

DVAD Series Digital Video Array

Eng

Installation Instructions



IMPORTANT SAFEGUARDS

1. Read Instructions - All the safety and operating instructions should be read before the unit is operated.
2. Retain Instructions - The safety and operating instructions should be retained for future reference.
3. Heed Warnings - All warnings on the unit and in the operating instructions should be adhered to.
4. Follow Instructions - All operating and use instructions should be followed.
5. Cleaning - Unplug the unit from the outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
6. Attachments - Do not use attachments not recommended by the product manufacturer as they may cause hazards.
7. Water and Moisture - Do not use this unit near water - for example, near a bath tub, wash bowl, kitchen sink, or laundry tub; in a wet basement; near a swimming pool; in an unprotected outdoor installation; or any area which is classified as a wet location.
8. Accessories - Do not place this unit on an unstable stand, tripod, bracket, or mount. The unit may fall, causing serious injury to a person and serious damage to the unit. Use only with a stand, tripod, bracket, or mount recommended by the manufacturer or sold with the product. Any mounting of the unit should follow the manufacturer's instructions and should use a mounting accessory recommended by the manufacturer.

An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.



9. Ventilation - Openings in the enclosure, if any, are provided for ventilation, to ensure reliable operation of the unit, and to protect it from overheating. These openings must not be blocked or covered. This unit should not be placed in a built-in installation unless proper ventilation is provided or the manufacturer's instructions have been adhered to.
10. Power Sources - This unit should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply you plan to use, consult your appliance dealer or local power company. For units intended to operate from battery power or other sources, refer to the operating instructions.
11. Grounding or Polarization - This unit may be equipped with a polarized alternating-current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

Alternately, this unit may be equipped with a 3-wire grounding-type plug, a plug having a third (grounding) pin. This plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding-type plug.
12. Power Cord Protection - Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords and plugs, convenience receptacles, and the point where they exit from the appliance.
13. Power Lines - An outdoor system should not be located in the vicinity of overhead power lines or other electric light or power circuits or where it can fall into such power lines or circuits. When installing an outdoor system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal. U.S.A. models only - refer to the National Electrical Code Article 820 regarding installation of CATV systems.
14. Overloading - Do not overload outlets and extension cords as this can result in a risk of fire or electric shock.
15. Object and Liquid Entry - Never push objects of any kind into this unit through openings, as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the unit.
16. Servicing - Do not attempt to service this unit yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
17. Damage Requiring Service - Unplug the unit from the outlet and refer servicing to qualified service personnel under the following conditions:
 - a. When the power supply cord or plug is damaged.

- b. If liquid has been spilled or objects have fallen into the unit.
 - c. If the unit has been exposed to rain or water.
 - d. If the unit does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions, as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the unit to its normal operation.
 - e. If the unit has been dropped or the cabinet has been damaged.
 - f. When the unit exhibits a distinct change in performance--this indicates a need for service.
18. Replacement Parts - When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.
 19. Safety Check - Upon completion of any service or repairs to this unit, ask the service technician to perform safety checks to determine that the unit is in proper operating condition.
 20. Coax Grounding - If an outside cable system is connected to the unit, be sure the cable system is grounded. U.S.A. models only--Section 810 of the National Electrical Code, ANSI/NFPA No.70-1981, provides information with respect to proper grounding of the mount and supporting structure, grounding of the coax to a discharge unit, size of grounding conductors, location of discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.
 21. Lightning - For added protection of this unit during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the cable system. This will prevent damage to the unit due to lightning and power line surges.

FCC & ICES INFORMATION (U.S.A. and Canadian Models Only)

WARNING - This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules and ICES-003 of Industry Canada. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and radiates radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. Intentional or unintentional changes or modifications not expressly approved by the party responsible for compliance shall not be made. Any such changes or modifications could void the user's authority to operate the equipment.

If necessary, the user should consult the dealer or an experienced radio/television technician for corrective action. The user may find the following booklet prepared by the Federal Communications Commission helpful: "How to Identify and Resolve Radio-TV Interference Problems." This booklet is available from the U.S. Government Printing Office, Washington, DC 20402, Stock No.004-000-00345-4.

