# 2370 MS Laboratory Management System

Measurement and Control of up to 16 Test Machines

The 2370MS Series 32-bit controller is configurable to provide servocontrol of up to 16 test machines or servoactuator channels, outfitted with up to 80 total transducers such as load cells, extensometers, strain gages, LVDT's or encoders. Test data can be gathered at a cumulative rate of up 50,000 samples per second, or approximately 6000 samples per feedback channel in the case of 8 feedback channels.

2370 software is powered by a single unified firmware and system software along with modular Global Data Sharing (GDS) application software.

With this foundation, the 2370 controller offers a wide choice of cost effective solutions in real-time digital control of servo-driven mechanical test systems, including servohydraulic, electric screw, electrodynamic and servopneumatic actuators.

2370 controllers offer a common platform for single channel, multi-channel and multi-station configurations. Three packaged configurations are available including
- MTL32SA Standalone system,
- MTL32SS Single-station solution, and
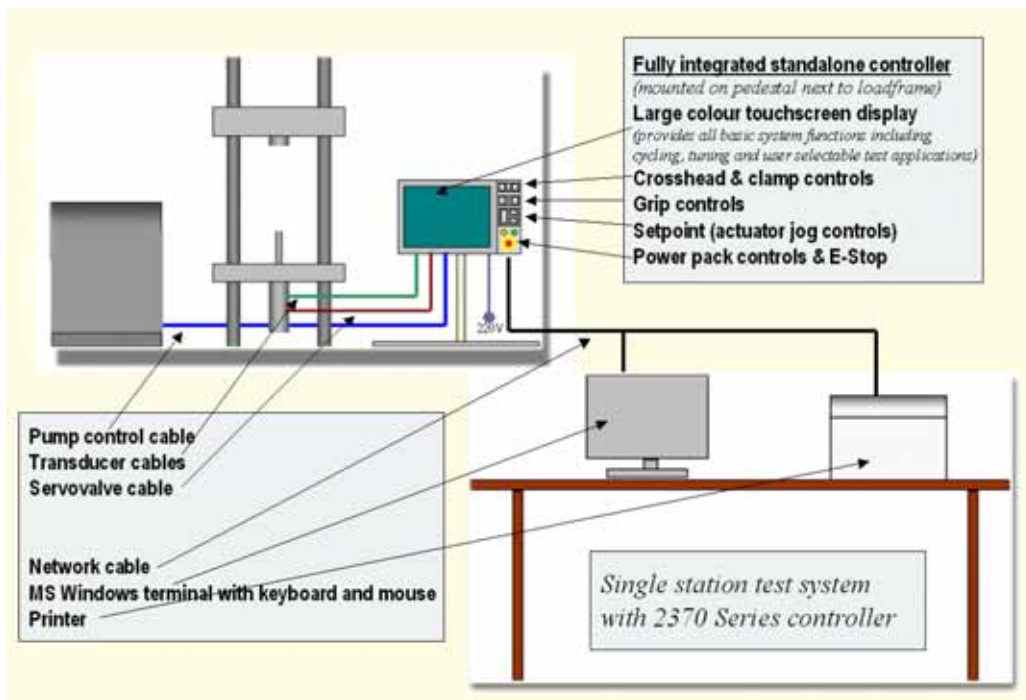- MTL32MS Multi-station solution.

The SS and MS controllers require a separate host PC running Microsoft Windows. All operations including system set up, calibration and servotuning are performed from this PC. All application software is also run from this computer.

The SA controller is added to an MS controller and is integrated into a single compact enclosure, complete with a digital color touch screen interface (other display choices optional) through which the operator can perform practically all operations related to the test system. The SA controller configuration requires a network connection to the host PC and 2370MS controller.

A unique feature of 2370 control systems is the GDS software environment. The GDS environment effectively converts the control system into an application server, permitting the connection of additional networked Microsoft Windows terminals , each with its own keyboard and mouse and Windows desktop.

2370MS Overview
- 300 MIPS DSP, 24-bit analog data conversion, 32-bit data acquisition and 40-bit servo-loop calculations.
- Three stage data filtering, oversampling and user selectable digital filters
- Up to 16 control channels
- Up to 80 feedbacks
- Digital loop update frequency between 2 kHz and 8 kHz depending on number of control channels
- MTL32 kernel software for basic operations including system or machine set up
- Wide choice of single and multi-channel GDS applications
- Open source code in Microsoft Office environment for many applications

**Fully integrated standalone controller**
*(mounted on pedestal next to loadframe)*

**Large colour touchscreen display**
*(provides all basic system functions including cycling, tuning and user selectable test applications)*

**Crosshead & clamp controls**

**Grip controls**

**Setpoint (actuator jog controls)**

**Power pack controls & E-Stop**

**Pump control cable**
**Transducer cables**
**Servovalve cable**

**Network cable**
**MS Windows terminal with keyboard and mouse**
**Printer**

*Single station test system with 2370 Series controller*

2370 shown in typical test station (servohydraulic)