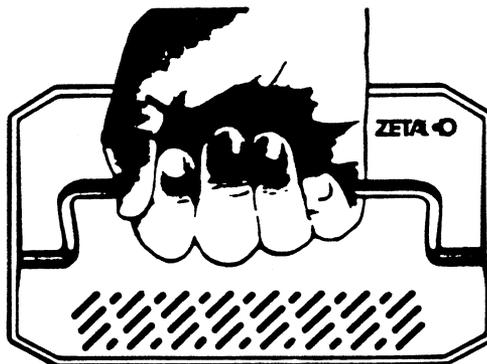


June 1988



Announcing
A New Member of the
SKS Series
of 5.25" Form Factor Disk Subsystems:
REMOVABLE DRIVE MODULES !!

SALES RELEASE PACKAGE
FOR ZETACO
AUTHORIZED STOCKING DISTRIBUTORS
and AUTHORIZED SERVICE AGENTS



For Internal Use Only

SKS Removable Disk Subsystems

Major Benefits of the new SKS Removables include:

- * Removable Modules (2 supported per enclosure)
- * Large Capacity (300 MB per module!)
- * Physically Small (5.25" form factor drive)
- * Argus-Emulating, Performance-Enhanced Disk Controller
- * Reliable, Field-Proven Disk Drive Technology
- * Available as new subsystem, or as add-on to installed SKS

Zetaco is pleased to announce an expansion of our family of plug-and-play SKS disk subsystems using 5.25" form factor drives. The new

 REMOVABLE DISK SUBSYSTEM!

You are familiar with our SKS-15 (300 MB) and SKS-25 (600 MB) Subsystems, based on 5.25" SCSI drives, released in July 1987. Zetaco now adds removable drive capability, available as add-ons for an installed SKS subsystem, or as a new complete subsystem.

Like other Zetaco subsystems, this is based on state-of-the-art components from leading vendors, and integrated with our high performance, Data General-emulating interface technology. This combination provides a broad range of initial configuration options for your customers, with up to seven (7) fixed or removable drives, while enabling the addition of new, higher capacity 5.25" drives as they become available from Zetaco.

AOS/VS and AOS users may now enjoy the flexibility of having both fixed and removable 5.25" disk drives on their Data General systems in a single Zetaco disk subsystem!

MAJOR FEATURES and BENEFITS

**** Removable modules** provide many advantages, as well as high capacity and high performance:

- + Ultimate security! Users with very confidential data bases can remove the entire plug-in drive module, easily and conveniently!
- + Removable Back-up! Those who want to use magnetic disk as back-up can use convenient removable SKS modules.
- + Portability! Transferring data between systems is easier and more practical than ever before.
- + Transferability! Your customers can now have the ability to transfer critical applications to a back-up system.

