The R330™ GNSS receiver is a full solution product in a small box. The R330 utilizes Hemisphere GNSS’ Eclipse™ platform, and our latest GNSS patented technology. The R330 provides accurate positioning using several differential correction methods such as RTK, L-band DGNSS (VBS/HP/XP/G2) and Beacon. The R330 GNSS receiver works well in any marine or land application where positioning accuracy is required. The base unit is configured with L1 GNSS, 10 Hz and raw data. The fully-upgraded unit can be optionally subscribed to L1/L2 GNSS, 20 Hz, RTK, L-band and Beacon. Compatible GNSS antennas for the R330 are A21™, A31™, A42™, A43™ and A52™.

The new R330™ GNSS receiver will outperform its predecessors and provides a user friendly experience. It features Hemisphere GNSS’ exclusive Eclipse Suretrack™ technology that enables the receiver to model the phase on satellites the rover is tracking, which allows the operator to continue working without corrections from the base.
R330 GNSS Receiver

GNSS Sensor Specifications
Receiver Type: GNSS L1 & L2, RTK with carrier phase
Signals Received: GPS, GLONASS and BeiDou
Channels: 270
SBAS Tracking: 3-channel, parallel tracking
Timing (1PPS): 10 Hz standard, 20 Hz optional
Accuracy: 20 ns
Cold Start Time: < 60 s typical (no almanac or RTC)
Warm Start Time: < 30 s typical (almanac and RTC)
Hot Start Time: < 10 s typical (almanac, RTC and position)
Maximum Speed: 1,850 kph (999 kts)
Maximum Altitude: 18,288 m (60,000 ft)
Differential Options: SBAS, Autonomous, External
RTCM, RTK, L-band (VBS/HP/XP/G2)
Timing Output: 1 PPS (CMOS, active high, rising edge sync, 10 kΩ, 10 pF load)
Event Marker Input: CMOS, active low, falling edge sync, 10 kΩ
USB Ports: 1 USB Host, 1 USB Device

Power
Input Voltage: 8 to 36 VDC
Power Consumption: 3.8 W nominal (WAAS and Beacon)
Current Consumption: 4.6 W nominal (L-band)
Antenna Voltage Output: 5 VDC maximum 80 mA
Antenna Short Circuit Protection: Yes
Antenna Gain Input Range: 10 to 40 dB
Antenna Input Impedance: 50 Ω

Positioning Accuracy
RMS (67%): Horizontal 2.5 m
Single Point, no SA: 1.2 m
SBAS (WAAS): 0.3 m
L-band DGPS: 0.3 m
Code Differential GPS: 0.3 m
L-band L1/L2: 0.15 m
RTK: 10 mm + 1 ppm

Beacon Sensor Specifications
Channels: 2-channel parallel tracking
Frequency Range: 283.5 to 325.0 kHz
Operating Modes: Manual, automatic and database
Compliance: EN50081-4-2 ESD
Environmental
Operating Temperature: -40°C to +70°C (-40°F to +158°F)
Storage Temperature: -40°C to +85°C (-40°F to +185°F)
Humidity: 95% non-condensing
Shock and Vibration:
Mechanical Shock: EP455 Section 5.14.1 Operational
Vibration: EP455 Section 5.15.1 Random
EMC:
FCC Part 15, Subpart B
CISPR22

L-band Sensor Specifications
Sensitivity: -130 dBm
Channel Spacing: 7.5 KHz
Satellite Selection: Manual and Automatic
Reacquisition Time: 15 seconds (typical)
Rejection: 15 kHz spacing > 30 dB, 300 kHz spacing > 60 dB

Communications
Serial Ports: 2 full-duplex RS232
Baud Rates: 4800 - 115200
Correction I/O Protocol: Hemisphere GPS proprietary, RTCM v2.3 (DGPS), RTK v3, CMR, CMR+1
Data I/O Protocol: NMEA 0183, Hemisphere GPS binary

Receive only, does not transmit this format

2 Depends on multipath environment, number of satellites in view, satellite geometry and ionospheric activity
1 Requires a subscription from OmniSTAR
4 Upgrade required

Note: The Eclipse receiver technology is not designed or modified to use the GPS Y-Code

Authorized Distributor:

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