

Sales Release Package

SKS-HP DISK SUBSYSTEMS

Two New High Performance
Additions
to our Current SKS Line

Faster Data Transfer Rate !!

Lower Cost per MB !!

Higher Capacity Drives !!

Faster Mirroring Resynch !!

September 20, 1988

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Using these components:

New! SC2-3 Synch/Asynch SCSI Disk Controller

New! ³³⁰~~330~~-MB Synchronous SCSI Disk Drive

New! 601-MB Synchronous SCSI Disk Drive

Zetaco is proud to announce two new high performance disk subsystems:

³³⁰
SKS-HP~~330~~ and SKS-HP601

SHARE THE INFORMATION!

This package is intended for the Zetaco sales force only; a similar package will be released to Authorized Stocking Distributors after Alpha testing so that more detail can be included, and will be used as part of a field roadshow planned for October.

While the document itself is for internal use, the information it contains may be shared with customers, distributors, and sales prospects. Some of the performance data is estimated, not final, so use numbers with caution, but the overall performance discussion is accurate.

We are accepting orders currently at 60 day ARO. Expect Zetaco's normal 30 day ARO in the near future.

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SKS-HP~~200~~ & SKS-HP601: Major Features

- * **Higher Subsystem Performance....** Through drive parallelism in multi-drive configurations, and 2nd generation SCSI hardware technology.
- * **Faster Data Transfers.....** 4 MB/sec transfer with bursts up to 4.75, achieved through synchronous SCSI technology on both controller & drive/s.
- * **Larger Capacities per Drive.....** Offering the latest & greatest: synchronous SCSI drives, in 5.25" form factor, your choice of ~~300~~ or 601 formatted MB per drive. 330
- * **Data General Compatibility.....** Through true emulation of Argus/DPJ driver. No patching, no modifications, just Plug-and-Play compatibility.
- * **Variety.....** Removable or fixed disk modules, or both on one subsystem!
- * **Configuration Flexibility.....** Choose from ~~300-MB~~, ³³⁰~~300~~-MB, and 601-MB drive modules. Mix 'n match as needed, up to 7 drives on the same controller.
- * **Easy to Fit into System.....** Drives are of the 5.25" form factor, and two of them need only 3.5" of vertical space in a standard rack.
- * **Highly Reliable.....** Although the drive models are new, they are simply the latest generation of a drive technology with a field-proven 100,000-hour MTBF! The new controller, as well, is an evolution of proven technology, with 100,000-hour MTBF!
- * **Improved Features.....** Zetaco has significantly improved the mirroring resynch time on the SCZ-3 over the SCZ-1.

330 SKS-HP660

ANNOUNCING: SKS-HP~~200~~, SKS-HP601, SKS-1202 !!!

Zetaco is pleased to announce new models in our field-proven SKS line of disk subsystems, based on:

New! SCZ-3 Synch/Asynch SCSI Disk Controller

New! ~~200~~-MB Synchronous SCSI Disk Drive

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New! 601-MB Synchronous SCSI Disk Drive

With a Mix 'n Match strategy, Zetaco now combines these components to provide SKS-HP (HIGH PERFORMANCE) Disk Subsystems to Data General OEM's, VAR's, and End-Users, to answer their needs to:

- * Maximize disk transactions per \$....competing effectively against Data General's RAMS and CSS.

And, the new 601-MB drive may be combined with our current SCZ-1 Disk Controller as the SKS-1202, for:

- * Higher capacity per drive
- * Lower cost/MB (significantly lower than CSS)

~~FLEXIBILITY IS MAXIMIZED! While highest performance is obtained using all synchronous SCSI components, our previous 300-MB asynchronous drive is supported on the new SCZ-3 controller, and the new synchronous drives are supported in asynchronous mode on the SCZ-1. Users have full flexibility to mix and match asynchronous and synchronous drives even in the same subsystem. We recommend that users of removable modules standardize on one size drive.~~

COMPATIBILITY IS MAXIMIZED!! Via mix and match of new SCSI components with previous SKS subsystems, we have retained packaging compatibility. We still offer the same 3-1/2" disk enclosure -- it now can boost up to 1202 MB. Removable modules are still offered, now bigger (601 MB) and faster (synchronous SCSI) than ever!

