



# RC3000BCN

High performance Beacon  
Receiver option for the RC3000  
Series Satellite Locator



RC3000BCN is an internal beacon receiver card, manufactured by Novella SatComs Ltd. that is fully integrated into the RC3000 Architecture. In addition to inclined orbit tracking applications the beacon receiver can be used also for fast antenna deployment and satellite acquisition.

## Features

- ◆ **Reduce Rack Space**  
*Eliminates 1 rack unit in a typical application.*
- ◆ **Saves Weight and Power**  
*Uses a common power supply, user interface, and chassis with the RC3000.*
- ◆ **Wide input Frequency Range**  
*940 MHz to 1,750MHz, optionally to 2,150MHz adjustable in 10kHz steps.*
- ◆ **Automatic Frequency Track**  
*Compensates for LNB or downconverter frequency drifts and Doppler shift.*
- ◆ **Automatic Frequency Search**  
*±100kHz wide search ensures capture of beacon in adverse LNB drift or Doppler shift. Fast PLL for full lock acquisition in less than 1 second in all circumstances.*
- ◆ **Very low threshold**  
*Low threshold for reacquisition, 43dBHz, ideal for small transportable terminals.*
- ◆ **Handles Modulated Beacons**  
*Option for the tracking and measurement of BPSK modulated NATO/SKYNET/DSCS military beacons with usual 43dBHz threshold.*
- ◆ **Seamless Operation**  
*Beacon information is stored in a local database associated with the internal satellite record.*
- ◆ **Monitor and Control Compatible**  
*Beacon Receiver status and control available through the RC3000 M&C interface.*
- ◆ **Fully Upgradable**  
*Any RC3000 may be field upgraded with the RC3000BCN option.*

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# Research Concepts, Inc.

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## NEW COMPACT TRACKING RECEIVER Outline Specification

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|--|-----------|--|
| <b>1. Input:</b>                         | Standard: | 950 to 1,750MHz                        |
|  | Option 1: | 950 to 2,150MHz (*)                    |
|  | Option 2: | 875 to 1,750MHz                        |
| <b>2. Input attenuator:</b>              |           | 0 to -30dBc (*)                        |
| <b>3. Maximum beacon level:</b>          |           | -65dBm (input attenuator set to 0dB)   |
| <b>4. Maximum aggregate input power:</b> |           | -15dBm (input attenuator set to 0dB)   |
| <b>5. PLL noise bandwidth:</b>           |           | 2kHz                                   |
| <b>6. Search bandwidth:</b>              |           | ±100kHz                                |
| <b>7. Acquisition time:</b>              |           | < 1 second                             |
| <b>8. Level detector:</b>                |           | Coherent, 100ms time constant          |
|  | Option 6: | Coherent, customer defined             |
|  | Option 7: | Squarer-coherent, for BPSK beacons (*) |

(\*) Options and/or configurations not available on budget models