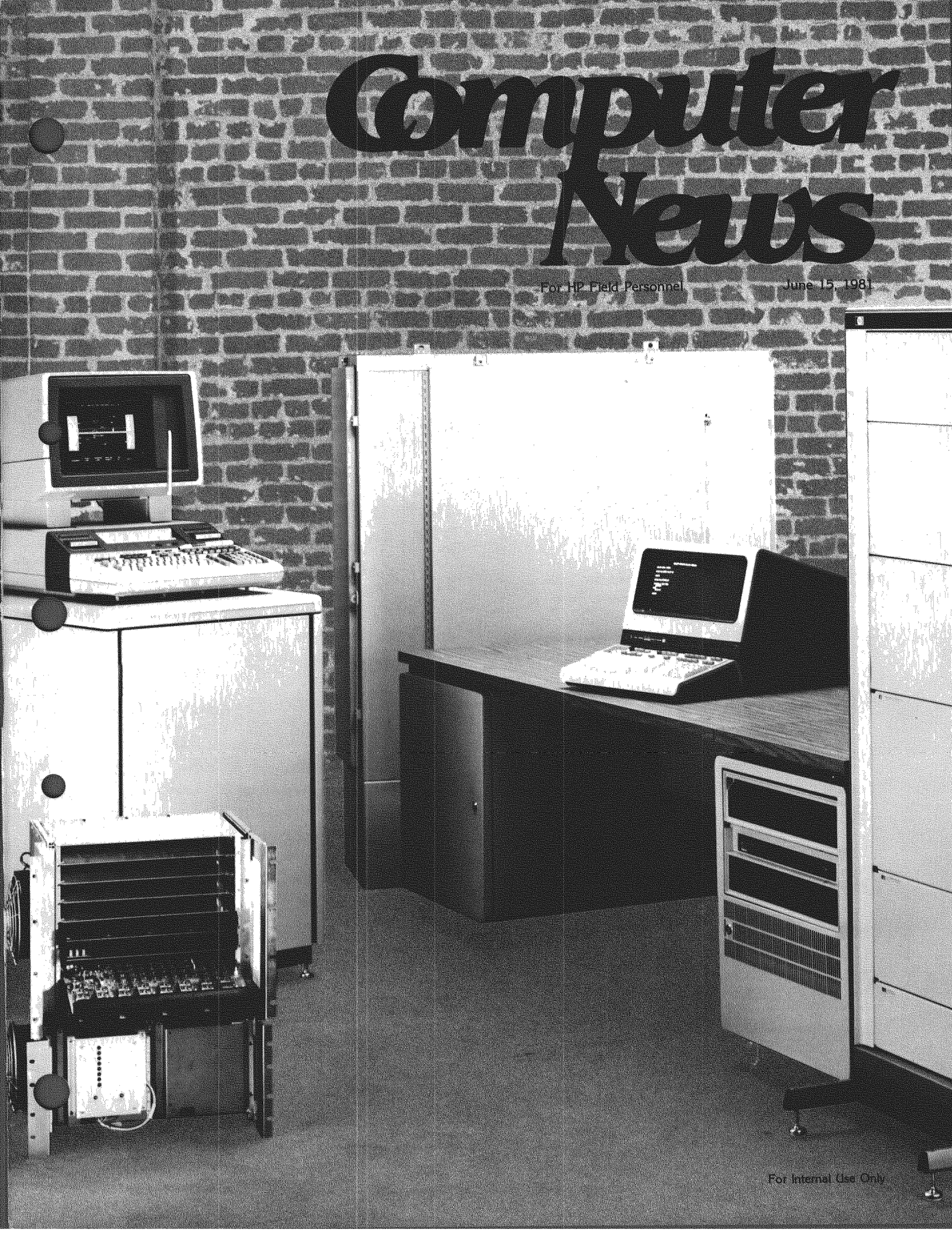
Computer News

For HP Field Personnel

June 15, 1981



For Internal Use Only

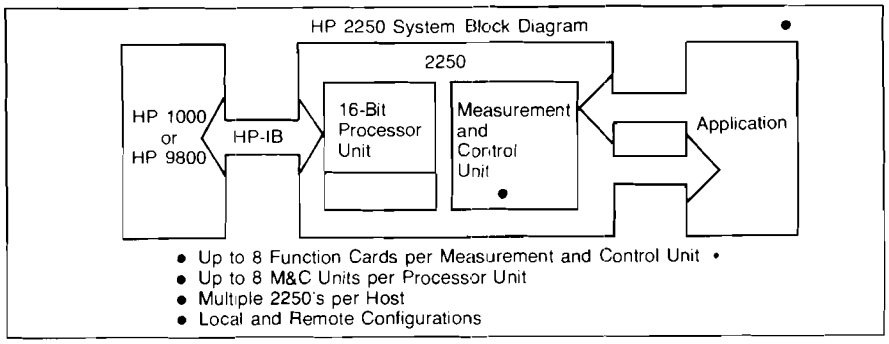
RVD

Introducing the HP 2250 Measurement and Control Processor

By Duncan Campbell/RVD

We proudly present the new family of HP 2250 Measurement and Control Processors. The 2250 has been designed to address the real needs of laboratory and industrial automation.

Automation is one of the last keys to breaking through the productivity barrier. With automation, the maximum benefit of time and resources can be gained. The HP 2250 has been designed as a system to meet these realities, attacking both the direct and implicit costs of automation. It takes the sensors and actuators appropriate to your application and connects them to your choice of computer or desktop systems with solid measurement performance, end-to-end specifications and worldwide Hewlett-Packard support.



The HP 2250 provides the interface to the automation application. A comprehensive set of high performance analog and digital function cards are used to interface to the broad range of sensors and actuators commonly found in laboratories, factory floors and process plants. The cards include modular on-board signal conditioning that permits accurate and reliable interfacing in the most demanding of applications. An HP 2250 processor can interface up to 2,032 analog and digital points. Typical customer applications will initially require 100 to 500 points and later expand to the 2250's full capacity.

Control of all function cards is handled completely by the 2250 without computer intervention. The decoupled operation offers predictable automation performance while maximizing total computer system performance.

The 2250 uses an easy-to-program measurement and control language, the MCL/50. HP understands your customer does not want to spend time writing code. He/she is concerned with productivity. MCL/50 is the answer! MCL/50 is designed so the 2250 can handle a big part of the automation programming effort independently of the computer. Application-oriented commands are sent to the 2250 in an ASCII string to be compiled for execution. Automation tasks, including data acquisition, data reduction and conversion to engineering units, data comparisons for decision-making, execution of control algorithms, and alarm task scheduling are easily implemented using the high level MCL/50 capabilities.