What is the key to SKS-HP higher performance?

SKS-HP models provide improved performance over previous SKS subsystems through several product improvements:

1. Due to synchronous technology, the SKS-HP bus is capable of a sustained data transfer rate of 4 MB/sec, with burst capability up to 4.7 MB/sec. The subsystem can write to the disk buffer at synchronous speed. Reads will be at the data rate of the drive, but if a drive must wait for the controller to service another drive, it puts the data in the buffer and transfers at synchronous speed when the controller is ready.
2. SKS-HP drives and controller have a new generation SCSI chip set with significantly reduced SCSI overhead. While previous chip sets had command overhead of 1.2 to 1.5 milliseconds, the new generation has only .5 to .6 milliseconds overhead -- only one third to one half of what it was!
3. SKS-HP subsystems are capable of overlapping all mechanical functions of the drives. By contrast, previous controllers could overlap drive seeks, which aided higher performance, but the controller had to wait the drive latency (typical average 8.3 ms) for each disk transfer. Now, latency can also be overlapped, so another significant improvement in performance is achieved!

In a single drive environment with both subsystems doing 4 sector reads from random locations on the media, an SKS subsystem is capable of 29 transactions per second, but an SKS-HP is capable of 34. This is a 17% improvement in a single drive environment.

The most significant improvement with SKS-HP occurs when multiple drives are used. The SKS-HP controller is only active about 15% of the time in the above single drive disk transaction. In a two drive subsystem, contentions between drives happen infrequently, because the controller is still typically waiting for the drives. When contentions do occur transfers on the SCSI bus occur from the drive buffers at synchronous speed gaining some of the wait time back. Performance in transactions/sec is nearly directly proportional to the number of drives supported as we add the second, third, and fourth drives. Past four drives, another controller is recommended to extend performance even more.

How will SKS-HP performance
compare to Data General's RAMS?

Theoretically, they're close because the technical strategy of RAMS and SKS-HP are very similar. We'll actually know more when the in-house testing is done, and will pass the results on to you. Meanwhile, our theoretical estimates are included here (and noted as estimates.)

Like SKS-HP, Data General's RAMS also has a high speed bus (5 MB/sec) and the capability to overlap both seeks and latency, resulting in the controller being active about 15% of the time during a transaction. Both SKS-HP and RAMS utilize the low controller involvement in a transaction to allow a multiple-drive strategy that significantly improves performance as drives are added.

RAMS has an slight advantage in most other drive performance parameters (see table), but SKS-HP has a significant advantage in that it is built around drives that can be added to take advantage of parallelism at a much lower cost.

This all nets out to a one-drive RAMS performing 37.3 transactions per second (TA/sec), compared to a one-drive SKS-HP performing 30₂ TA/sec, or 90% of RAMS. **However, with SKS-HP, we can add one extra drive and outperform RAMS, while remaining at significantly lower cost to provide better performance.**

SKS-HP drives are built on a high production line that has produced literally millions of drives, which therefore allows us to offer lower prices, in turn allowing SKS-HP pricing that makes this multiple drive strategy practical for any performance-oriented MV user.

Two add-on SKS-HP ⁶⁶⁰~~601~~-MB drives are priced at \$12,595, while one 500-MB RAMS add-on drive is \$22,000 -- or **43% more cost for 37% fewer megabytes!** Utilizing the 601-MB drives, SKS-HP provides 20% additional capacity per drive added. As you can see, an SKS-HP configured with one extra drive typically provides improved performance over RAMS, at far less cost, no matter which drives are used!

