



Marketing Bulletin

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Enhanced DVD-RAM Software And Hardware

Dear Alpha Micro Dealer:

As we continue to enhance and upgrade our AMOS 8.x related software and hardware, Alpha Micro is pleased to introduce enhancements to our DVD software and a new DVD-RAM drive that is included in all AM-8000 orders and optional in Eagle 800 orders.

New DVD-RAM Software - Announcing DVDRES

DVD media is rapidly becoming the choice for AMOS logical disk backup for both AM-8000 and Eagle 800 business systems. Although you can recover individual files from a DVD backup using DVD.LIT and the AMOS COPY command, we have had many requests for an efficient way to restore entire AMOS logicals to the system disks.

Enter DVDRES, a new command that does exactly that! DVDRES features the following capabilities:

- Very high speed restore of entire AMOS logicals - 32 MB per minute restore rate
- Select the logical(s) you wish to restore
- DVD-RAM logicals with different bitmap sizes can be selectively restored.

For details of the DVDRES command, see the command reference sheet attached to this bulletin and contained in the latest revision of the AMOS System Command Reference Manual, DSO-00043-00.

This software will be included on all systems manufactured after January 15, 2007, and can be downloaded from URL /T <http://ftp.alphamicro.com/anon/DVDPK.LIT> or ftp to <ftp.alphamicro.com>. The DSVDPK.LIT will provide additional instructions.

Enhanced DVD-RAM Drive Now Available

Like CD-R and DVD-R drives, DVD-RAM drives are rated by their speed. The numbers are lower than those for CD drives, but the concept is the same. The current DVD-RAM drive used in the AM-8000 has been enhanced from a 5x drive to a 12x drive when used in DVD-RAM mode, the fastest speed presently available for this DVD format. Although 12x DVD media is not readily available yet, the drive is capable of handling 12x speeds when the higher speed DVD discs are readily available.

DVDRES

FUNCTION

Copies one or more AMOS logical disks from a recordable DVD-RAM media in a supported DVD-RAM-drive to AMOS logical disks. The logical disk(s) being copied to must be the same bitmap word size as the AMOS logical disk being copied from.



DVDRES is only supported on AM8000, Eagle 800 and AMPC 7.0 Systems.

CHARACTERISTICS

DVDRES copies logical AMOS disk(s) from a DVD-RAM media to an AMOS disk drive. The DVD-RAM media AMOS disk and the AMOS disk being copied to must be the same bitmap word size! The MAKDVD software will create logical drives of differing sizes by padding the smaller logicals. DVDRES will not allow for differing bitmap size logicals to be copied! If an unequal bitmap word size is tried, DVDRES will ignore the request and continue with the restoring.

FORMAT

DVDRES {switches}

OPTIONS

/HELP	Display the available options and exits
/?	Same as /HELP
/DEV:xxx:	Uses device and driver named xxx: instead of the default DVD:
/ID:n	Uses the DVD-RAM Drive at SCSI ID n instead of scanning the SCSI bus to find a DVD-RAM Drive. The ID can be from 0 to 15.
/V	Display version information.
/PIC	Display Product Installation Code

OPERATION

Before starting the program, place the DVD media with the logicals you wish to copy in the DVD-RAM drive.

Type DVDRES from the AMOS prompt:

```
DVDRES [RETURN]
```

DVDRES will attempt to find a DVD-RAM drive that is compatible with the DVD-RAM driver being used. The driver must have the same name as the DVD-drive device name and be loaded in system memory. DVDRES will find the DVD-RAM drive either using the command line switches /DEV and /ID or by defaulting to DVD:. If more than one DVD-RAM type device is found when scanning the SCSI bus, you will be asked to choose the device you wish to use for coping from.

