What's New?

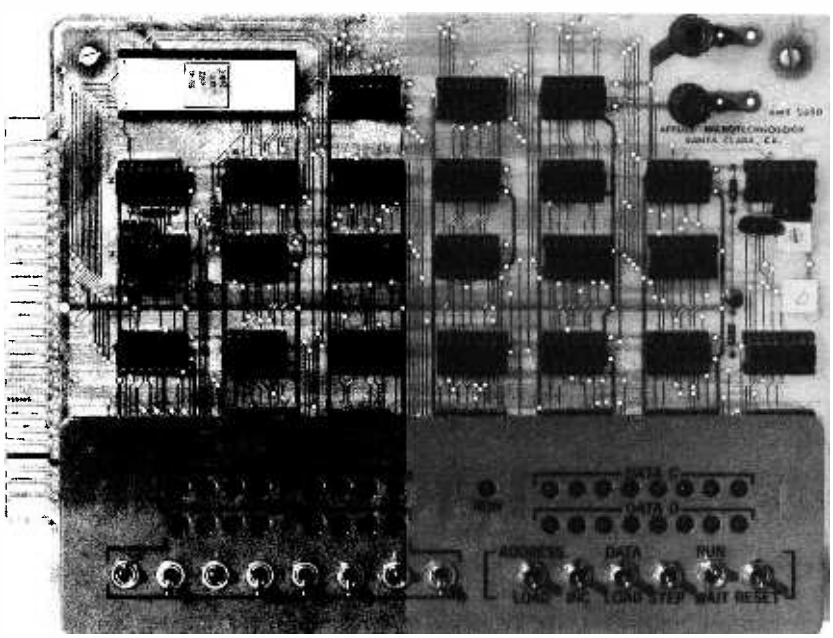
It's About Time!

We were beginning to think nobody would pick up on the Signetics 2650 processor, a design which has been "announced" since late 1974 but only in the past six months or so available off the shelf. The 2650 is an 8 bit central processor which has 7 on chip registers organized as two banks of three registers with the odd remaining register shared between both banks. Also on the chip are the stack pointer and the program counter, both with 15 bits, for a total memory address space of 32 K bytes, divided into four pages of 8 K bytes. Most direct addressing is done using 13 bits for an address within the "current page." The use of only 13 bits for direct addressing allows the instruction set to have a fairly wide range of addressing modes expressed in its multiple byte instructions: Register addressing (1 byte); immediate addressing (2 bytes); relative addressing, optionally indirect (2 bytes); absolute addressing for data in the current page (3 bytes) with optional modes including indexing, indirection, indirect auto increment, indirect auto decrement; absolute addressing for branching anywhere in address space with optional indirection (3 bytes), and single byte operations with inherent addressing. [BYTE has an article in the works on details of the 2650.]

The AMT 2650

Briefly, what Applied Microtechnology, 100 N Winchester Blvd, Suite 260, Santa Clara CA 95050, has done is to take the 2650 processor and package it as a single board computer system as shown here. The result is called the AMT 2650. The single card computer system comes assembled and tested at $195, with an optional power supply in a desk top package running $39.95. The following is a quotation from the product announcement received at BYTE:

> Applied Microtechnology of Santa Clara has announced the AMT 2650, a low cost completely self-contained microcomputer card system employing the Signetics 2650 Microprocessor. The unit allows the circuit and system designer to hand load and debug programs using the powerful 2650 instruction set; additionally a 62 pin edge connector on the card outputs all microprocessor functions plus two fully buffered TTL compatible output data ports for interfacing with the user's hardware application.
>
> The system includes a panel mounted on the card that includes data/address LED displays, data port LEDs and reset. Programs can be single stepped instruction-by-instruction for program debug. Addresses can be independently incremented by hand and are automatically incremented after each data load.
>
> The AMT 2650 contains 256 bytes of RAM (additional RAM, PROM, and ROM can be interfaced directly via the edge connector). The system requires 5 VDC/2A (optional power supply available from the vendor).



This processor card from AMT looks like an excellent starting point for a computer system which can be used to illustrate principles of programming and for beginning experimentation in computer systems. With buffering and expansion of memory capability, it should be possible to start with this seed and grow a full blown general purpose system with one of the best 8 bit instruction sets on the market today.■

Sherlock Ohms Department

How do you deduce what major companies are about to enter the personal computing field in a big way? Why, scan the help wanted pages of your friendly local metropolitan newspaper and see who's hiring whom in terms of qualifications and experience. It's a reliable way to bypass the grapevine.■