SKS-HP configurations can be sold against RAMS to provide more capacity and higher performance at a significantly lower cost. Against RAMS configurations of up to 3 drives, just ensure the SKS-HP subsystem has one more drive. When competing against 4-drive RAMS subsystems, an SKS-HP configuration with 2 controllers and at least 4 drives is recommended. Refer to the charts on the next pages for comparisons.

DRIVE SPECIFICATION COMPARISON

MODEL NUMBER -->	SKS-HP 620 ⁶⁶⁰	SKS-HP1202	RAMS	CSS-234	CSS-322
Capacity Per Drive	320 ³³⁰ MB	601 MB	500 MB	234 MB	322 MB
Average Seek Time	10.5 ^{10.7} ms	16.5 ms	16 ms	28 ms	18 ms
Average Data Latency	8.3 ms	8.3 ms	6.5 ms	8.3 ms	8.3 ms
User Data Rates					
Average MB/sec	1.46	1.61	2.13	.80	1.11 E*
Maximum	1.65	1.77	2.13	.80	1.11 E*
Data Heads	9	15	12	15	15
Drive Buffer Size	32 KB	32KB	32 KB	8 KB	?

SKS-HP to RAMS SUBSYSTEM COMPARISONS

Configuration with -->	1 drive	2 drives	3 drives	4 drives
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Zetaco's SKS-HP ~~620~~ ⁶⁶⁰

Subsystem Capacity	330 ⁶⁶⁰ MB	660 ⁶⁶⁰ MB	990 ⁹⁹⁰ MB	1320 ¹³²⁰ MB
TA/sec	43 ⁴³	66 ⁸²	118 ¹¹⁸	157 ¹⁴⁴
Subsystem Price	n/a	\$18,595	n/a	\$31,190
Initial Cost/MB	n/a	\$28.78	n/a	\$24.60

Zetaco's SKS-HP1202

Subsystem Capacity	601 ⁶⁰¹ MB	1202 MB	1803 ¹⁸⁰³	2404 MB
TA/sec	35 ³⁵	68 ⁶⁸	99 ⁹⁹	137 ¹³⁷
Subsystem Price	n/a	\$24,995	n/a	\$43,990
Initial Price/MB	n/a	\$20.79	n/a	\$18.30

Data General's RAMS

Subsystem Capacity	500 MB	1000 MB	1500 MB	2000 MB
TA/sec	37.3	75.1	110.9	? (140?)
Subsystem Price	\$29,300	\$51,300	\$73,300	\$95,300
Initial Price/MB	\$58.60	\$51.30	\$48.86	\$47.65

E* = Estimated, based upon current knowledge.

MB = megabytes, ms = milliseconds, TA/sec = transaction per second.

PRODUCT POSITIONING

How Do SKS-HP Subsystems Affect our Product Mix, Particularly the Position of the MAX Line of Subsystems?

Besides providing extremely high capacity/\$, the MAX products, particularly the MAX-1066, still win in some performance benchmarks over SKS-HP or RAMS.

The MAX-1066 remains the highest performing Argus-emulating solution in a single-drive environment that we can offer. It is expected to be comparable to, or better than RAMS in virtually any benchmark in a single-drive configuration. It should also do well in a multiple-drive environment where the typical data transfer is a large sequential transfer such as imaging.

Customers with large file transfers, or those who find it difficult to balance their load over multiple disk drives, will probably prefer the MAX line over SKS-HP or RAMS.

Zetaco recently conducted a transactions per second (TA/sec) benchmark at a customer site with a MAX-1066 against RAMS. The MAX-1066 won, 38 to 37. The customer subsequently reported that his benchmark activity showed the MAX-1066 to be "significantly faster."

Why did this customer's benchmark show the MAX-1066 to be "significantly faster" while it was only slightly faster in TA/sec? The TA/sec test tends to show a disk drive at its worst, and to show quite dramatically the benefits of parallel drives. Heads are driven to a random location for each transaction with no logical connection between transactions, and the disk drive looks like it is totally fragmented. The transactions are only 4 sectors.