After entering the DVDRES command, the following will be displayed:

```
DVDRES Version X.X(xxx)- x - Copyright © 2002 Alpha Micro Products
```

If DVDRES finds multiple possible DVD-RAM drives while scanning the SCSI bus, the following message will be displayed to allow you to select the drive to use:

```
Found the following possible DVD-Recorders:
```

	ID	Description
1.	nn	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
2.	nn	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

Select one of the above devices:

Additional information about the DVD-RAM drive, driver, and media contents is then displayed:

```
DVD-RAM drive found at SCSI id: x
```

```
CD title: xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
```

```
DVD-RAM contains x logical units.
```

```
DVD0: xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx (xxx) mounted [xxxxx.]
DVD1: xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx (xxx) mounted [xxxxx.]
DVD2: xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx (xxx) mounted [xxxxx.]
DVD3: xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx (xxx) mounted [xxxxx.]
DVD4: xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx %ERROR - zero UFD link! [0.]
DVD5: xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx (xxx) mounted [xxxxx.]
```

BITMAP WORDS

Blank logical with no data!

DVDRES then asks for the DVD Logical(s) that you wish to copy.

Which DVD Logical(s) would you like to restore?

Enter list of disk logicals to be transferred. Disk logicals may be entered as a range (ex. Dev0: -20 for dev0: thru dev20:), or may be comma separated. The list is terminated with a blank line:

Enter the logical drives to be copied from.

DVD0: -4

DVDRES then asks for the AMOS Disk Logical(s) that you wish to copy to.

Which Disk Logical(s) would you like to restore to?

Enter list of disk Logicals to be transferred. Disk Logicals may be entered as a range (ex. Dev0: -20 for dev0: thru dev20:), or may be comma separated. The list is terminated with a blank line:

Enter the logical drives to be copied to.

AGB0: -4

The copying process then begins. As it progresses, status messages are displayed:

The following is a sample of a DVDRES process:

```
.dvdres
DVDRES Version 8.0(101)-5 - Copyright (C) 2002 Alpha Micro Products

Found the following possible DVD-Recorders:

      ID  Description
1.      5  HL-DT-STDVDRAM GSA-4081B
2.      3  HITACHI DVD-RAM GF-2050

Select one of the above devices: 1 
DVD-RAM drive found at SCSI id: 5

CD title: Alpha DVD Backup

DVD-RAM contains 9 logical units.
DVD0:  Open Logical...UPD0:..... ( )  mounted [56320.]
DVD1:  Open Logical...UPD1:..... ( )  mounted [56320.]
DVD2:  Open Logical...UPD2:..... ( )  mounted [56320.]
DVD3:  Open Logical...UPD3:..... ( )  mounted [56320.]
DVD4:  Open Logical...UPD4:..... ( )  mounted [56320.]
DVD5:  Open Logical...UPD5:..... ( )  mounted [56320.]
DVD6:  Open Logical...UPD6:..... ( )  mounted [56320.]
DVD7:  Open Logical...UPD7:..... ( )  mounted [56320.]
DVD8:  Open Logical...UPD0:..... ( )  mounted [56320.]

Which DVD Logical(s) would you like to restore?
```

Enter the list of disk Logicals to be transferred. Disk Logicals may be entered as a range (ex. dev0: -20 for dev0: thru dev20:), or may be comma separated. The list is terminated with a blank line:

DVD0: -8

Which Disk Logical(s) would you like to restore to?

Enter list of disk Logicals to be transferred. Disk Logicals may be entered as a range (ex. dev0: -20 for dev0: thru dev20:), or may be comma separated. The list is terminated with a blank line:

TST0: -8

```
--- Date & Time: Mon 18-Sep-2006 08:47:14 AM
DVD0: [56320.] 440 Mb -----> TST0: [56320.] 440 Mb
--- Date & Time: Mon 18-Sep-2006 08:47:14 AM
Restoring .....
Logical has been restored & remounted!
--- Date & Time: Mon 18-Sep-2006 09:00:38 AM Elapse Time: 00:13:24
DVD1: [56320.] 440 Mb -----> TST1: [56320.] 440 Mb
--- Date & Time: Mon 18-Sep-2006 09:00:38 AM
Restoring .....
Logical has been restored & remounted!
--- Date & Time: Mon 18-Sep-2006 09:14:07 AM Elapse Time: 00:13:29
DVD2: [56320.] 440 Mb -----> TST2: [56320.] 440 Mb
--- Date & Time: Mon 18-Sep-2006 09:14:07 AM
Restoring .....
Logical has been restored & remounted!
--- Date & Time: Mon 18-Sep-2006 09:27:36 AM Elapse Time: 00:13:29
DVD3: [56320.] 440 Mb -----> TST3: [56320.] 440 Mb
--- Date & Time: Mon 18-Sep-2006 09:27:36 AM
Restoring .....
Logical has been restored & remounted!
--- Date & Time: Mon 18-Sep-2006 09:41:00 AM Elapse Time: 00:13:24
DVD4: [56320.] 440 Mb -----> TST4: [56320.] 440 Mb
--- Date & Time: Mon 18-Sep-2006 09:41:00 AM
Restoring .....
Logical has been restored & remounted!
--- Date & Time: Mon 18-Sep-2006 09:54:23 AM Elapse Time: 00:13:23
DVD5: [56320.] 440 Mb -----> TST5: [56320.] 440 Mb
--- Date & Time: Mon 18-Sep-2006 09:54:23 AM
Restoring .....
Logical has been restored & remounted!
--- Date & Time: Mon 18-Sep-2006 10:07:44 AM Elapse Time: 00:13:21
DVD6: [56320.] 440 Mb -----> TST6: [56320.] 440 Mb
--- Date & Time: Mon 18-Sep-2006 10:07:44 AM
Restoring .....
Logical has been restored & remounted!
--- Date & Time: Mon 18-Sep-2006 10:21:00 AM Elapse Time: 00:13:16
DVD7: [56320.] 440 Mb -----> TST7: [56320.] 440 Mb
--- Date & Time: Mon 18-Sep-2006 10:21:00 AM
Restoring .....
Logical has been restored & remounted!
```

```
--- Date & Time: Mon 18-Sep-2006 10:34:15 AM Elapse Time: 00:13:15
DVD8: [56320.] 440 Mb -----> TST8: [56320.] 440 Mb
--- Date & Time: Mon 18-Sep-2006 10:34:15 AM
Restoring .....
Logical has been restored & remounted!
--- Date & Time: Mon 18-Sep-2006 10:47:30 AM Elapse Time: 00:13:15
----- Date & Time: Mon 18-Sep-2006 10:47:30 AM Elapse Time: 02:00:16
DVD Logicals are being uninstalled!
The program has completed!
```

Now all data has been copied to the AMOS Logicals (TST0: - TST8:) and the AMOS logicals (TST0: - TST8:) are ready to use.

REQUIREMENTS AND SETUP

DVDRES requires the following:

- AM-8000, Eagle 800 or AMPC 7.0 based systems
- AMOS 8.1 or later
- A supported DVD-RAM drive.



DVDRES is only supported on AM8000, Eagle 800, and AMPC 7.0 Systems.

The DVDRES package contains the following required files:

- DVDRES.LIT
The device driver for the DVD-RAM drive.
- The DVD.DEV file that contains supported DVD-RAM drive information
- The SSD overlay file (DVD000.OVR)

MODIFYING THE SYSTEM INITIALIZATION FILE:

See the software installation instructions in the AMOS 8.X Owner's Manual, DSM-00226-00.

MESSAGES

Command line syntax messages:

- Invalid switch
- Invalid switch option

System requirements messages:

- DVDRES requires AMOS 8.x or compatible operating system.
- Memory partition is too small for DVDRES. An additional nnnK of memory is required.

DVD-RAM Recorder device or driver messages:

- Device specified is not a DVD-RAM Recorder.
- This DVD-RAM Recorder requires a different driver.
The current driver is: xxxxxx
The required driver is: xxxxxx
The device and driver selected are inappropriate for the physical DVD-RAM drive.
- Unable to find a DVD-Recorder.
- Unknown DVD-Recorder!
Error - Unsupported DVD-Recorder drive found.
The DVD-RAM Recorder is not supported by DVDRES.

Error messages when setting up or reading from the DVD Recorder

- Error - Buffer not initialized.
- Error - Device is already in use.
This indicates that either another user is running the DVDRES program or the DVD is being used in shared read/write mode.
- Error - Disk in DVD-Recorder is not writeable.
- Error - DVDram driver must be in system memory.
- Error - Unable to load DVD media.
This indicates a hardware problem with the DVD-RAM drive or a problem with the DVD media.
- Error - Unable to read disk information from media.
Try a different DVD media. This can also indicate a possible DVD-RAM drive problem.
- Fatal SCSI error. Sense key=nn additional sense=nn
DVD drive device error has occurred. Sense key and additional sense provide further error information.
- Please insert a DVD-RAM media
- Warning - Maximum number of devices exceeded - extras ignored.
- Warning - Unable to close DVD.
Device error occurred while closing the current DVD. The DVD-RAM may or may not be usable.