Warning: This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

For additional information or to speak to a representative, please contact the Philips Communication, Security & Imaging location nearest you:

The Americas: 1 800 326 3270

Europe & Middle East: +31 40 278 1222

Asia Pacific Region: +65 350 1859

or visit our Web site at www.philipscsi.com.

SAFETY PRECAUTIONS



CAUTION

RISK OF ELECTRIC SHOCK. DO NOT OPEN!



CAUTION: TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT OPEN COVERS. NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The lightning flash with an arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

**WARNING
TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE UNITS NOT SPECIFICALLY DESIGNED FOR OUTDOOR USE TO RAIN OR MOISTURE.**



Attention: Installation should be performed by qualified service personnel only in accordance with the National Electrical Code or applicable local codes.



Power Disconnect. Units with or without ON-OFF switches have power supplied to the unit whenever the power cord is inserted into the power source; however, the unit is operational only when the ON-OFF switch is in the ON position. The power cord is the main power disconnect for all units.

SECURITE



ATTENTION

RISQUE D'ÉLECTROCUTION. NE PAS OUVRIR!



DANGER : POUR ÉVITER TOUT RISQUE D'ÉLECTROCUTION, VEUILLEZ NE PAS OUVRIR LE BOÎTIER. IL N'Y A PAS DE PIÈCES REMPLAÇABLES PAR L'UTILISATEUR À L'INTÉRIEUR DU BOÎTIER. POUR TOUTE MAINTENANCE, VEUILLEZ VOUS ADRESSER À UN TECHNICIEN SPÉCIALISÉ.



L'éclair fléché dans un triangle équilatéral avertit l'utilisateur de la présence d'une “tension dangereuse” non isolée à l'intérieur de l'appareil et d'une valeur suffisante pour présenter un risque d'électrocution aux personnes.



Le point d'exclamation contenu dans un triangle équilatéral avertit l'utilisateur de la présence de consignes d'utilisation et de maintenance importantes dans la documentation qui accompagne l'appareil.

**ATTENTION
POUR ÉVITER TOUT RISQUE D'ÉLECTROCUTION OU D'INCENDIE, VEUILLEZ NE PAS EXPOSER À LA PLUIE OU À L'HUMIDITÉ UN APPAREIL NON CONÇU POUR UNE UTILISATION EXTÉRIEURE.**



Attention. L'installation ne doit être effectuée que par un personnel technique qualifié conformément à la réglementation du Code Électrique National ou à la réglementation locale pertinente.



Disjonction de l'alimentation. Les appareils avec ou sans commutateurs ON-OFF sont alimentés à chaque fois que le cordon d'alimentation est branché à la source d'alimentation; toutefois, les appareils disposant de commutateurs ON-OFF ne fonctionnent que lorsque le commutateur ON-OFF est dans la position ON. Le cordon d'alimentation constitue le moyen de disjonction de l'alimentation principale de tous les appareils.

WARNING: Electrostatic-sensitive device. Use proper CMOS/MOSFET handling precautions to avoid electrostatic discharge.

NOTE: Grounded wrist straps must be worn and proper ESD safety precautions observed when handling the electrostatic-sensitive printed circuit boards.



SICHERHEITSHINWEISE



VORSICHT

ELEKTRISCHE SPANNUNG.
NICHT ÖFFNEN!



VORSICHT: DAS GEHÄUSE ZUR VERMEIDUNG VON ELEKTRISCHEN SCHLÄGEN NICHT ÖFFNEN. DAS GERÄT ENTHÄLT KEINE VOM BENUTZER ZU WARTENDEN TEILE. REPARATUREN NUR VON FACHPERSONAL AUSFÜHREN LASSEN.



Das Blitzsymbol im gleichseitigen Dreieck soll den Benutzer auf nicht isolierte "gefährliche Spannung" im Produkt hinweisen, die ausreichend stark sein kann, um die Gefahr von elektrischen Schlägen für Menschen darzustellen.



Das Ausrufungszeichen im gleichseitigen Dreieck soll den Benutzer auf wichtige Bedienungs- und Wartungsanweisungen in der Dokumentation hinweisen, die dem Gerät beiliegt.