The 2250 Measurement and Control family currently features four packaging alternatives. The configurations are: HP 9800 Mobile Laboratory Automation System using the 2250M (June 1 CPL) with a 9800 Desktop Host Computer; HP 1000 High Performance Automation System using the 2250R as a rack-mounted expandable configuration with HP 1000 Host Computer; HP 1000 Industrial Automation System using the 2250N as a NEMA mounted configuration with a host 1000 computer, and in the future with a "plug-in" 1000XL Host Computer as DS/1000 node; or the 2250 in its components parts so the customer can rack it to fit his needs. the result is that HP can provide a single-vendor solution for your customer with local or remote interfacing to the HP host computer.

The 2250 is an exciting product launched by the Technial Computer Group. It competes and wins in applications in the fields of Automated Electromechanical Test and Analysis, Machine Monitoring and Control, Process Supervision, and in the Automation of R&D Laboratories. These "best fit" applications can be implemented by the HP Automation Customer with minor additions of tools outside of HP. In other cases you solve an application by a System OEM using the HP automation tools.

In competitively installed accounts, the 2250 can be your best foot in a "DEC" house. The 2250 product places the HP automation flag on the customer's factory floor and represents the front line of HP products for industrial automation in the '80's.

HP Automation Library for Greater HP 2250 Capabilities

By Alan Housley/RVD

To greatly enhance the capabilities of your customer's 2250 system, you should make sure to sell the HP Automation Library software package. This library will add capabilities such as Continuous Data Acquisition to disc with up to 50,000 samples/second, downloaded FORTRAN subroutines for execution in the 2250, and an MCL/50 exercisor program for instant hands-on use of the 2250.

The MCL/50 exercisor, known as MCX, provides a simple interactive dialog between the programmer and the 2250, with no BASIC or FORTRAN programming involved. MCX capabilities include status reporting of the 2250 and its tasks, syntax, runtime or communication error reporting, and results can be displayed in integer, octal, or real formats. Also included with MCX is a "help" file describing all the MCL/50 commands and their syntax.