- SCSI error message from the driver
DVD-RAM drive device error has occurred. Code provides additional SCSI error sense information.

SCSI error – SCSI status =(nn)
sense key = xx sssssssssssss Add Sense Code/Qualifier Code = ac.qc

nn = SCSI Status Code
xx = SCSI Sense Key code
sss = Interpreted sense key code if known
ac = SCSI Additional Sense Code
qc = SCSI Qualifier Code

Example:

.DVDRES/nojject

DVDRES Version 8.0(101)-4 - Copyright (C) 2001 Alpha Micro Products

Initializing SCSI DVD-RAM Recorder...
Found the following possible DVD-Recorders:

	ID	Description
1.	6	HL-DT-STDVDRAM GSA-4082B
2.	5	SAMSUNG SCR-1231 REV1.01

Select one of the above devices: **1**
Using Generic SCSI-DVD-RAM driver (DVD-RAM).
DVD-RAM Recorder located at SCSI id 6

You may enter an optional title for the DVD or press RETURN for none.
Title: **AlphaDVD backup "A"**

Enter list of disk devices to transfer onto the DVD media. Devices may be entered as a range (ex. dev0: -20 for dev0: through dev20:), or may be comma separated, The list is terminated with a blank line:

dsk0: -6

DSK0: 131072 blocks.
DSK1: 131072 blocks.
DSK2: 131072 blocks.
DSK3: 131072 blocks.
DSK4: 131072 blocks.
DSK5: 131072 blocks.
DSK6: 131072 blocks.

The DVD logical unit size is greater than 64K blocks which could mean compatibility problems on AMOS 1.x systems. Press RETURN to continue, or ^C to abort DVDRES:

Calculating space requirements:
AMOS partition requires 229376 sectors.
2007327 unused sectors remain.

Note that once started, the recording operation can be stopped by pressing ^C.


Press RETURN to start recording or ^C to abort.

```

Transferring DSK0:
SCSI error - SCSI status = (1)
                sense key = 03 medium error Add Sense Code/Qualifier Code = 32.00
Error - Unable to write to the DVD.

```

No defect spare location
available



Errors concerning the AMOS DVD data structure:

- Error - Disk geometry calculation was incorrect.
The AMOS hidden sector parameters calculated are invalid.
- Error - memory previously calculated as available isn't
Memory required for data buffers has disappeared.
- Error - Unable to calculate AMOS disk geometry.
The AMOS hidden sector parameters could not be calculated.
- Error - unable to get AMOS data buffer
The system was unable to acquire memory for data buffers.
- Error- Unable to remove DVD Recorder data buffer from memory.
- Error - Source Bitmap Words could not be calculated!
For DVDs created before MAKDVD 8.0(101)-4, this error may exist. This error appears when DVDRES tries to calculate the Bitmap Words for a specific logical. The last block of the bitmap area following the hash value has garbage following it. This needs to be cleared for DVDRES 8.0(101)-5 to calculate the logical bitmap words. The logical will be ignored and you must use the COPY command to restore that logical.
- Error - zero UFD link! [0.]
This error may appear when DVDRES displays the contents of the DVD. It means that the logical which was backed up had no data in it other than the label block and MFD. It is ignored because the bitmap words cannot be calculated.

Normal informational messages:

- The program has completed
The recording of data from the DVD media is done.
- DVD-RAM Recorder located at SCSI id n
This shows the SCSI id of the DVD-RAM Drive being used.
- Note that once started, the restoring operation can be stopped by pressing ^C.
However, if the restoring is stopped, a DSKANA or SYSACT to the last logical that was interrupted needs to be done! The last logical that was interrupted will have a mixture of new and old blocks that will cause problems.
- Restoring DSK0:
- Using Generic SCSI-DVD-RAM driver (DVDRAM)
This message shows the DVD driver name and description being used.
- Using Panasonic DVD-RAM driver (DVDPAN)