WARNUNG

ZUR VERMEIDUNG VON FEUER UND ELEKTRISCHEN SCHLÄGEN DAS GERÄT NICHT REGEN ODER FEUCHTIGKEIT AUSSETZEN.



Achtung: Die Installation darf nur von qualifiziertem Wartungspersonal gemäß dem National Electrical Code oder den gültigen örtlichen Vorschriften durchgeführt werden.



Abtrennen der Spannungsversorgung: Die Spannungsversorgung zu Geräten mit und ohne Ein/Aus-Schalter ist hergestellt, wenn das Netzkabel an eine Netzsteckdose angeschlossen ist. Das Gerät ist jedoch nur betriebsbereit, wenn der Ein/Aus-Schalter eingeschaltet ist. Bei allen Geräten erfolgt das Abtrennen der Spannungsversorgung über das Netzkabel.

SEGURIDAD



PRECAUCIÓN

RIESGO DE DESCARGA ELÉCTRICA
¡NO ABRIR!



PRECAUCIÓN: PARA REDUCIR EL RIESGO DE DESCARGA ELÉCTRICA, NO ABRA LAS TAPAS. EN EL INTERIOR NO HAY NINGÚN COMPONENTE REPARABLE POR EL USUARIO. LAS REPARACIONES DEBE REALIZARLAS PERSONAL CUALIFICADO.



El símbolo de flecha en forma de rayo situado dentro de un triángulo equilátero pretende alertar al usuario de la presencia de "voltaje peligroso" sin aislamiento dentro de la caja del producto, el cual podría resultar de una magnitud suficiente como para presentar un riesgo de descarga eléctrica para las personas.



El punto de exclamación dentro de un triángulo equilátero pretende alertar al usuario de la existencia de instrucciones de funcionamiento y mantenimiento (reparación) en la documentación suministrada con el aparato.

AVISO

PARA IMPEDIR EL RIESGO DE INCENDIO O DESCARGA, NO EXPONGA EL APARATO A LLUVIA O HUMEDAD



Atención: La instalación debe realizarla personal cualificado en cumplimiento estricto del código eléctrico nacional (en el caso de los EE.UU.) o de los códigos locales aplicables.



Para Desconectar la Alimentación: Unidades no equipadas con interruptores ON/OFF, son alimentadas cuando el cable de alimentación es conectado a la corriente eléctrica. Las unidades equipadas con interruptores son alimentadas de igual forma, pero adicionalmente requieren que el interruptor esté posicionado en ON. El cable de alimentación es el medio principal de desconexión del equipo.

VEILIGHEIDSMATREGELEN



VOORZICHTIG

GEVAARVOOR ELEKTRISCHE SCHOK.
NIET OPENEN!



VOORZICHTIG: MAAK HET APPARAAT NIET OPEN OM DE KANS OP ELEKTRISCHE SCHOKKEN TE VERMIJDEN. BEVAT GEEN ONDERDELEN DIE DOOR DE GEBRUIKER MOETEN WORDEN ONDERHOUDEN. LAAT ONDERHOUD EN REPARATIES UITVOEREN DOOR BEVOEGDE TECHNICI.



Het symbool 'Bliksemflits met pijlkop' in een gelijkzijdige driehoek wijst de gebruiker op de aanwezigheid in de kast van het apparaat van niet-geïsoleerde spanningen die voldoende sterk zijn om het gevaar van elektrische schokken op te leveren.



Het uitroepteken in een gelijkzijdige driehoek maakt de gebruiker attent op de aanwezigheid in de bij het apparaat behorende documentatie van belangrijke aanwijzingen voor bediening en onderhoud.

**WAARSCHUWING
TER VOORKOMING VAN BRANDGEVAAR EN
ELEKTRISCHE SCHOKKEN MAG DIT
ARMATUUR NIET AAN REGEN EN VOCHT
WORDEN BLOOTGESTELD.**



Let op: Het apparaat mag uitsluitend door bevoegde technici geïnstalleerd worden en wel in overeenstemming met de National Electrical Code of de daarvoor plaatselijk geldende richtlijnen.



Afsluiten voeding. Apparaten met of zonder ON-OFF-schakelaar krijgen voeding zodra het netsnoer in de wandcontactdoos wordt gestoken; het apparaat is echter alleen operationeel als de ON-OFF-schakelaar op ON staat. Het netsnoer kan bij alle apparaten worden gebruikt om deze uit te schakelen.

