SMART RELAY® RTK Radio

RTK RADIO MODULE FOR SMART6-L ANTENNAS

SMART6-L and antenna not included

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, PacCrest 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

RELAY

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
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

Wi-Fi

Frequency band	2.4 GHz
802.11 b/g/n	

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 (pass through from SMART6-L)

» 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/

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SE Asia and Australia 61-400-883-601

Version 4 Specifications subject to change without notice.

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