The MAX-1066 has 85 sectors/track while RAMS only has 54. MAX-1066 also has 15 data heads to RAMS 12. MAX-1066 has 1275 sectors under the heads without repositioning while RAMS only has 648. With 85 sectors/ track, MAX-1066 transfers user data off the heads at 2.611 MB/sec, while RAMS only transfers at 2.13 MB/sec. MAX-1066 is capable of significantly higher data transfer from the media, despite RAMS higher RPM.

The MAX-1066 cannot benefit as dramatically using multiple drives, because: 1) SMD drives do not have buffers. 2) Data transfers directly between the drive heads and the controller without the benefit of a buffer on the drive side of the bus. 3) The controller can overlap seeks, but not latency.

In the aforementioned MAX-1066 TA/sec benchmark, the controller is active about 40% of the time in support of

just one drive. Significant contentions occur as drives are added past the second drive, and an additional controller is recommended if the customer requires maximum performance.

FOR ULTIMATE PERFORMANCE
WITH MULTIPLE PARALLEL DRIVES
SELL SKS-HP !!!

The SKS-HP can be configured as the highest-performing Argus emulating solution in a multiple-drive environment where the typical disk transfer element size is short (i.e., 4 sectors), and where the load can be balanced reasonably well over the available drives. In this case, configure SKS-HP with one more drive than RAMS and expect to win on capacity, performance and price. If you compete against 4 or more RAMS drives, use two controllers.

Are there other benefits besides
capacity, performance & price?

Of course! Reliability, Removability, and Improved Mirroring!

Reliability

SKS-HP DRIVES: SKS-HP drives are the product of an evolutionary technology from a production line tuned by shipping over 1 million drives. The drive MTBF specification is 30,000 hours and there is significant field data on closely similar products to back up that claim. Data General doesn't publish MTBF specifications, so no direct comparison is possible. Data General, however, has never before built a drive like this -- RAMS appears to be totally new technology for them.

DATA GENERAL'S DRIVE: The RAMS drive is Data General's first 8" technology drive. It is also a first at 4630 RPM, which is very high by today's norms; almost all disk drives manufactured today operate at 3600 RPM.

While the high RPM results in a higher performance drive, it is also a factor requiring more power (360W) and high heat dissipation (144 BTU/hr). High RPM makes the heads fly higher, making it difficult to achieve high bit densities. This may be why the drive only has 54 sectors/track, similar to our high performance 5.25" products, while Zetaco's 8" MAX-1066 has 85. High RPM also

creates engineering challenges to prevent media lubricant migration. Experience will tell how well Data General engineers handled the technical challenges of this technology.

THE CONTROLLER: Zetaco's new SCZ-3 controller in the SKS-HP represents the continuing evolution of Argus-emulating technology, which was first released in 1986 with the ARZ-1. This technology evolved into the Argus-emulating controller in the LRS-10 disk-emulating optical subsystem in early 1987, and the SCZ-1 asynchronous SCSI disk controller in mid-1987. Much of the hardware and firmware design have been proven on these established products.

The SCZ-3 utilizes the faster synchronous chip set and improved firmware for full overlap of disk seeks and latency, as well as improved mirroring resynchronization, while the basic design is proven in current products.

Removability

SKS-HP provides customers the option of removable media in their high-performance disk subsystems. SKS-HP provides users the ultimate in security, removable back-up, ease of transfer of programs or data bases from one system to another, or ease of movement to a backup system for critical applications.

Within the SKS line of products, the SKS-HP extends the removable options from the current 300-MB modules to include a 323-MB and a 601-MB module. We recommend that any one customer pick one size module and stick with it to eliminate the potential confusion of mixing sizes.

RAMS Claims Mirroring Improvements -- HOW ABOUT SKS-HP???

Zetaco has not had an opportunity for a first-hand look at RAMS mirroring. There is an implication of improved mirroring because of "synchronized disks," and they do claim disks can be resynchronized in 15 minutes. RAMS mirroring will require two drives for \$44,000 for a 500-MB mirrored pair, or \$88 per mirrored MB of data.