SICUREZZA



ATTENZIONE

PERICOLO DI SCOSSA ELETTRICA.
NON APRIRE.



ATTENZIONE: PER RIDURRE IL PERICOLO DI SCOSSA ELETTRICA, NON APRIRE LE COPERTURE. L'INTERNO NON CONTIENE COMPONENTI CHE L'UTENTE PUÒ RIPARARE PERSONALMENTE. RIVOLGERSI AL PERSONALE DI ASSISTENZA QUALIFICATO PER QUALSIASI INTERVENTO DI RIPARAZIONE.



Il simbolo triangolare di un fulmine con la punta a freccia intende mettere in allerta l'utente riguardo alla presenza di tensioni pericolose non isolate all'interno del guscio dell'unità, che potrebbero essere di intensità sufficiente per costituire pericolo di elettrocuzione.



Il punto esclamativo racchiuso in un triangolo equilatero intende avvisare l'utente in merito alla presenza di importanti istruzioni operative e di manutenzione nella documentazione di accompagnamento all'unità.

**AVVERTENZA
PER IMPEDIRE INCENDI O SCOSSA
ELETTRICA, NON ESPORRE L'UNITÀ ALLA
PIOGGIA O ALL'UMIDITÀ.**



Precauzione: affidare l'installazione al solo personale qualificato e nel rispetto del Codice elettrico nazionale (USA) o dei codici locali pertinenti.



Scollegamento dell'alimentazione. Gli apparecchi con o senza commutatori ON-OFF ricevono corrente tutte le volte che il cavo di alimentazione è inserito nella presa di forza; tuttavia, gli apparecchi muniti di commutatore ON-OFF funzionano solo se quest'ultimo è in posizione ON. Il cavo di alimentazione serve a scollegare dalla corrente tutti gli apparecchi.

MEDIDAS DE SEGURANÇA



CUIDADO

RISCO DE CHOQUE ELÉCTRICO.
NÃO ABRIR!



CUIDADO: PARA REDUZIR O RISCO DE CHOQUE ELÉCTRICO, NÃO ABRA AS TAMPAS. O INTERIOR NÃO CONTÉM PEÇAS QUE NECESSITEM DE MANUTENÇÃO. A MANUTENÇÃO DEVE SER EFECTUADA POR PESSOAL DE ASSISTÊNCIA TÉCNICA QUALIFICADO.



O símbolo do raio com a cabeça de uma seta dentro de um triângulo equilátero serve para alertar o utilizador para a presença de "corrente eléctrica perigosa" não isolada no interior da caixa do produto que pode ser suficiente para dar origem a choques eléctricos.



O ponto de exclamação dentro de um triângulo equilátero serve para alertar o utilizador para a presença de instruções de funcionamento e manutenção importantes na documentação fornecida com o aparelho.

**AVISO
PARA EVITAR INCÊNDIOS OU CHOQUES ELÉCTRICOS, NÃO EXPONHA À CHUVA OU HUMIDADE UNIDADES NÃO ESPECIFICAMENTE CRIADAS PARA UTILIZAÇÃO NO EXTERIOR.**



Atenção: A instalação deve ser efectuada por pessoal de assistência técnica qualificado, de acordo com o National Electrical Code (Normas de Electricidade Nacionais) ou a legislação local aplicável.



Desconexão da electricidade. Unidades com ou sem interruptores ON-OFF são activadas sempre que o cabo eléctrico for ligado a uma fonte de alimentação. No entanto, a unidade fica operacional apenas quando o interruptor ON-OFF se encontrar na posição ON. Para desligar a electricidade em qualquer uma das unidades deve ser utilizado o cabo eléctrico.

ZASADY BEZPIECZEŃSTWA



UWAGA

NIEBEZPIECZEŃSTWO PORAZENIA PRĄDEM
ELEKTRYCZNYM. NIE OTWIERAĆ!