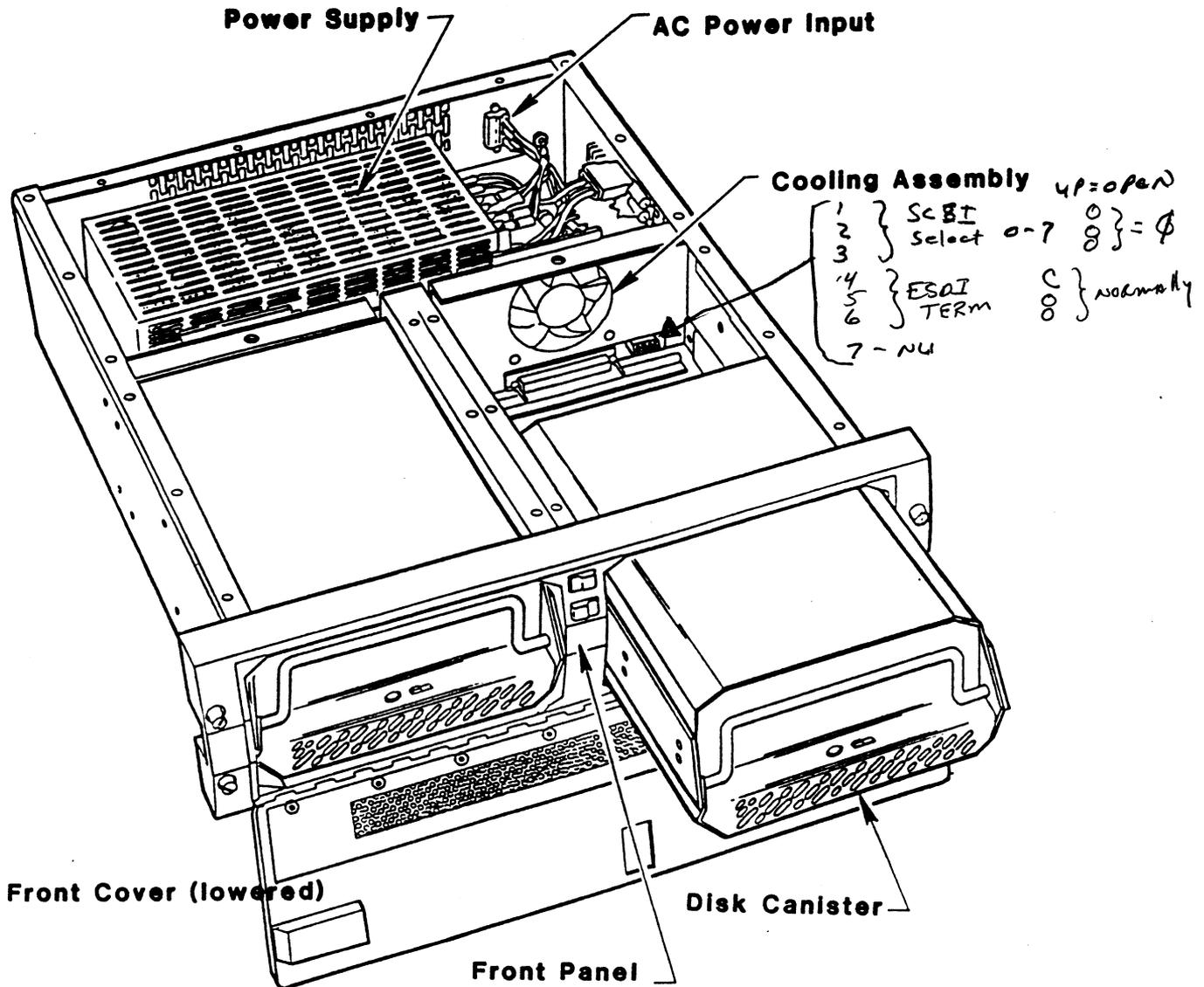
**** Supports MV and Eclipse** processors under AOS/VS and AOS, unmodified.

**** Includes Zetaco's Argus-emulating technology,** field-proven since 1986, providing compatibility with Data General's latest supported disk I/O driver technology.

**** Includes 300 MB disk drives** that have an industry-low 16.5 ms average seek time -- providing consistently high performance over a broad range of applications.

**** Uses industry standard SCSI disk interface,** providing a cost-effective solution, and support of larger capacity drives as they become available in the future.

SKS Removable Disk Subsystem



SKS REMOVABLE SUBSYSTEM COMPONENTS

- Controller.... with Argus emulation and SCSI interface.
- Disk Module... 300 MB drive in canister with front handle and plug-in connectors at rear.
- Enclosure..... 19" wide X 5.25" high X 21" deep, for mounting in standard rack, with integral power supply.
- Cabling..... one SCSI cable set for connecting controller to drive enclosure (28" internal and 5' external).
- Manual..... Complete Technical Manual on subsystem components, for installation and operation.
- Software Support Tape... for installation, configuration, trouble shooting.

SKS Subsystem Models

With this product announcement, Zetaco begins a new style of model numbering, designed to make it easier for you and your customers to immediately discern the formatted capacity of the subsystem.

These numbers may take a little time to get used to, but we think, overall, that they will make your selling and ordering much easier and more convenient than the old method.

Below are listed all the current models. The SKS prefix remains the same, while the numerical suffix indicates formatted capacity in megabytes. A 3-letter alpha prefix (SKS) indicates a full subsystem; the 2-letter alpha (SK) is used on Add-ons, since they may be added to either SKS or SKZ subsystems. The alpha tags on the end indicate the configuration, where F = fixed drive, R = removable module, A = Add-on, C = Chassis, U = Upgrade.

 Note that the SKS-15 and SKS-25 are now SKS-300F and SKS-600F, respectively.

