

## OvenMaster™ 2000 Data Acquisition & Control System: Description



The OvenMaster™ 2000 computerized temperature monitoring system, with control capability, is designed as a production control system with the inherent flexibility to be used as an R&D tool and is designed to be modified to accommodate specific user requirements.

OvenMaster™ 2000 features a completely new GUI (graphical user interface), operating in a Microsoft Windows 95/98/2000/ME/NT® environment. OvenMaster™ 2000 is a Pentium® PC based system with specifically designed RS-485 based I/O capabilities.

## OvenMaster™ 2000 Data Acquisition & Control System: Technological Advances

- Compatibility with Windows® 95/98/2000/ME/NT Operating Systems;
- “Background” operation, which allows the computer to be used for other applications while it continues to monitor and control;
- Utilization of standardized RS-485 communications eliminates the need for costly, often troublesome, dedicated data acquisition hardware;
- Monitoring and/or control of up to 32 components through a single “twisted pair” connection through the RS-485 compatible controller;
- Multiple loop, RS-485 compatible, programmable PID temperature controllers;
- User defined configuration of controllers through the GUI, including temperature ramping, set points, temperature profiling, and alarms/alerts;
- User optional keyboard “lockout” of the temperature controllers which prevents inadvertent changes that result in inaccurate results or “crashed” tests;
- “Real-Time” monitoring and control with on-screen color display of temperature, time and test protocol data, date/time, test ID, operator information, set points, targeted profiles, standard deviation, mean, and minimum/maximum temperatures plotted over time;
- Archiving of all test data and parameters for later comparative analysis;
- Printing in tabular or graphical formats.

## OvenMaster™ 2000 Data Acquisition & Control System: Applications & Features

In a typical time/temperature data acquisition system there are several components: the temperature probe, temperature controller, external signal conditioning hardware, an internal I/O (input/output) device and, of course, the software.

Historically, there have been communications limitations and other problems associated with this arrangement. The OvenMaster™ 2000 resolves these problems by employing RS-485 compatible temperature controllers and I/O devices, greatly reducing complexity... while increasing reliability and flexibility of applications.

While the typical OvenMaster™ 2000 application is designed for ovens (convection, forced air, & aging), oil baths, environmental chambers and presses, new technology now makes it possible to simultaneously communicate with a widening variety of instrumentation. This includes, for example, relative humidity, flow or rate instruments and a host of others that monitor/control concentrations, such as ozone, and noxious or combustible gasses.

The inherent flexibility of OvenMaster™ 2000 allows it to be adapted to current applications not employing RS-485 communications. Existing time/temperature dependent applications may be retrofitted to utilize the advantages of the OvenMaster™ 2000 software package. However, depending upon the instrumentation being used, some functionality may be unavailable.

The tradition of the original OvenMaster™, which has a proven history in the rugged production control environment, is carried forward by OvenMaster™ 2000 into the arena of R&D, as well as an expanding array of quality control/assurance applications.

 Detailed information on the OvenMaster™ 2000 specifications, computer program features, and technical data may be obtained by sending an e-mail to [CCSi\\_TechInfo](mailto:CCSi_TechInfo).