TOTAL, REAL-TIME SIGNAL PROCESSING

Array Processing
PLUS Data Interpretation
PLUS Control

All in a single, superfast, easily programmable mainframe

Real-time signal processing applications from Signal Search, Recognition and Demodulation to ECM and RADAR can benefit from the ability of the AR-10 High Speed Processors to combine Array Processing, Data Interpretation, and Control in a COMPLETE APPLICATION PROGRAM.

An AR-10 Processor performs the high-speed number-crunching you need for large scale applications. It makes Data and Time Dependent Calculations and Decisions. It provides Real-Time Control. And, it is readily programmed by the user.

As a field proven system, it comes with the support you'd expect — from a Real-Time AR-10 Resident Supervisor providing Input-Output and System Control Software to A/D and D/A Converters. A complete set of Utility Software is also provided to allow you to develop efficient assembly language programs.

Parallel subprocessor architecture allows simultaneous, high-speed execution of independent processing routines. AR-10 Series Modularity allows you to optimize the amount of number-crunching and decision/control power to meet your requirement. A Data Dependent Subprocessor (a superfast minicomputer) performs System Control, I/O Management, Logical and Arithmetic Functions concurrent with Test and Branch operations. A Pipelined Arithmetic Subprocessor is optimized for Repetitive Arithmetic Operations required in Real Time Signal Processing.

Just a few of the many real-time functions performed in these subprocessors are:

**DATA DEPENDENT SUBPROCESSOR**
- Signal Sorting
- Pattern Recognition
- Signal Synchronization
- Phase Lock Loops
- Data Compaction
- Display Generation
- Pulse Train Analysis
- System Control

**PIPELINED ARITHMETIC SUBPROCESSOR**
- Array Multiplication
- Beam Forming
- Fast Fourier Transforms
- Heterodyning
- Digital Filtering
- Magnitude Detection
- Coordinate Conversion
- Signal Demodulation

... and many others

A unique "window into the system"—the System Control Analyzer (AR/SCAN) option aids both system development and performance monitoring as well as real-time debugging. It shows, on a scope, waveforms of EXACTLY what is happening and has absolutely no effect on ongoing signal processing.

TOTALLY SUPPORTED AR-10 HIGH SPEED PROCESSORS* are available now. For the complete AR-10 picture, call today (617) 891-4700 or write: Adams-Russell, Digital Processing Division, 280 Bear Hill Road, Waltham, Mass. 02154.

*We provide full system support from concept and analysis through implementation.