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- SKS-300F..... 300MB SCSI Disk Subsystem, with one fixed drive in the chassis. (formerly SKS-15)
 - SKS-600F..... 600MB SCSI Disk Subsystem, with two fixed drives in the chassis. (formerly SKS-25)
 - SKS-300R..... 300MB SCSI Disk Subsystem, with one removable drive module. The chassis supports 2 modules.
 - SK-300RA.... 300MB Removable Module for Add-on. (The power supply is built into the chassis)
Prerequisite = installed SKS-300R or SKS-RC.
 - SK-RC..... An empty SKS Chassis designed to hold two removable drive modules.
 - SK-300U..... 300MB Upgrade Kit for a fixed-drive configuration. Upgrades an SKS-300F to an SKS-600F, or an SKS-300FC to an SKS-600FC. This includes the drive and the power supply, and requires some technical skill to install.
 - SK-300FC.... 300MB Add-on Chassis with 1 fixed drive, typically ordered to be the 3rd drive in the subsystem.
 - SK-600FC.... 600MB Add-on Chassis with 2 fixed drives, typically ordered to be the 3rd & 4th drives in the subsystem.
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How Zetaco's SKS Subsystems Stack Up
Against Data General's 5.25" Offering

Data General currently has two 5.25" disk subsystems available that can be configured on rack-mount MV systems, under the AOS/VS operating system:

1. Combined Storage Subsystem (CSS)
2. Rugged Removable Disk Subsystem (RRDS)

The RRDS supports up to two removable 234 MB disk drives in a rack-mounted chassis. An add-on chassis is available to support additional disk drives. The RRDS is targeted at a rugged market, such as the military, not the general commercial market. Data General may propose it as a commercial solution, but the price is prohibitive for most customers. It is not sold as an integrated product offering with the CSS product.

The CSS subsystem is a commercial subsystem with fixed media. The controller will support up to 7 peripherals, 4 of which may be cartridge tape. The 21 MB cartridge tape is supported mainly for interchange compatibility with the MV/1400 DC, MV/2000 DC, and DS/7500. The subsystem also supports a 130 MB cartridge tape and a 234 MB 5.25" disk drive.

While we hesitate to say that what Data General can offer is "comparable" to Zetaco's subsystems, here is a table comparing the two product lines.

DATA GENERAL DISK PRODUCTS	ZETACO DISK SUBSYSTEMS
6429 = 234MB CSS Subsystem (fixed media, 1 drive)	SKS-300F = 300MB SKS Subsystem (fixed media, 1 drive)
6458R = 234MB RRDS Subsystem (1 removable drive)	SKS-600F = 600MB SKS Subsystem (fixed media, 2 drives)
6429-A = Chassis with 234MB disk	SKS-300R = 300MB SKS Subsystem (1 removable drive)
6460R = Rugged Chassis for two drives	SKS-300FA = 300MB Add-on Chassis (fixed media, 1 drive)
6446-M = 234MB CSS Disk Add-on	SKS-600FA = 600MB Add-on Chassis (fixed media, 2 drives)
6459R = 234MB RRDS Disk Module	SKS-RC = Add-on Chassis to hold two removable disk modules
	SKS-300U = 300MB Upgrade Kit (1 fixed drive & power supply)
	SKS-300RA = 300MB Disk Module (1 removable drive)

COMPETITIVE ADVANTAGES & DISADVANTAGES

The main competitive feature of the CSS seems to be its support of the 130 MB cartridge tape drive, which can be added to a CSS disk subsystem at a list price of \$5500. We don't think customers will find it much of an advantage, however, since the 130 MB capacity isn't of adequate size to back up a typical disk.

We think your customers will agree that a better buy, both from a cost and performance viewpoint, is a tape subsystem made with Zetaco's BMX-2 Tape Coupler, and any of the outstanding tape drives it supports.... such as the 750 MB MegaTape cartridge tape system, or the STC 2920 series. These offer a much better "real world" solution for tape back up than 130 MB!

The main disadvantages of Data General's CSS subsystem appear to be high price and inconsistent performance. Data General's own sales literature provides good information for comparison; the next few paragraphs are our synopsis and comments on their literature.



