

DATARAM. Your disk drive connection.



**UDA50
Compatibility**

NEW!

**DEC-compatible controllers
for SMD/Winchester disk drives
for LSI-11, PDP-11 and VAX minicomputers**

DATARAM

PDP-11 and VAX SMD/Winchester Controllers

Dataram's SMD controllers interface to the host minicomputer via a single hex UNIBUS slot. Dataram's high-performance SMD controllers allow transfer of a complete cylinder of data without the loss of a disk revolution. Up to four SMD/Winchester drives can be supported on one controller.

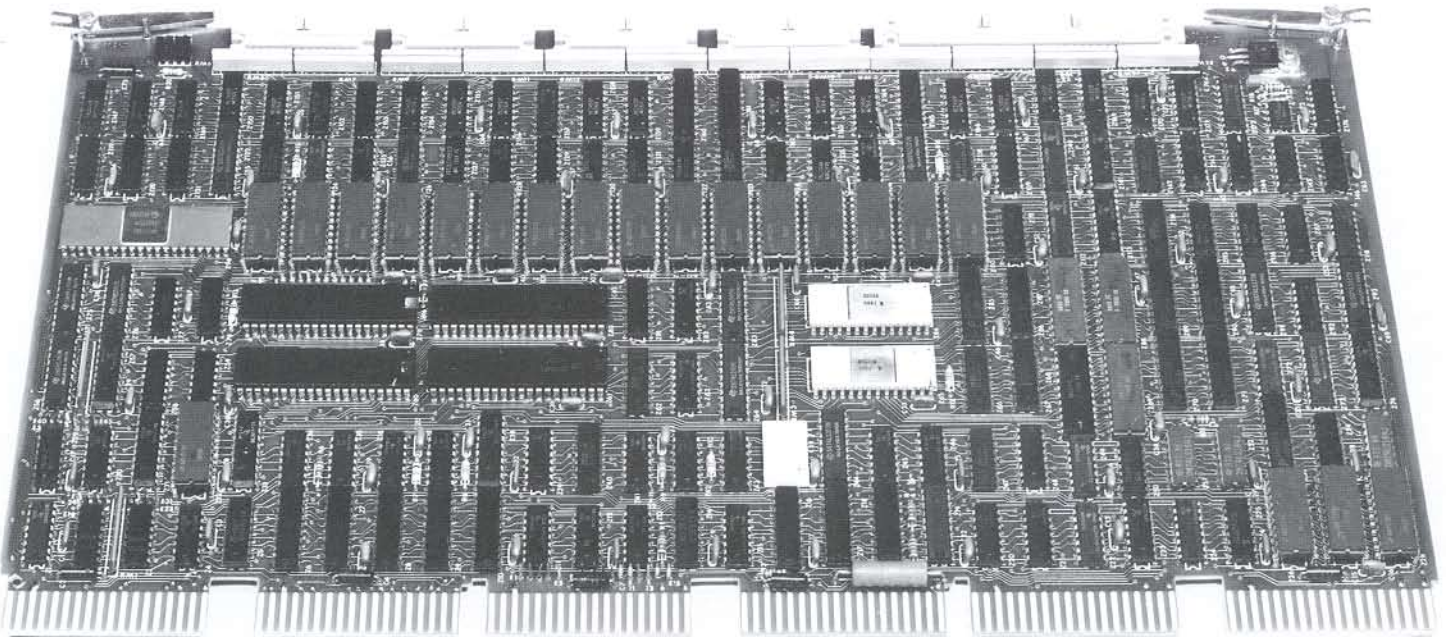
Our workhorse over the last few years has been the S34 SMD controller, which provides RK06, RK07, RM02, and RM05 emulations to standard SMD/Winchester drives. This high-performance controller is now joined by an even better performer, the S35.

The S35 is compatible with DEC's new UDA50 controller, and features capabilities not available on

DEC's older generation disk subsystems.

DEC's UDA50 controller is supported under the VMS operating system and all other current DEC operating systems.

