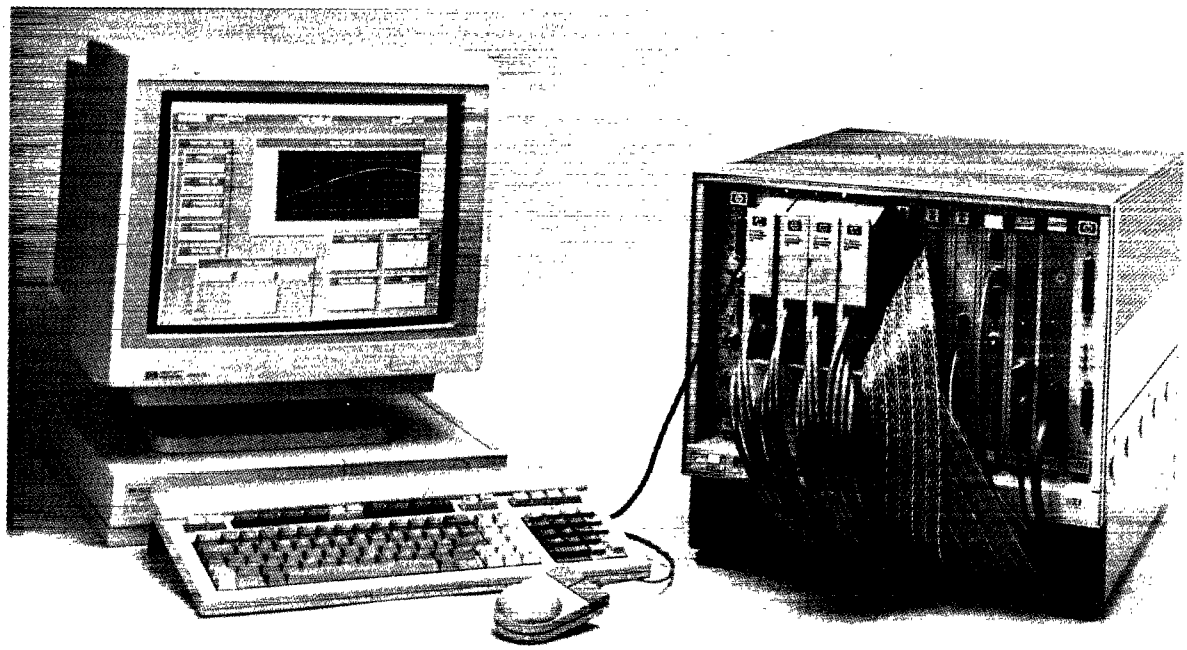

HP 75000 Model HD2000/Series C VXI

The HD2000 System is a high performance data acquisition initially targeted to do tests in jet engines, auto piston engines, and wind tunnel applications. These applications required a complete set of measurement, control, and interfacing capabilities, including static and dynamic transient temperatures, strains, pressures, analog voltages, resistances, frequencies, RPM, period, digital input, and angular rotation. Output control and interfacing includes digital and analog outputs, RS-232, LAN, IEEE-488, ARINC-429, MIL-STD-1553, and IRIG-B Time codes.

In fact, we have found these applications required solutions to the same problems typical of many others. For this reason the system and its core elements have proven much more useful and popular and are being used in many other types of applications.

Elements of the HD2000 System

The HD2000 is a group of VXI products which, when brought together, form a system as described above. Specific VXI products that provide the HD2000 its capabilities are: (These products are described more completely in the VXIbus Systems section.)

Embedded Controller	E1499A
High-Speed Scanning A/D	E1413B
4-Channel Counter/Totalizer	E1332A
4-Channel D/A Converter	E1328A
Quad 8-bit Digital I/O	E1330B
Synchro-Resolver	DDCC-37001
IRIG Time Code Processor	BANC-350
ARINC-429 Interface	TASC-429
MIL-STD-1553 Interface	DDCC-1553

The High-Speed Scanning A/D

One of the products in this suite is especially valuable in any high-performance data acquisition application—the High-Speed Scanning A/D (HP E1413B). This card provides a true breakthrough in analog measurement capability. It is a combination mux and A/D running at 100 Kreadings/second with 16-bit resolution. It has 64-channel input and provides mixed-signal analog measurements of unprecedented accuracy, does on-board conversion to engineering units on-the-fly—all at full speed! Plug-on signal conditioning modules (SCPs) provide on-board convenience for handling signals of all types, providing gain, filtering, sample, and hold and straingage completion circuitry. The card provides reliable, efficient coupling to the computer through a unique dual data path design. A 64K reading FIFO buffer assures the reading will not be lost if the computer is not ready for it, while a second, parallel, 64K reading buffer provides the last reading on each of the 64 channels—a concept that allows convenient monitoring of channels and the ability to evaluate an out-of-limit condition quickly. The E1413B is a register-based card, programmed in C-SCPI.