radio compatibility**: SATEL 3AS, PacCrest – 4FSK, PacCrest – GMSK, PacCrest – FST, TrimTalk 450s

#### 900 MHz Model
- **Frequency band**: 902 to 928 MHz
- **Transmit power**: 1 W
- **Rx sensitivity**: -108 dBm
- **Radio compatibility**: Freewave MM2

### PHYSICAL AND ELECTRICAL

#### Dimensions
- 290 mm L x 275 mm W x 80 mm H

#### Weight
- 2.0 kg

#### Signal and Power Connector
- 14-pin Tyco Ampseal

#### Radio Antenna Connector
- TNC female jack, 50 Ω nominal

#### Mounting
- Integrated magnetic mount
- Screw mounting
- Optional mounting plates

#### Power
- **Input voltage range**: +9 to +36 VDC

#### Power Consumption
- UHF 400 MHz radio: 10.5 W
- UHF 900 MHz radio: 8.5 W
- HSPA radio: 5.5 W

#### Status LEDs
- Power
- Position valid
- Error indicator

#### I/O Protection
- ISO 7637

#### Interface Ports
- **RS-232 dedicated ports**: 2
- **CAN Bus NMEA 2000**: 1
- **1PPS**: 1
- **Event mark input**: 1
- **Ground speed output**: 1

#### Models Available
- RELAYN-900
- RELAYN-400
- RELAYN-HSPA

### OPTIONAL ACCESSORIES

- Mounting plate
- Pole mounting plate
- Interface cable
- NMO to TNC adapter cable

### ENVIRONMENTAL

#### Temperature
- **Base**
  - Operating: -30°C to +60°C
  - Storage: -40°C to +80°C
- **Rover**
  - Operating: -30°C to +70°C
  - Storage: -40°C to +80°C

#### Humidity
- MIL-STD-810G, 507.5

#### UV Protection
- MIL-STD-810G, 505.5

#### Sand and Dust
- MIL-STD-810G, 510.5

#### Salt Fog
- MIL-STD-810G, 509.5

#### Acidic Atmosphere
- MIL-STD-810G, 518.1

#### Immersion
- MIL-STD-810G, 512.5

#### Vibration
- MIL-STD-810G, 514.6

#### Shock
- MIL-STD-810G, 516.6

### COMPLIANCE

- E-mark, FCC, IC, CE marking
- **Carrier Approvals**
  - RELAYN-HSPA - PTCRB/GCF

For the most recent details of this product: [www.novatel.com/products/smart-antennas/](http://www.novatel.com/products/smart-antennas/)

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