Check out the features below and consider the endless possibilities presented by the S35. The S35 controller enables you to combine drives of any size and configuration, operates with state-of-the-art, high-speed drives, interfaces with VAX-11/730, 11/750, 11/780, and the entire line of PDP-11 and UNIBUS computers, and handles sizing automatically, utilizing 100% of the disk — there is no lost capacity.



Dataram UDA50-Compatible S35 Controller Features

- DEC UDA50/MSCP compatible
- Unlimited drive size
- Greater than 1.8 MB transfer rate
- 100% capacity utilization
- Intermix different speeds and different capacity drives
- Full-track transfer in one revolution
- 14-sector buffer
- Dynamic bad block retirement
- Automatic revectoring to bad block replacement
- Automatic retries on hard errors
- Interleave or non-interleave operation
- 32-bit ECC
- Selectable
 - Burst size
 - NPR throttle
 - NPR off time
 - CSR address
 - Vector address
 - Interrupt priority
 - Drive configuration
- Dual-port capability

Dataram and SMD/Winchester controllers. A performance story.

Dataram has been supplying products for the minicomputer industry for more than 15 years. In 1975, Dataram introduced the first of what is today the industry's broadest family of DEC-compatible products. Three years later, building on its leadership position in DEC-compatible memories, Dataram entered the peripheral controller marketplace.

In 1979, continuing its pacesetting role, Dataram delivered the first single-board SMD controller. In addition to its ongoing product enhancement program, Dataram has been engaged in an

aggressive new product development effort — today offering SMD/Winchester controllers for LSI-11, PDP-11 and VAX minicomputers. The controllers provide important capabilities that enable users to optimize minicomputer performance.

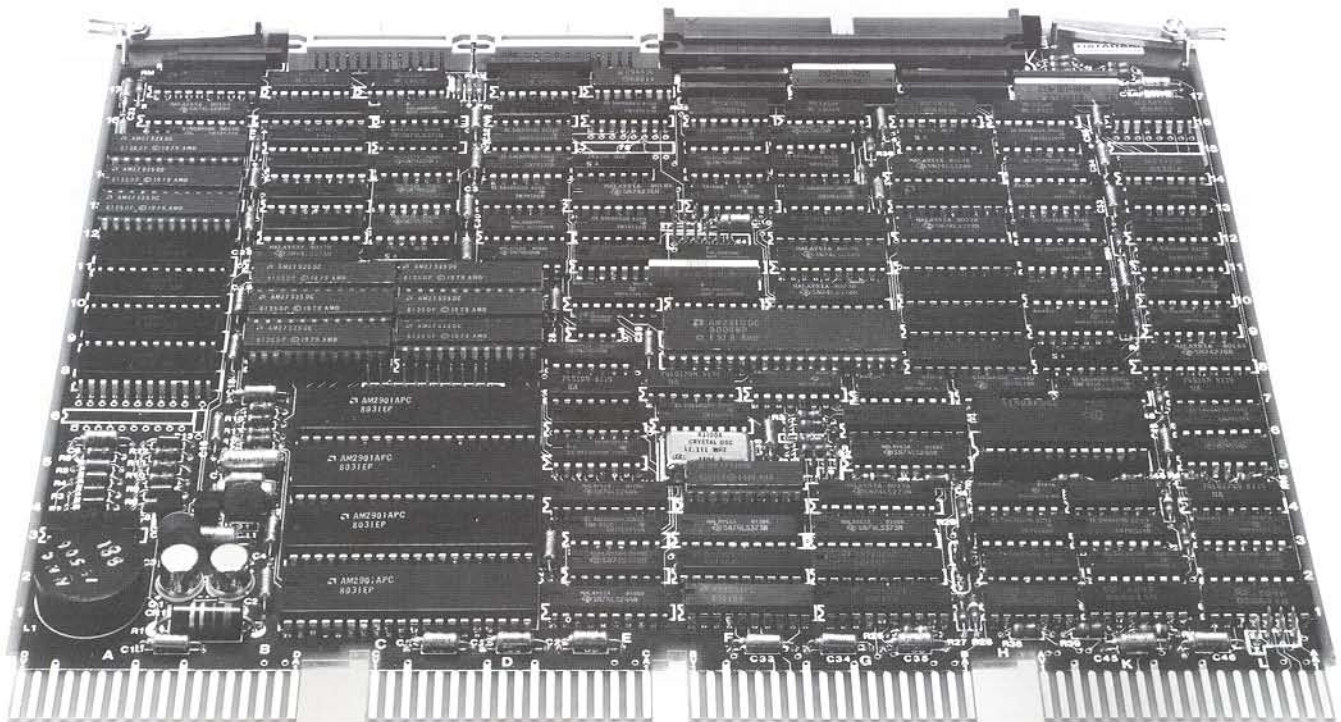
Dataram will continue to add software-compatible SMD/Winchester controllers to meet the needs of the DEC marketplace. These controllers will reflect the same philosophy as the current family of SMD/Winchester controllers: high quality, high performance, innovative design and user orientation.

