

The ALR MPS: Modular Micro Channel

Advanced Logic Research

gambles that it can

take a byte out of

the True Blue market

■
Stan Miastkowski



prices—\$1995 with no hard disk drive or graphics. And there's a well-chosen selection of upgrade options. For example, a 33-MHz 386-based MPS with a 16K-byte static RAM cache, an 80-megabyte hard disk drive, a Super VGA card, and a 14-inch color monitor costs about \$4500. That's nearly half the price of a comparably equipped IBM PS/2.

ALR's entry is a compact 6 by 15 by 17 inches, weighing in at about 35 pounds. The motherboard in the preproduction MPS that I looked at still had hand-wired patches, but careful layout and construction were evident. Packing all this circuitry into a small case isn't a trivial undertaking, and it requires surface-mount fabrication techniques. ALR has used the Intel Micro Channel chip set and has ended up with considerably more expansion space than you find in the PS/2s. The MPS has a total of eight expansion slots (versus three in a comparable PS/2). Two of these are proprietary ALR slots, but there are four 16-bit and two 32-bit Micro Channel slots.

The World Gets Smaller

ALR has also opted for a semimodular case layout. As with a true PS/2, you pop out a few plastic buttons, and the drive bays lift off. But you still need to fiddle with cable connectors. And speaking of drives, ALR has also decided to emulate the PS/2 approach of eschewing 5¼-inch drives. You have a choice: Take 3½-inch drives or leave them. Period. But there's lots of room for them: space for four half-height units on the front panel, and room for two 3½-inch hard disk drives (mounted vertically) inside the case.

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Despite all the circuitry crammed onto the MPS's motherboard (including an Intelligent Drive Electronics hard disk drive interface), there's plenty of room for expansion. A basic MPS comes with 1 MB of surface-mounted RAM on the motherboard. Add 256K-byte, 1-MB, or 4-MB single in-line memory modules to the four on-board sockets, and you can upgrade to 2, 5, or 17 MB in one fell swoop. Still not enough for you? Add an ALR 32-bit RAM card (that takes up to 22 MB), and you end up with a total system capacity of 49 MB.

Adding Processing Power

At press time, the cost of upgrading an MPS machine to a 486/25 was pegged at \$1995; moving up to a 486/33 was a wallet-clearing \$3195. But that's likely to change quickly; 486/25s are becoming more available, while 486/33s are likely to be hard to come by for some time. ALR also offers a trade-in rebate for processor modules. The rebate varies as the market changes, so check with the company for the latest details.

Those who are truly power (or is that status?) hungry can equip the MPS with a high-end TMS34010-based graphics

Just when you thought you had a handle on all those computer terms, here's another acronym for you: MPS. It stands for Modular Personal System, and it's Advanced Logic Research's latest PC incarnation on the way to that ever-elusive system nirvana.

ALR has carved out a solitary and comfortable niche for itself with well-built systems notable for their easy-to-upgrade processor cards. It started off last year with the 286-based PowerFlex and kept the industry hopping earlier this year with the PowerVEISA, a 386-based machine with the Extended Industry Standard Architecture (EISA) bus.

With "Logic" in your corporate moniker, I guess you make logical business decisions. So it's no surprise that the latest ALR machine has taken the "logical" step of jumping headfirst into the Micro Channel market. The ALR MPS is essentially a nicely built PS/2 clone (see photo 1) that offers several features that Big Blue's entries do not, such as truly easy upgrade. A basic MPS unit comes equipped with a 33-MHz 386. Want more power later? No problem. All you need to do is pull the 386 CPU board out of its proprietary slot and plug in an i486 (either 25 or 33 MHz) (see photo 2). Once you get the case off, the whole process takes about 30 seconds. And unlike the processor upgrade schemes that other manufacturers have opted for, ALR's requires no change of software or BIOS ROM upgrade. It's truly plug and play.

Riding the Micro Channel

Of course, other ALR systems upgrade in the same way. So what's the point of the MPS? Mainly, the Micro Channel. While the folks at IBM probably aren't quaking in their collective wingtips over ALR's Micro Channel entry, ALR has frosted the competitive cake with lots of sweet goodies, especially for the steely-eyed bean counters of the bottom line. Stripped MPS systems start at lowball

PRELIMINARY BYTE LOW-LEVEL BENCHMARK SCORES

We tested the ALR MPS with three different plug-in processor modules. Although its CPU results were on the low side of competing machines (and the video results were usually fast), note that the ALR was a prototype and the final production versions may (and probably will) differ.

	CPU	FPU	Disk I/O	Video
ALR MPS 386/33	4.83	14.35	1.61	11.77
ALR MPS 486/25	5.07	24.73	2.63	13.52
ALR MPS 486/33	6.82	32.98	2.68	17.13
ALR PowerVEISA 386/33	9.69	37.03	3.48	4.02
Compaq Deskpro 386/33	6.09	15.50	2.90	4.53
AST Premium 486/33	8.21	37.10	N/A	3.40
Cheetah Gold 33 (486/25)	6.52	21.49	9.49	5.57

Note: Benchmark results are indexed to show relative performance; higher numbers indicate better performance. For all indexes, an 8-MHz IBM PC AT running MS-DOS 3.30=1.

