



# TestNet™

## General Purpose Data Acquisition System

GEOTAC is proud to introduce the TestNet™ system for distributed data acquisition and control. Based on significant advances in both hardware and software, the TestNet™ system offers a new approach to data collection and automation for geotechnical testing.

Modularity, high resolution, and expandability are key advances incorporated in TestNet™ hardware. Unlike conventional systems that employ centrally located data loggers and computer plug-in boards, compact TestNet™ modules are placed directly at test stations. Digital information is exchanged between modules and the host computer over a high speed serial network. A TestNet™ system eliminates the need to carry low level analog signals over long runs of noise susceptible cables. Being modular and scalable, a TestNet™ system can be expanded easily as needs grow. The system can grow to consist of thirty two modules networked over distances of up to 2000 feet.

Three types of TestNet™ modules are currently available. The Network module, required for each system, regulates the flow of commands and data between other modules and a computer. The AD-IO module provides four or eight channels of 22-bit analog to digital conversion and six digital I/O lines for controlling relays and switches. It also

provides 5 and 10 volt DC power for sensor excitation. The Servo module performs digital control of DC servo motors.

A graphical user interface, multi-tasking ability, ease of use, and LiveLink are key advances incorporated in TestNet™ software. This software is a Windows based, true 32-bit program. The user-friendly graphical interface provides convenience in sensor management, creating reading schedules, entering task information, and data storage. Data can be independently collected from multiple test stations simultaneously, each with different sensors and reading intervals. A monitor window allows an operator to view sensor output from across a room.

Perhaps the most exciting advance included in TestNet™ software is LiveLink. This feature makes it possible to import data, collected via the TestNet™ system, directly into spreadsheet programs such as Excel in real time. This feature provides the user with complete control over data reduction and presentation. The real time plotting feature enables an operator to make critical decisions concerning the course of testing before it is too late.

### TestNet benefits include:

- ▶ **Flexibility** - TestNet™ can be configured to fit a laboratory. Test stations can be located in different rooms, even on different floors.
- ▶ **Accuracy** - AD-IO modules are placed close to sensors. This minimizes noise problems since low level analog signals travel a short distance before being converted into digital form and transmitted over a robust serial network.
- ▶ **Scalability** - a TestNet™ system can grow along with laboratory needs. Start with a single test station and add additional modules as more test stations are needed.
- ▶ **Convenience** - TestNet™ software, a Windows based graphical package, makes it easy to collect data and control testing at multiple stations simultaneously. LiveLink makes it possible to import data directly into report ready spreadsheets.

**Affordable, reliable, easy to use a TestNet™ system is a great way to introduce data acquisition to any geotechnical testing laboratory.**



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