The SKS-HP also has some significant improvements in mirrored operation, and has the big plus, as with performance, of mirroring much lower-cost units. Two SKS-HP mirrored pair sizes are available with dual 323-MB drives at only \$12,595, or dual 601-MB drives at \$18,995. Per mirrored pair, these options cost \$39 and \$32 per mirrored megabyte, respectively.

Mirror Resynch is substantially improved from previous Zetaco mirrored products because the drive buffers allow

transferring relatively large blocks of data at once. We do not believe we can achieve 15 minutes, but are targeting 1/2 hour. We also expect a mirrored pair to perform write transaction nearly as fast as an unmirrored disk, because the controller does not have to wait for drive latency. It can write directly to the drive buffers. (It is hard to understand where synchronized drives creates an improvement opportunity with RAMS.)

On a read, performance should be comparable to single-drive read performance on initial release, but by March 1989, mirrored pair read performance is planned to be improved by selecting the drive that can provide the data the fastest. (Again synchronized drives should provide no benefit.)

RAMS may provide effective mirroring, but the cost of \$88/MB will be prohibitive to all but the most reliability-conscious user. SKS-HP can provide mirrored pairs at a cost 64% below RAMS in \$/MB!

While we have not had an opportunity to do a performance comparison, we believe that mirrored performance will not be much different. Zetaco should be able to compete effectively where mirroring is a requirement, and also provide mirrored pairs to customers who could not otherwise justify this feature.

**HOW TO SELL ZETACO SUBSYSTEMS
AGAINST DATA GENERAL DISK PRODUCTS**

If your customer is considering:

RAMS Subsystems..... **Sell Performance!** In a multi-drive environment, an SKS-HP Subsystem with one additional drive will beat RAMS.....

or, in a single-drive configuration, a MAX-1066 Subsystem will outperform RAMS in any application that will capitalize on MAX-1066's higher data rate off the heads.

Sell Capacity! Either MAX-1066 or SKS-HP will provide greater subsystem capacity than RAMS per subsystem, or per drive. The cost of typical subsystems will be less than 1/2 the cost of RAMS on \$/MB.

Sell Price! Again, both MAX-1066 and SKS-HP Subsystems cost less per drive, or per MB. \$/MB for virtually any configuration is less than 1/2 a RAMS subsystem cost for comparable capacity.

Sell Reliability! SKS-HP and MAX Subsystems utilize field proven drive technology from a major disk drive manufacturer, IMPRIMIS (formerly CDC). The technological changes in the 323-MB and 601-MB drives introduced with SKS-HP represent relatively minor evolution of the 300-MB drive featured in SKS. They are built by a company that has produced literally millions of 5.25" drives.

CSS Subsystem..... **Sell Performance!** An SKS-HP Subsystem with the same number of drives outperforms CSS through lower overhead, higher transfer rates from the media, much higher transfer rate on the bus, and a faster average seek time.

Sell Capacity! SKS subsystems can be configured with up to 4.2 Gigabytes, while CSS tops out at 2.25 gigabytes.

Sell Price! SKS-HP1202 subsystems are designed to maximize cost savings where capacity is the primary consideration, and SKS-HP646 where performance is the primary requirement. When you really need a low-cost alternative, sell SKS-601 or SKS-1202 for about 50% the \$/MB of a CSS subsystem.

Availability

SKS-HP Subsystems and the new SKS-601 & SKS-1202 are available 60 days ARO. SKS-300 & SKS-600 continue to be available to meet customers' immediate needs. SKS-HP will be 30 days ARO when available in sufficient quantities to meet demand, probably November 88.

Sales Support

The write-up on bannerhead is attached, FYI, and is the official literature until brochure updates, which are in process, are completed. An updated version of this Sales Release Package will coincide with a road show to selected distributor locations in October. Limited rotating stock of units will be planned for early customer evaluation.