UWAGA: ZE WZGLĘDU NA NIEBEZPIECZEŃSTWO PORAZENIA PRĄDEM NIE WOLNO OTWIERAĆ POKRYWY. W ŚRODKU NIE MA ŻADNYCH ELEMENTÓW, KTÓRE MOGĄ BYĆ NAPRAWIANE PRZEZ UŻYTKOWNIKA. NAPRAWĘ NALEŻY POWIERZYĆ AUTORYZOWANEMU PUNKTOWI SERWISOWEMU.



Błyskawica ze strzałką wewnątrz trójkąta równobocznego ma za zadanie zwrócić uwagę użytkownika na obecność nieizolowanego "niebezpiecznego napięcia" wewnątrz obudowy urządzenia, o wielkości stwarzającej niebezpieczeństwo porażenia prądem.



Wykrzyknik wewnątrz trójkąta równobocznego ma za zadanie zwrócić uwagę użytkownika na ważne czynności, związane z obsługą i konserwacją urządzenia, zamieszczone w Instrukcji obsługi.

**OSTRZEŻENIE
ABY UNIKNĄĆ POŻARU LUB PORAZENIA PRĄDEM NIE WOLNO WYSTAWIAĆ NA DZIAŁANIE DESZCZU LUB WILGOCI URZĄDZEŃ, KTÓRE NIE ZOSTAŁY SPECJALNIE ZAPROJEKTOWANE DO UŻYWANIA NA OTWARTYM POWIETRZU.**



Uwaga: Instalację urządzenia powinien wykonać tylko wykwalifikowany personel, zgodnie z przepisami NEC lub odpowiednimi przepisami miejscowymi.



Odłączanie zasilania. Urządzenia zarówno nie posiadające, jak i posiadające wyłączniki ON-OFF znajdują się pod napięciem, jeżeli tylko przewód zasilający jest połączony ze źródłem zasilania. Jednakże urządzenie działa tylko wtedy, gdy wyłącznik znajduje się w położeniu ON. Przewód zasilający jest głównym odłącznikiem zasilania dla wszystkich rodzajów urządzeń.

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SECTION 1
PRODUCT INTRODUCTION
DVAD is a high speed SCSI to ATA Intelligent low profile JBOD (Just A Bunch Of Disks) disk array, designed and optimized for CCTV applications. It can be configured with a maximum of four 160GB ATA hard disks providing over 600GB of storage. In addition, up to seven (7) **DVAD** disk arrays can easily be grouped together, satisfying storage requirements. The **DVAD** can be desktop mounted, or 19" rack-mounted with the supplied rack hardware. The Ultra2 SCSI interface (80MB/s) is backward compatible with Ultra Wide, Ultra, Fast and Wide, Fast and Asynchronous SCSI.

1.1 Models

Model	Description
DVAD0216	Digital Video Array, Low Profile, with two (2) 160GB HDD, 120/240 VAC 50/60 Hz.
DVAD0416	Digital Video Array, Low Profile, with four (4) 160GB HDD, 120/240 VAC 50/60 Hz.

1.2 Accessories

The **DVAD** includes a .5m (1.6 ft) SCSI Cable, SCSI Terminator, and the specified number of drives factory installed.

ITEM	TYPE
SCSI Cable (Included)	ACCVHD20
SCSI Terminator (Included)	ACCVHDTM
SCSI Looping Cable (Sold Separately)	ACCVHD06L

1.3 Features

- Digital Storage Capacity of 320GB or 640GB
- Expandable
- Fault Notification via Relay
- Low Profile Design
- Easy Installation

SECTION 2 UNPACKING

2.1 For Your Safety

For your safety, and perfect performance of your new product, please note the following:

Follow correct lifting methods when handling the **DVAD**. Special care should be taken when removing the **DVAD** Series disk array from its packaging, and positioning it into its required location.

When installing **DVAD** Series disk array as a rack-mounted component, be sure to secure all fixtures. All bolts and screws should be fully tightened. Failure to comply with this may result in the unit not being fully supported in the rack, and could lead to the product dropping out of the rack or falling onto other rack components.

EMC Regulations require that all data cables be shielded.

On receipt of your **DVAD** Series disk array, verify that no damage has been sustained in transit, and that you have received the following items:

- **DVAD** Chassis
- SCSI Cable (ACCVHD20)
- SCSI Terminator (ACCVHDTM)
- 2 - Power Cords (American and European type)
- Rack-mount Kit
- Installation Manual

NOTE: The shipping carton is the safest container in which to transport the unit. Save it and all packing materials for future use.