Data General warns customers to expect performance 50% below an Argus 6236/39 subsystem of similar capacity when the subsystem has only one drive, or, in multiple-drive CSS subsystems, when the load is unbalanced. However, in the optimal situation of multiple drives operating with transfers under 32 sectors, with activity well balanced across all drives, Data General tells customers to expect performance 100% better than an Argus 6236/39.

Data General's problem lies in selecting a relatively slow drive (28 ms average seek time), so the subsystem must depend on overlapped seeks to obtain performance. In contrast, Zetaco SKS Subsystems are built around drives with the lowest average seek time available (only 16.5 ms!), and provide superior performance, even when benchmarked as a single-drive subsystem against a 6236/39.

With our SKS Subsystems, customers can expect performance consistently better (on reads, writes, sequential, random, etc) than a 6236/Argus, while purchasing only the number of drives required to meet their capacity requirements....no need to pay for more drives than they really need just to obtain performance.

HOW TO SELL SKS SUBSYSTEMS AGAINST DATA GENERAL'S CSS,
ACCORDING TO CUSTOMER REQUIREMENTS

If your customer needs:

300 MB requirement..... **Sell Performance!** Data General's stated performance of a single-drive CSS is 50% slower than a 6236, while SKS performance is significantly better than a 6236/Argus.

600+ MB requirement..... **Sell Price!** Data General add-on drives at \$7200 for only 234 MB add up to "too high" rather quickly. Compare their \$30.76 per MB cost to Zetaco's \$19.16 per MB for a 600 MB add-on!

Sell Consistent Performance! SKS performance is not dramatically dependent on keeping transfers under 32 sectors with well balanced loads over multiple drives, as Data General has said that CSS performance is. Customers may be able to control this part of the time, but not all the time, and why force them to worry about it?

Sell Reliability! The disk drives used in SKS Subsystems are spec'ed at only one failure per 30,000 hours (about 5 three-shift years) for 300 MB! Data General's MTBF is unpublished, but if we assume it is as high as 30,000 hours for 234 MB, that's 22% lower per MB of capacity. Adding drives just for performance widens the gap rapidly.

Both Disk and Tape..... **Sell higher capacity!** The CSS tape drive is only 130 MB, not large enough to back up a disk. Current Zetaco tape subsystems are available with an STC 9-track reel-to-reel, and the MegaTape cartridge system, with 630 MB capacity! Future Zetaco technology will make available other standards such as 8mm tape up to 2.2 GB depending on blocking factors. **Watch for a MegaTape GT-88 announcement of an 8mm product supported on the Zetaco BMX-2.**

Sell media transportability! Data General's 130 MB cartridge tape will be compatible with little else in the industry, unlike standard 9-track reels and other popular media.

Sell Media Cost! Data General has priced the 130 MB 10253 cartridge at \$54 with no discounts. 8mm cartridges will be sold in a competitive environment with probable prices of \$10 available in the future with much greater capacity.

Needs Removable Media..... **Sell price!** Data General's removable subsystem price makes it non-competitive in any market that does not require the ruggedized version. Our SKS Removable Subsystem is designed to take the normal handling in a commercial environment that requires removing the disk modules and storing, shipping, or transporting them. The Data General product is targeted at a different market.

Sell Configuration Flexibility! The customer does not have to pay the extra price for removability for all the drives on his subsystem. With Zetaco, s/he can purchase removability only where needed.

Needs only fixed..... **Sell Future Options!** The controller in the SKS Subsystems supports both fixed and removable SKS drives.....a user can start with the enclosure for fixed drives, and later add an enclosure for removable modules. Maybe a future application will need removable, or maybe some users just haven't identified the benefits. When the requirement arises, however, a Zetaco SKS Subsystem will be prepared for the additional feature.

AVAILABILITY

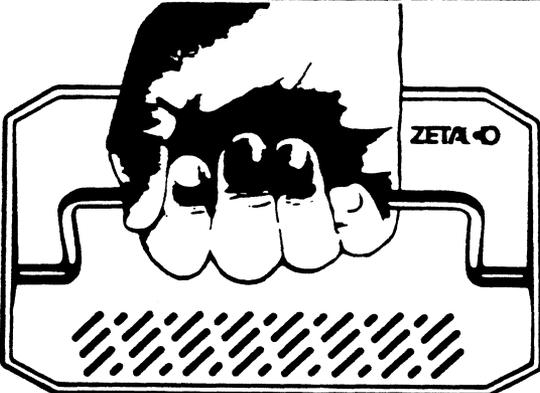
SKS Removable Disk Subsystems are available now, 45 days ARO. SKS Fixed Drive models are available, as they have been, 30 days ARO.