Maintenance

Zetaco will provide maintenance options to our distributors and OEM's to whom we offered similar options on SKS. These include low-cost spares kits, overnight exchange, and our normal 2-day turnaround for repair. Our Customer Support department is working on additional options to support this product as well as other Zetaco products.

DELIVERABLES: ADD-ON DRIVES

The 9018-04 add-on enclosure includes a drive enclosure with two drives and two power supplies, with a 1' interchassis cable.

SK-646FC: This product is the same as a 900-018-04 dual 300-MB drive SK Add-On, except it uses dual WREN IV 323 MB drives. Only option is 120v, 220v, or 240v.

SK-323FC: The single-drive version of an SKS-646FC.

SK-1202FC: Same as SK-646FC, except using WREN V 601 MB drives.

SK-601FC: Single-drive version of the SK-1202FC.

DELIVERABLES: REMOVABLES

SKS-300R includes an SCZ-1 controller package, internal and external cables, a drive chassis, and one removable drive module.

SKS-HP323R: Same as SKS-300R single-drive removable subsystem, except uses SCZ-3 and WREN IV 323-MB drive. Options include 5', 9', or 15' external cable lengths, 18" or 28" internal cables, and 120v and 220/240v. Materials are basically the same for 120v and 220/240v models, but the 220/240 should be shipped with the power switch set for the proper voltage and the fuse changed.

SKS-HP601R: Same as SKS-HP323R, except uses WREN V 601-MB drive.

SK-323RA: Removable module with WREN IV 323 MB drive. This model has no options.

SK-601RA: Same as SK-323RA except with WREN V 601 MB drive.

MODEL NUMBERS

Here's a brief explanation of how these model numbers are generated:

Example: SKS-HP1202F

SKS-	Indicates this is an Argus-emulating product. If it is Zebra it will be SKZ-, if it works with either it will be SK-
-HP	Used with subsystem products to indicate they include our new "High Performance" SCZ-3 controller. Designator is not used on add-ons, as they typically work with other subsystems also.
1202	Indicates the capacity of the subsystem. This may be on one drive or two drives, but it is whatever formatted capacity is included with the product.
Alpha Suffix:	F indicates fixed drives, while R means removable drives. FC indicates a fixed chassis add-on without controller. RA indicates it means it is an add-on removable module. There is another product already released that is an RC which is a chassis to support additional RA's.

PRICING 8/88

MAX SUBSYSTEMS

MAX-1066	Disk Subsystem 8" 1066 MB Add-on 1066 MB Drive	\$23,695 16,695
MAX-731	Disk Subsystem 8" 731 MB Add-on 731 MB Drive	19,995 12,995
MAX-429	Disk Subsystem 8" 429 MB Add-on 429 MB Drive	17,995 10,995
MAX-317	Disk Subsystem 8" 317 MB Add-on 317 MB Drive	16,995 9,995

SKS 5.25" SUBSYSTEMS

SKS-601F	Disk Subsystem Single 601 MB Drive	14,395
SKS-1202F	Disk Subsystem Dual 601 MB Drive	22,895
SKS-300F	Disk Subsystem Single 300 MB Drive	12,995
SKS-600F	Disk Subsystem Dual 300 MB Drives	17,495
SK-300FC	Add-on Single 300 MB Drive Chassis	6,845
SK-600FC	Add-on Dual 300 MB Drive Chassis	11,495

SKS-HP HIGH PERFORMANCE SUBSYSTEMS

SKS-HP646F	Two 323-MB Drives	18,595
SKS-HP1202F	Two 601-MB Drives	24,995
SK-646FC	Add-on Dual 323 MB Drive Chassis	12,595
SK-1202FC	Add-on Dual 601 MB Drive Chassis	18,995

REMOVABLE SUBSYSTEMS

SKS-300R	Removable Single 300 MB Subsystem	16,995
SKS-HP323R	High Performance Removable 323 MB Disk Subsystem	17,495
SKS-HP601R	High Performance Removable 601 MB Disk Subsystem	20,695
SK-323RA	Removable 323 MB Add-on Module	6,695
SK-601RA	Removable 601 MB Add-on Module	9,895
SK-RC	Removable Disk Chassis	4,695