2.2 Serviceable Parts

This product has no user serviceable parts. Any attempts to remove this product's cover may result in loss of warranty. If the unit ever needs repair service, contact the nearest Philips CSI Service Center for a return authorization number and shipping instructions.

Service Centers

U.S.A.: Phone: 800-366-2283 or 408-956-3895
fax: 800-366-1329 or 408-956-3896
e-mail: NationalServiceCenter@ca.slr.com

Canada: 514-738-2434

Europe, Middle East & Asia Pacific Region:
32-1-440-0711

For additional information, see www.philipscsi.com.

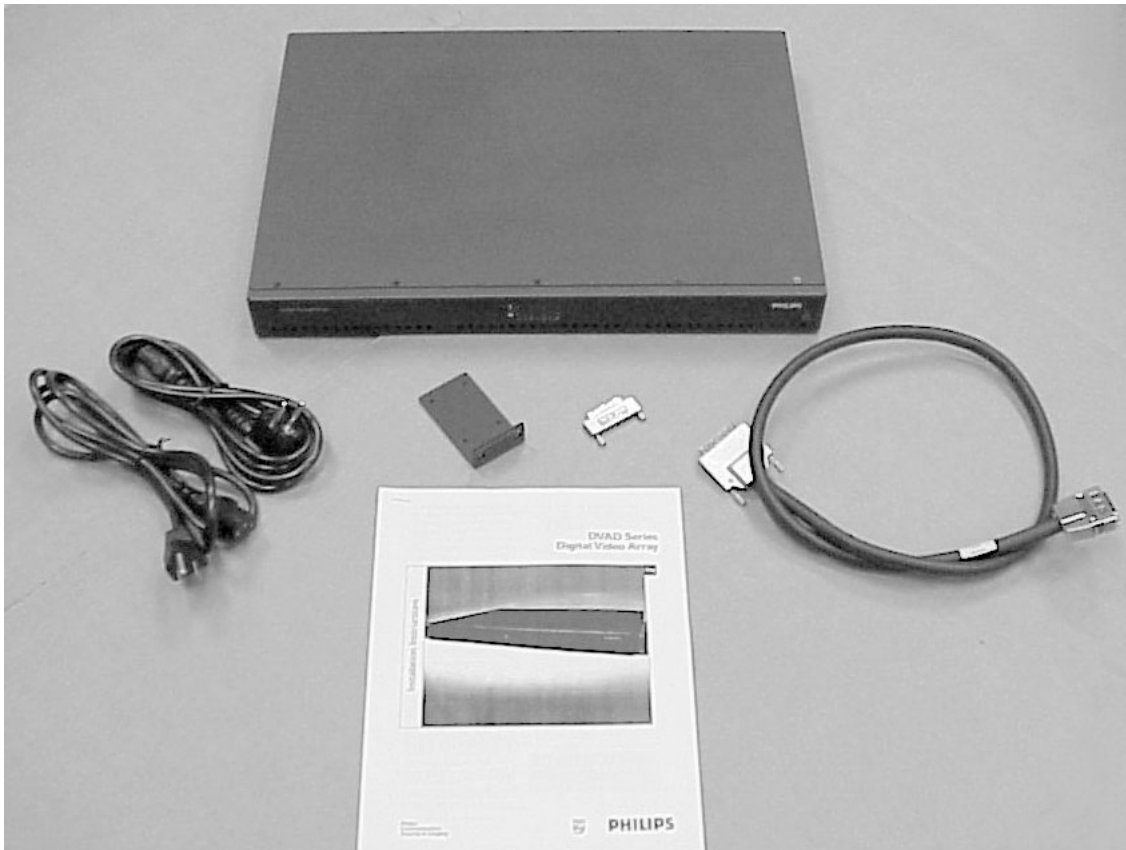


Figure 2-1 Package Contents

SECTION 3 PRODUCT OVERVIEW



Figure 3-1 Front View of DVAD Series Digital Video Array

3.1 Front Panel

LED	Icon	Color	Description
POWER	⓪	Green Red OFF	Unit is powered on. Indicates fault. LED not illuminated; no Power to the system.
DRIVE ACTIVITY	Ⓢ	OFF Green	Drives are in an idle state. LED Flickers when drives are active (reading or writing).
DRIVE FAULT	!	Amber OFF	Drive has been declared faulty by the controller. LED not illuminated when disk is operating normally.