For high speed data acquisition, provided is a program known as CDA (Continuous Data Acquisition). This is specialized software that is executed in the 2250, providing up to 50,000 samples/second to 2250 memory. When used with the program GRAB and GRAB1 (both included in the Automation Library), you can obtain up to 50,000 samples/second to disc, without missing a single sample. That's 200,000 bytes/second of information to disc; an unmatched capability of HP.

Finally, for customized routines that are to execute within the 2250 (e.g., digital filtering algorithms, PID control algorithms, or standard computer library functions like SQUARE ROOT) we've provided the 2250 Subroutine Loader (LINKR). LINKR is used to link RTE relocatable files from the HP 1000 producing an absolute format file suitable to download to the 2250 for execution on command within the 2250.

The Automation Library for HP 1000 Computers can be ordered by the product number 25581A and is priced at $1000. Currently, there are both 264X tape format and dual sided floppy media options. By the end of the summer, we will also offer a mini-floppy option for use on the Model 5.

The Automation Library for 9835/45 Desktop Computers is also available on a consult factory availability (25582A at $750). The desktop version does not include the subroutine linker (LINKR) or the GRAB programs.

HP 2250M Mobile Measurement and Control Processor

By Alan Housley/RVD

The HP 2250M Mobile Measurement and Control Processor has been listed in the Corporate Price List since June 1. The 2250M is an excellent opportunity for you to sell in the laboratory environment, especially for control of laboratory tests of up to 256 points.

The heart of the 2250M is the 2104AR processor unit that controls all 2250 measurement and control tasks. Also included in the 2250M is the power supply and 10 field wiring assemblies, all packaged in a 36 inch low-boy cabinet. There is space available for mounting one 2251 Measurement and Control Unit (MCU). The MCU will allow for up to eight analog and/or digital measurement and control cards.

The 2250 is an HP-IB peripheral that offers a wide variety of configurations. You can connect the 2250M up to an HP 1000 Computer, or you may place an HP 9835 or HP 9845 Desktop Computer on top of the cabinet, hook up the HP-IB cable to the processor, for a complete mobile measurement and control system allowing you to perform many laboratory tests, and providing a real-time measurement and control interface.

The 2250M sells for $10,000 and is part of product line 65. The Measurement and Control Unit (2251AR) that mounts into the 2250M cabinet, and the analog and digital M&C cards are sold separately under product line 86.

HP 2250 Follow-on Training "Completed"

By John Streeter/RVD

The initial introduction of the HP 2250 and the training of SF01/SF02 SEs was completed in June. Since the Telesat NPT on April 22, over 2000 HP sales personnel have been trained to various levels.

This training was conducted by both Roseville and sales area personnel, according to the HP 2250 Introduction Plan. The Industrial Automation opportunity will require *continued* improvement of your product and market knowledge. Roseville will try to assist in this area by offering either reference information or training activities.

Please let us know how we can specifically help you (i.e., presentations to your district, additional Roseville SE training, seminar presentations/visits, etc.).

Can We Obsolete These Products?

By Bob Bessin/RVD

The following data communications products have realized low sales over a period of nine months or more and are being considered for obsolescence. Feedback from the field can help make the right decision. If you have any comments on whether or not the following products should be obsoleted, please contact me, Bob Bessin, at the Roseville Division. Thanks for your assistance.

Product #	*Description*
12531C	Buffered Teleprinter Interface
12889A	Hardwire Serial Interface
*91712A	75 meter DS/1000 IV Cable
*91713A	DS/1000 IV Connector Kit
*91714A	300 meter DS/1000 IV Cable Kit
*91720A	250 ft DS/1000 IV Cable
*91721A	250 ft DS/1000 IV Cable Kit

*all cables can be ordered through Belden Corporation.

HP 2250 NPT Videotape

By Chuck Ernst/Corporate

Brice Clark from Roseville Division introduces the manner in which the HP 2250 meets the three key needs of the industrial automation market:

1) For the automation application: Unmatched Hardware
2) For the automation engineer: Easy To Use
3) for the automation environment: Appropriate Package

To Order: Transmit a HEART (COCHISE) I-2 order to Video Products, Palo Alto, Sales Force 09, Produce Line 95, Marketing Division 0700, Supplying Division 07. Order 90364RZ for a videocassette.