Photo 1: *The ALR MPS is highly modular, although not to the extent of the IBM PS/2 series, with which it directly competes. The drive bays detach with three pop-up plastic buttons, giving you easy access to the motherboard.*

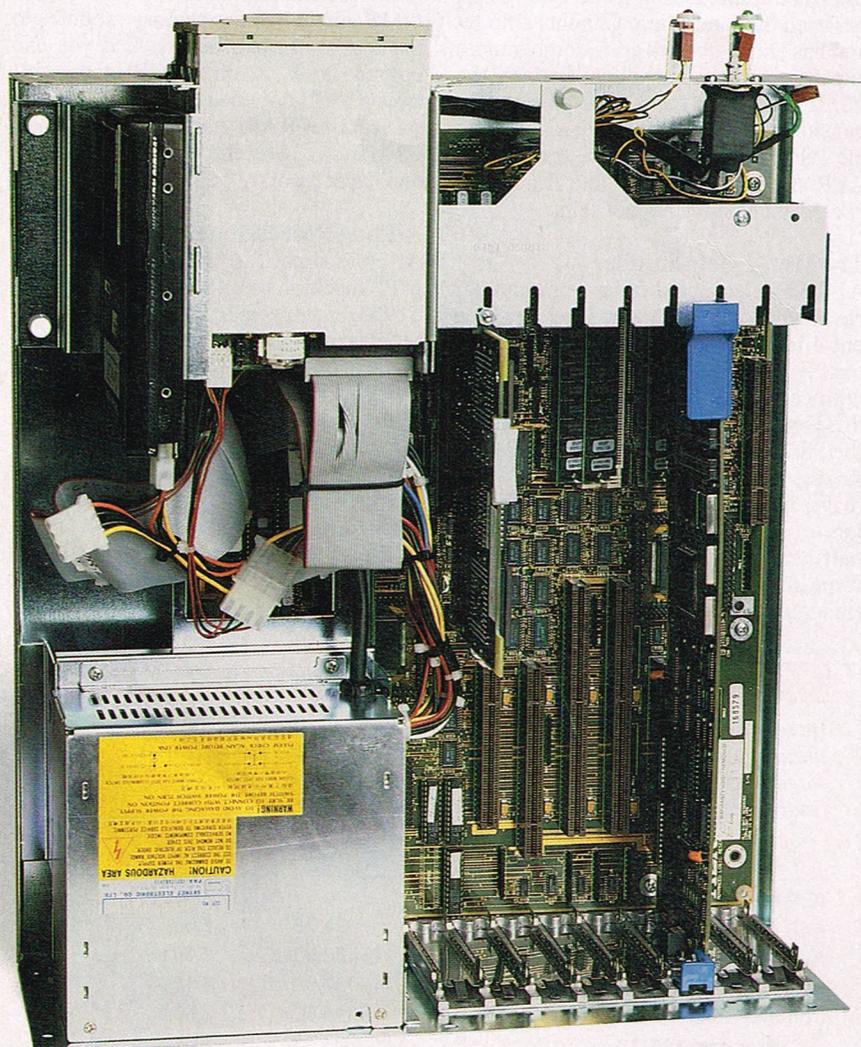
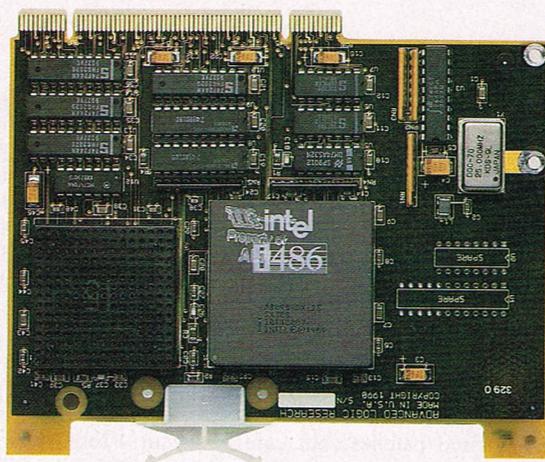


Photo 2: *You can upgrade ALR's CPU module (the 486/25 with a Weitek socket is shown here) in about 5 minutes. You don't need to upgrade the software or firmware.*

processor that emulates the 8514/A (\$3300 with a 15-inch monitor; \$5300 with a 21-inch monitor). And if the MPS is going to see duty as a network file server, there's a 330-MB hard disk drive that will add \$2100 to the system price.

Mass Transportation

EISA? Industry Standard Architecture (formerly the AT bus)? Micro Channel architecture? Sometimes I feel like a confused commuter trying to decide which bus to take. An ALR spokesperson told me that ISA is essentially dead. That's an understandable statement on the company's part, because it wants to sell lots of EISA and Micro Channel machines. But ISA-based systems are far from obsolete, especially since the high-bandwidth, multiprocessing promises of both EISA and Micro Channel remain largely a dream. Many more add-in boards are available for the Micro Channel than for the EISA bus, but most are simple repackages of ISA products that offer little (or, more often, nothing) in the way of increased performance.

That situation will change, of course; and ALR is in a particularly good position to be a strong contender as the PC market eases leisurely toward high-power processors and high-bandwidth buses—complementary technologies that are just plain made for each other. The ability to upgrade your PC's processor in the future remains an intriguing one. (There will be an i586 one of these days.)

If you're considering going for a bus upgrade, the choice between EISA and Micro Channel is a somewhat thornier issue. Except for ever-true, ever-blue IBM users, Micro Channel-bus PCs haven't taken off since their introduction some 2½ years ago. Other non-IBM Micro Channel machines, such as those made by NCR, Reply, Tandy, and Wang, have largely been rolled out so that the companies can tout their "complete lines" to Big Corporate Buyers. I have a hunch that the ALR MPS is very much the same.

The MPS is well designed and well built, and it shows a high degree of engineering expertise and sophistication. But for the time being, its user base is likely to be confined to large companies who specify Micro Channel yet are looking for a lower-priced (and upgradable) alternative. While EISA and Micro Channel slug it out, ALR can profitably work both sides of the street. ■

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