NOTE: During the product's short initialization period, all LEDs flicker briefly.



Figure 3-2 Rear View of DVAD Series Digital Video Array

3.2 Back Panel

3.2.1 IEC Power Inlet

The IEC power socket connects to the internal auto-ranging power supply in order to power the unit. The **DVAD** has no power switch, so the system starts up as soon as power is applied.

3.2.2 SCSI ID Selector

The SCSI ID selector allows user alteration of the unit's SCSI address. The SCSI address can be set between and including 0 and F (hexadecimal). However, the initiator (DVR) requires one address (usually 7). When using narrow SCSI, the permissible IDs are between and including 0 and 7.

3.2.3 MODE Switch

The MODE switch is used for operating mode configuration. See **Section 4.2** for additional information regarding operating modes.

3.2.4 Serial Port

The serial port is set at 115200 baud. When used with a null modem cable, the serial port is used for maintenance tasks such as uploading new **DVAD** firmware.

Communication Settings:

Baud: 115200
Data bits: 8
Parity: None
Stop bits: 1
Flow Control: None

3.2.5 Alarm Output

The alarm output is normally energized, and is de-energized upon failure of a disk drive. The external device is connected to the normally closed side of the relay.

The alarm console must be configured so that when closed, it detects a failure, and when open, it is in the normal state. This means if the **DVAD** is disconnected, no error will be reported, but if the unit is powered off or the PSU fails, an error will be reported.

3.2.6 SCSI Connectors/Termination

The SCSI connection on the rear of the **DVAD** is a dual stack VHDCI connector. The connection speed is Ultra2, but is backward compatible with previous forms of SCSI. The SCSI input is not auto terminating; the supplied SCSI terminator must be installed on the last device on the disk array. Failure to properly terminate the SCSI port will result in poor SCSI connectivity, and possibly data loss. The SCSI terminator can be installed on either the top or the bottom SCSI connector. The LED on the terminator will illuminate green when properly terminated.

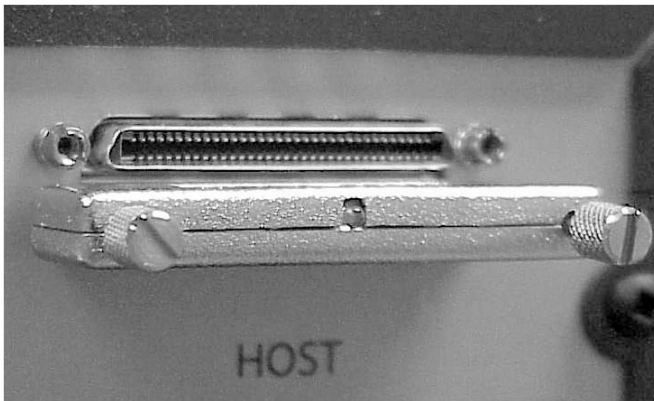


Figure 3-3 SCSI Terminator Installation

SECTION 4 PRODUCT CONFIGURATION

The **DVAD** Series disk arrays are pre-configured with two (2) or four (4) drives, each showing as one (1) LUN (Logical Unit Number) on the selected SCSI ID.

Two settings are available for this product; **SCSI ID** and **Operating Mode**.

4.1 Changing the SCSI ID

1. Power the unit **OFF**.
2. Use the SCSI ID Selector wheel to select the desired SCSI ID 0 (Factory Default).

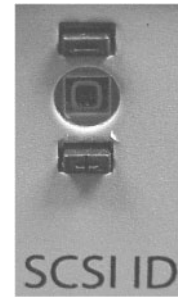


Figure 4-1 SCSI ID Selector

- When using a narrow SCSI, select a value between and including 0 and 7. It is recommended not to use SCSI ID 7, as most host adapters (DVRs) use this SCSI ID setting.
 - If using wide SCSI, a hexadecimal value between 0 and F is permissible.
3. When the desired ID is selected, power the unit back **ON**.