New SKS-HP Disk Subsystems Transfer Data at 4 MB/sec

Announcing Zetaco's SKS-HP, the HIGH PERFORMANCE series of magnetic disk subsystems with data transfer rate up to 4 Megabytes per second, and burst performance up to 4.75 MB/sec. Using 5.25" form factor drives, SKS-HP Series is plug-compatible with Data General's Eclipse and MV minicomputers, emulating Argus/DPJ under AOS or AOS/VS, and is deliverable in October 1988.

The synchronous transfer capability of the advanced disk controller and the disk drives in the SKS-HP Series results in a data transfer rate of 4 MB/sec. (Other subsystems typically transfer data in an asynchronous mode, at 2.4 MB/sec or 1.5 MB/sec, and Argus/6236 at 1.7 MB/sec).

Higher transfer rates can directly affect the performance of the disk in your system to allow faster response time at the terminal level . . . and, consequently, more efficient response time for your users, and overall improved productivity.

SKS-HP high performance is achieved through:

- advanced, second generation SCSI chips,
- fast-access drives with high data transfer rates, and
- a high level of parallelism between drives, which significantly improves performance in multiple-drive configurations.

Small Form Factor

The use of compact and efficient 5.25" disk drives in the SKS-HP Series lets you pack up to 1202 formatted megabytes of storage into only 3.5" of vertical space in your cabinet! Smaller drives also mean less energy consumption for power and cooling requirements, to help hold your operating costs down.

True Argus Emulation

In addition to supporting and emulating all of the outstanding features of Argus/DPJ, such as disk mirroring, and dual port, the SKS-HP Series offers

Zetaco's own high performance features, including bad sector relocation and automatic soft error logging.

Configuration Flexibility

The modular SKS-HP Series uses a 'building block' approach, for best flexibility, offering formatted storage capacities from 646 MB to 4.2 GB, in both fixed and removable drive configurations. The SKS-HP disk controller supports up to 7 physical disk devices, mapped as 4 logical units.

Fixed-drive systems start with either the SKS-HP646, with 646 formatted MB of storage, or the SKS-HP1202, with 1202 MB, and continue with add-ons in 646 & 1202 MB increments, to let you expand as your data storage needs increase.

Removable drives, available singly in increments of 323 and 601 MB, are housed in canisters that plug into Zetaco's rack-mountable SKS-HP chassis. Removable drives are supported on the same controller as the fixed drives, so you can tailor a subsystem to fit your specific media requirements.

SKS-HP Subsystems consist of Zetaco's newest Argus-emulating disk controller, which has the capability for both synchronous and asynchronous data transfers, and synchronous SCSI disk drives in the 5.25" form factor.

Drives and their power supplies are housed in 3.5"-high rack-mountable modules, and the controller installs into any I/O slot in the CPU. Formatted at the factory, SKS-HP Subsystems are supplied with cables, documentation, and everything required for complete connection.

Low Cost Per Megabyte

The SKS -HP Series list prices range from \$21 to \$29 per megabyte, depending on the configuration, and will be available in October 1988. Please call us for further information, or for a quote on price and delivery.

SKS-HP SUBSYSTEMS WITH FIXED DRIVES

- SKS-HP646 2 drives with 323 formatted MB per drive.
- SKS-646A 2 add-on drives, 323 formatted MB per drive.
- SKS-HP1202 2 drives with 601 formatted MB per drive.
- SKS-1202A 2 add-on drives, 601 formatted MB per drive.

SKS-HP SUBSYSTEMS WITH REMOVABLE CANISTERS

- SKS-HP323R 1 drive with 323 formatted MB
- SKS-323RA 1 add-on drive with 323 formatted MB
- SKS-HP601R 1 drive with 601 formatted MB
- SKS-601RA 1 add-on drive with 601 formatted MB
- SKS-RC Add-on Chassis to support 2 drives