SALES SUPPORT

SKS Removables were introduced in June issues of DG Review and FOCUS in our new modular ad format, which will appear again in July issues. The ad is shown below; it ran as one of four across the bottom of 2 pages. Zetaco's Authorized Stocking Distributors (ASD) will, of course, receive the sales leads this ad generates in their territories.

We are in the process of adding the removables to the current SKS brochure, and will get a supply to you within the next 30 days.

NADGUG is coming up at the end of August in Philadelphia! A pre-show mailing is planned that will promote the SKS line, with the objectives of drawing attendees to the booth or generating a sales lead via mail. As was true last year, this year we are unable to accommodate all of our ASD salespeople in the booth; while we look forward to seeing you if you're at the show, we won't be asking you to work our booth. Show leads will be sent to ASD's in the usual manner.



**Secure Data With
Removable Media**

If your sensitive data requires tight security, try our **Removable Disk Subsystem**. Each cartridge holds 300 MB of formatted data, and emulates DG's high performance Argus.

ZETA-O
The Link To Tomorrow.

(612) 941-9480

SKS Subsystem Integration Guide

SKS Disk Subsystems (both fixed & removable configurations) have been tested by Zetaco Engineering and verified for use with the following Data General CPU's.

S/140.....	via BMC, under AOS (Rev 7.0 ONLY)
S/280.....	via BMC, under AOS (Rev 7.0 ONLY)
MV/4000.....	via BMC, under AOS/VS (Rev 5.0 to Rev 7.5)
MV/7800 C & U.....	via BMC, under AOS/VS (Rev 6.06 or 7.5 ONLY)
MV/7800 XP.....	via BMC, under AOS/VS (Rev 5.75)
MV/8000 II & C.....	via BMC, under AOS/VS (Rev 5.0 to Rev 7.5)
MV/15000.....	via BMC, under AOS/VS (Rev 7.55 ONLY)

Here is Data General's current list pricing on the 5.25" subsystem products, for your reference. Zetaco's pricing is on the following page.

DATA GENERAL SUBSYSTEM PRICING: MAY 1988

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Model      Description                                     List Price
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6429       234 MB CSS* Subsystem..... $15,100
6458R      234 MB RRDS** Subsystem..... 30,000
6429-A     CSS Chassis with 234 MB Drive..... 10,100
6460R      RRDS Chassis with no drive..... 17,000
6446-M     234 MB CSS Disk Drive..... 7,200
6459R      234 MB RRDS Disk Module..... 10,210
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* CSS = Combined Storage Subsystem

** RRDS = Rugged Removable Disk Subsystem

SKS SUBSYSTEM PRICING

(Prices are effective 6/88, and are shown in U.S. dollars)

Model	Description	Quantity	
		1-4	100+
SKS-300F	300 MB Disk Subsystem, one fixed drive (chassis support for two drives).....	\$ 12,995	\$ 7,797
SKS-600F	600 MB Disk Subsystem, two fixed drives.....	17,495	10,497
SKS-300R	300 MB Disk Subsystem, one removable drive module (chassis support for 2 modules).....	16,995	10,197
SK-300RA	300 MB Removable Module for Add-on.....	6,295	3,777
SK-RC	SKS Removable Chassis (empty) for two additional removable modules.....	4,695	2,817
SK-300U	300 MB Upgrade Kit (drive & power supply) for fixed-drive subsystem only.....	5,395	3,237
SK-300FC	300 MB Add-on Chassis, 1 fixed drive.....	6,845	4,107
SK-600FC	600 MB Add-on Chassis, 2 fixed drives.....	11,495	6,897

CABLING: Each **SKS Subsystem** includes a 28" cable for backplane-to-bulkhead connection; a 5' cable for bulkhead-to-peripheral connection; BMC & SCSI bus terminators; and the necessary mounting hardware for use with standard 19"-wide cabinets.

Add-on Chassis includes one 1' interchassis cable; and the necessary mounting hardware for use with standard 19"-wide cabinets.