4.2 Operating Mode

The **DVAD** can be altered to run in several modes.

Selections are:

- | | |
|----------------------------------|--|
| 4 LUN Mode: | Each installed hard disk drive is its own LUN. This mode will appear as (4) drives to the host (DVR). |
| 2 LUN Mode: | In the DVAD04xx Series disk array with (4) hard disk drives. Drives 1 and 3 are the first LUN, and hard disk drives 2 and 4 are the second LUN. This mode will appear as (2) drives to the host (DVR). |
| 1 LUN Mode:
(Factory Default) | In the DVAS Series arrays with (2) or (4) hard disk drives installed. This mode will appear as (1) drive to the host (DVR). |
| Erase Mode: | Erases the Hard Disk Drive Set. |

Each mode displays a different number of physical devices (Hard Disk Drives) to the host Philips Digital Recorder. Use the MODE Switches on the rear of the disk array to change operating mode. Permitted settings are:

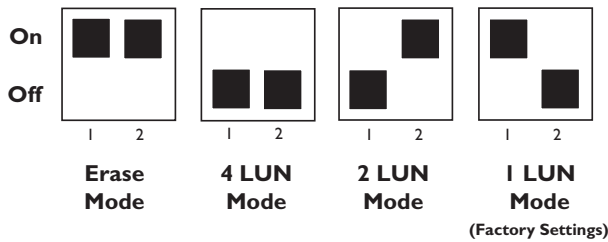


Figure 4-2 MODE DIP Switch settings diagram

NOTE: Altering the configuration DESTROYS ALL DATA on the unit.

1. The disk array must be powered **OFF** to alter the mode.
2. With the disk array powered **OFF**, change the MODE Switch to **Erase Mode**. (See **Figure 4-2**).
3. Power the disk array **ON**, and leave powered for at least 90 seconds.
4. Power the disk array **OFF** again, and configure the DIP Switches for the new mode. (See **Figure 4-2**).
5. Power the disk array back **ON**. The reconfiguration may take up to two minutes.

Do not attempt to communicate with the disk array over SCSI until at least two minutes after power up with the new configuration.

4.3 Extending the DVAD disk array storage

If the DVAD disk array is not the only SCSI disk array connected to your Philips Digital Recorder:

1. Remove the terminator from the first disk array. In the terminator's place, attach one end of the 15cm (6") SCSI looping cable (ACCVHD06L; purchased separately).
2. Attach the other end of the SCSI looping cable (ACCVHD06L) to the top connector on the second DVAD disk array.
3. Attach the SCSI terminator to the bottom connector of the second DVAD disk array.
4. Make sure each DVAD looped has a unique SCSI ID.

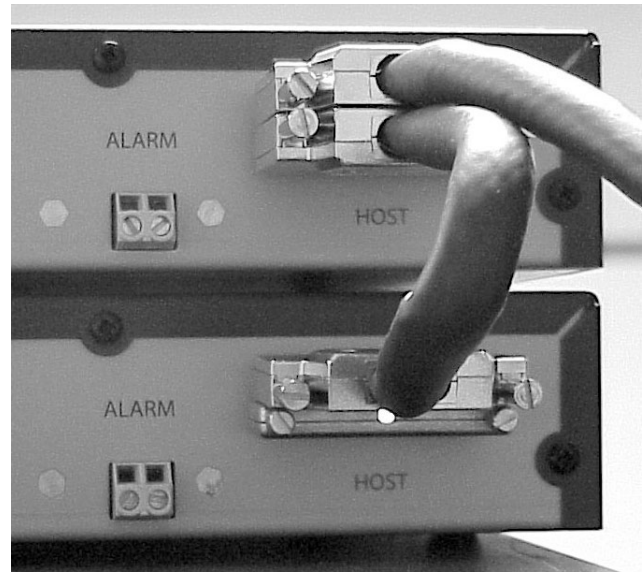


Figure 4-3 Looped DVAD Disk Array

NOTE: A maximum of seven (7) DVAD disk arrays can be looped in 1.5 M (4.9 ft) from one Philips Digital Recorder.

NOTE: Do not exceed these distance limitations, or poor SCSI connectivity and loss of data may occur.

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