

Upgradeable GNSS Receiver

The C-Nav3050 GNSS receiver has been designed to upgrade the C-Nav3050 from a single-frequency receiver to a powerful geodetic instrument. The C-Nav3050 performance upgrade path allows users to adapt to changing requirements via simple software upgrades avoiding the need to purchase costly additional hardware.

C-Nav3050 is powered by the new 66 GNSS channel Sapphire circuit board making the receiver uniquely suited for real-time applications including precise positioning, offshore surveys and engineering, DP input, hydrography (exceeds highest IHO standards), coastal and military applications, marine airborne reconnaissance and survey.

Interference suppression (both in-band & out-band), multipath mitigation, and measurement accuracy are examples of the sensor's technological advances. The Sapphire GNSS engine incorporates several patented innovations, delivering near-optimal GPS P-code recovery with a significant signal-to-noise ratio advantage over competing technologies.

The C-Nav3050 comes fully functional with a demodulator inbuilt to receive the C-Nav real-time RTG correction service; a single set of Precise Point Positioning corrections providing decimeter level accuracy across the globe, 24/7.

GNSS data sampling options include GPS (L1, L2, L2C, L5); Glonass (G1, G2); Galileo (E1, E5a). The C-Nav3050 also accepts WAAS, EGNOS, MSAS, GAGAN (RTCA/DO-229D compliant) code corrections via two internal Satellite Based Augmentation System (SBAS) channels with auto-configuration to use the most suitable correction source available. Raw measurement data and Position, Velocity, & Time are provided at 5Hz in the standard configuration with optional upgrades to 10, 25, 50, and 100Hz via high speed ports.

The patented RTK/UltraRTK algorithm provides fast initialization and the ultra-compact binary format ensures robust data performance at all times. The C-Nav3050 is capable of outputting or accepting legacy 0x5B (RTK) or 0x5E (UltraRTK) binary formats.

The RTK Extend feature allows continuous real-RTK/RTK level positioning accuracy during radio communication interruptions by utilizing the C-Nav global correction service. By overcoming the drawbacks of traditional RTK, the C-Nav3050 with RTK Extend maintains centimetre-level positioning during communication loss for up to 15 minutes.

The C-Nav3050's Sapphire GNSS engine delivers more than 50% signal-to-noise ratio advantage over competing technologies. This results in improved real time positioning in the most challenging of multipath environments.

The C-Nav3050 conforms to MIL-STD-810F for low pressure, solar radiation, rain, humidity, salt-fog, sand, and dust. The unit is also IP certified to the IP67 level and complies with type approval procedures of the Marine Equipment Directive 96/98/EC.