

# Multi-Function Research Receiver

## L1 GPS, L1/L2 GLONASS

### Features

- Dual-frequency GLONASS measurements for real-time ionospheric compensation.
- Time transfer outputs in standard Consultative Committee for the Definition of the Second (CCDS) format.
- Three-dimensional position and velocity solutions.
- Significantly improved performance compared to GPS only.

### Basic System Configuration

- Four-channel GLONASS L1/L2 P-code.
- Twelve-channel GPS/GLONASS L1 C/A-code.
- RF/IF Unit.
- IBM-compatible on-board control PC.
- Installation Guide and User's Manual.

### Options

- Single-channel expansion modules, capable of processing an additional channel of GLONASS L1 C/A code or L1/L2 P-code, maximum of 10 total channels.
- Standard 19" rack-mountable configuration IBM-compatible PC.
- Antenna choke ring.
- Temperature stabilized antenna.
- Differential reference station software.

### Operation

- User interface is via the on-board host PC. Utility programs on the PC give the user complete control over receiver configuration and output messages.

### Performance

- < 2 nsec RMS for short range (<10 km) common view time transfer using optional Temperature Stabilized Antenna.
- < 5 nsec RMS for long range (>10 km) common view time transfer using optional Temperature Stabilized Antenna.
- < 20 meters error 2drms horizontal position (unaided).

### Input

- 10 MHz reference atomic clock oscillator
- 1 PPS by exact division of 10 MHz clock by 10e6

### Outputs

- Time in CCDS Format.
- Ionospheric delay for each satellite.
- Pseudoranges, carrier-smoothed pseudoranges, and integrated carrier phase measurements.
- Carrier-to-noise ratios.
- RTCM-SC-104 differential correction messages (with optional software).
- Three-dimensional position and velocity.
- Outputs written to host computer for data collection and reduction.
- 1 PPS via rear panel SMC connector.

### Dimensions

- Industrial Computer
- RF/IFW17" x D17" x H1.75".
- Antenna/Pre-amp H10" x W15" (with ground plane).

### Environmental

- DSP and RF/IF.
- Operating: Laboratory environment. Storage: -25°C to +85°C 95% humidity.
- Antenna Operating: -25°C to +70°C 100% humidity. Storage: -25°C to +85°C 100% humidity.

### System Power

- 115 to 220 VAC, 50 to 60 Hz.
- < 3 amps at 115VAC, 60 Hz.

### Weight

- DSP and RF/IF: NTE 60 lbs.

### Availability

- Systems configured to your specific requirements are available 30 to 90 days ARO.

*Specifications are subject to change without notice.*

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