LSI-11 SMD/Winchester Controllers

Dataram's S04 series of single quad board SMD/Winchester controllers provides an interface to a wide variety of SMD/Winchester drives from the major manufacturers. Dataram's S04 controllers provide a true differential SMD interface to one or two physical SMD/Winchester drives.

The S04's 16-bit bipolar microprocessor gives the performance needed to maintain high data rates on today's state-of-the-art Winchester drives. Connection to the SMD drives is achieved through differential drivers and receivers which eliminate the possibility of noise interference.

- Self test
- DEC software compatible
- 3.5 sector data buffer
- Interleaved or non-interleaved capability
- Selectable
 - Burst size
 - CSR address
 - Vector address
 - Interrupt priority
 - On-board boot
- Dual-port capability
- 32-bit ECC
- DEC RM02/RM05 media compatibility available



Specifications

	S04/A, S04/A1, S04/A2	S04/B	S04/D	S34/A	S34/B	S33/D	S35
Emulation	RM02/RM05	RK07/RK06	RK06	RM02/RM05	RK07/RK06	RK06	UDA50
Bus	Q-BUS	Q-BUS	Q-BUS	UNIBUS	UNIBUS	UNIBUS	UNIBUS
Drive Interface	SMD	SMD	CMD	SMD	SMD	CMD	SMD
Physical Drives	2	2	2	4	3	4	4
Logical Drives	2/4/2	6	8	4	8	8	N/A
Buffer Size	3.5 sector	3.5 sector	3.5 sector	7 sector	7 sector	4 sector	14 sector
Addressing	128 KW or 2 MW	128 KW	128 KW	128 KW	128 KW	128 KW	128 KW
Drive Capacities	80/160/300	84	32/64/96	80/160/300	84	32/64/96	Unlimited

Drive Compatibility Chart

Dataram's SMD/Winchester Controllers work with these popular drives...and more!

Drive	S04/A	S04/A1	S04/A2	S04/B	S04/D	S34/A	S34/B	S33/D	S35
Ampex									
Capricorn 165E		•	•						
Capricorn 330			•			•			•
DFR-932/64/86				•				•	•
DM 980	•	•	•			•			•
DM 9160		•	•			•			•
DM 9300A	•	•	•			•			•
Scorpio 80	•	•	•			•			•
APS									
4830	•		•						•
4835									•
4865									•
Century Data									
AMS 315	•		•			•			•
AMS 513									•
AMS 571									•
T302RM	•					•			•
T82RM	•	•	•			•			•
CDC									
9448-32/64/96					•			•	
9710	•	•	•			•			•
9715		•	•			•			•
9715-500									•
9730-80	•	•	•			•			•
9730-160		•	•			•			•
9762	•	•	•			•			•
9766	•		•			•			•
977X									•
Fujitsu									
M2280	•								•
M2284		•						•	•
M2294			•						•
M2298									•
M2312	•	•					•		•
M2321	•	•	•					•	•
M2322		•	•					•	•
M2351									•
Hitachi									
DK-812S								•	•
Kennedy									
5380	•	•	•						•
53160		•	•						•
Memorex									
214	•	•							•
233	•	•	•						•
236		•	•						•
677-30	•		•						•
PRIAM									
803	•	•	•					•	•
TECSTOR									
Sapphire 85	•		•					•	•
Sapphire 165			•					•	•
Sapphire 315	•	•						•	•

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