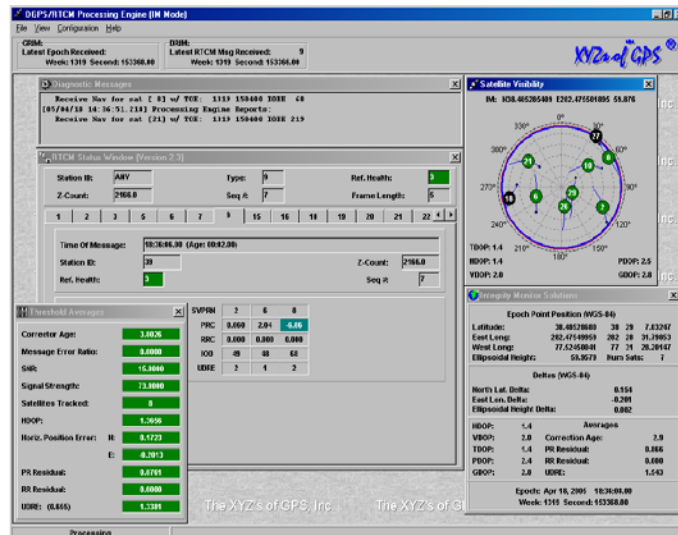




**Modernization Details**

- **Configurable:** Supports different communications protocols such as TCP/IP, RS-232, and so on.
- **Flexible:** Supports generic hardware equipment for all hardware components including server, GPS receiver, demodulator, and so on.
- **Adaptable:** Supports different hardware architectures and redundancy assumptions.
- **Network Oriented:** supports distributed processing
- **GUI based:** (See included graphics)
- **Monitor Desktop:** Fixed technician presentation plus information layering to improve productivity
- **Section 508 Compliant**
- **Capable of capture and playback**
- **Capable of data archival levels**
- **RTCM compliant:** 2.0, 2.1, 2.2, 2.3
- **RTCM message 60-63 capable**
- **RSIM 1.2 compliant:** Including full support of local/remote control station needs such as control commands, message scheduling, and status requests
- **Selectable system parameters including thresholds, timeouts, resets, GPS tracking and more**
- **Password Protection capable**
- **Windows based and multithreaded**
- **Computationally efficient:** low resource usage



**Pre and Post Integrity**

The Integrity Monitor component of the USCG’s NDGPS system evaluates RTCM messages after they are broadcast, and sends RSIM messages (to RS and CS) when correctors are out of bounds, and the RS sends satellite warnings to users. This is called post-broadcast integrity. Trimble Charisma introduces pre-integrity to the system. The concept is simple: Why not also evaluate the correctors before they are broadcast when that is possible. Pre-integrity is under development and will be available in an upcoming release.

**System Requirements**

- The system can be designed with one to four servers depending on redundancy and integrity assumptions:
- Windows XP operating system or later
- 1 GB RAM recommended
- 2 hard disks recommended (software & data)
- Network or RS-232 capable
- Modulator/DSP board for D/A message creation and analog signal to broadcast transmitter
- Demodulator radio and receiver
- GPS inputs (single or dual; code and carrier)